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Prolec's range of genuine OEM approved circuit protection and power distribution products have been designed and tested to meet the demands of today and requirements of tomorrow. Whether that be on the highway, off road, in the field, on the battlefield, underground or on the water, Prolec has a suitable product solution for your application.

We are proud to represent some of the world's leading circuit protection and power distribution manufacturers whose products meet global industry standards and are manufactured in quality accredited facilities from materials are sourced from ethical suppliers whom have corporate governance, environmental and social policies. Prolec continues to invest in our people and inventory to ensure we offer the very best products and customer service.



#### **AUTHORISED AGENT FOR LEADING BRANDS**



Prolec proudly represents the worlds leading international brands of genuine, quality power distribution products used by major manufacturers around the world. These brands design, test and manufacture products unders strict quality guideline which are then approved to recognised international standards. The majority of products are manufactured using environmentally compliant materials which meet RoHS and Reach standards. Manufacturers data sheets are also available upon request.































## **MEMBER ORGANIZATIONS**



Prolec is a proud supporter and member of the following industry organisations which are the voice for automotive industry which includes component design, parts manufacturers, wholesalers, distributors, independent service and repair workshops and retailers.









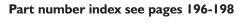






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FUSES & FUSE KITS

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POWER DISTRIBUTION

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RELAYS & SWITCHES

## TECHNICAL INFORMATION

Fuse & Circuit Breaker Information, Wire Gauge Selection, Ingress Protection Ratings, Imperial vs. Metric Bolt Sizes, Ignition Protection, Packaging Options, Part Number Index, Symbols & Markings, Battery Information.

#### **COMMUNITY SPONSORSHIP - MONASH MOTORSPORT**









Combustion

**Driverless** 

**Electric** 

#### THE COMPETITION

Formula SAE is the world's largest student engineering design competition. Students from Universities all around the world design, manufacture, test and compete with formula style racecars.

#### **COMPETITION STRUCTURE**

Formula Student is divided into distinct classes; Combustion, Driverless and Electric. At competitions each car competes separately and is judged in two types of events, Dynamic and Static.

Static events allow the team to demonstrate their knowledge behind the development of the cars and test industry skills such as entrepreneurialism, financial acumen and the holistic engineering design process behind the cars.

Dynamic events are the culmination of the design process, testing the performance of the cars in a variety of scenarios. These events require more than just the quickest car; they are a test of reliability, efficiency and driver skill.

#### **MONASH MOTORSPORT**

Last year, the team from Monash Motorsport (MMS) entered 2 cars in the competition; a petrol car and electric car. This year, the team entered 3 cars; a petrol car and two electric cars, one of which is autonomous. For the latest news from Monash Motorsport, visit their Facebook page: www.facebook.com/monashmotorsport

#### Formula SAE-A Team 2019 MMS Results:

Ist Place - Electric Vehicle

1st Place - Internal Combustion Vehicle

#### Formula Student Sydney 2020 MMS Results:

Ist Place - Combined Overall Result 2nd Place - Skidpad Combustion

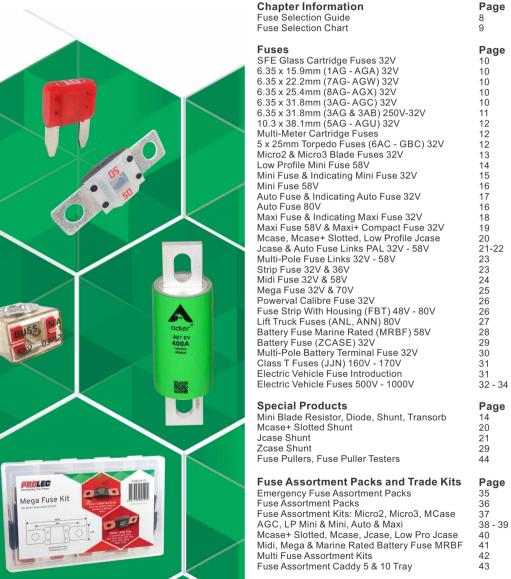
1st Place - Endurance Combustion 3rd Place - Technical Presentation
2nd Place - Acceleration Combustion 1st Place - Sponsorship Presentation





# Fuses, Fuse Kits & Fuse Pullers

## The original and still the best.



#### **FUSE SELECTION GUIDE**

Fuse Type	Characteristic	Amperage Range	I.R. @ Voltage	Ignition Protected	Ingress Rating	Page
SFE	Fast & Slow	50mA to 16A	1.5kA at 250V	-	-	10
AGC	Fast	IA to 35A	TBA, 32VDC	-	-	10
IAG & 7AG	Fast	500mA to 35A	TBA, 32VDC	-	-	10
3AG,3AB	Fast & Slow	200mA to 35A	Varies by rating & speed	-	-	- 11
AGU / 5AG	Fast	10A to 60A	TBA, 32VDC	-	-	12
GBC	Fast	5A to 25A	TBA, 32VDC	-	-	12
Multimeter Fuses	Fast	630mA to 20A	Varies	_	-	12
Micro2	Fast	5A to 30A	IkA at 32VDC	-	-	13
Micro3	Fast	5A to 15A	IkA at 32VDC	_	_	13
Low Pro. Minifuse	Fast	2A to 30A	I kA at 58VDC	-	-	14
Minifuse - 32V	Fast	2A to 30A	I kA at 32VDC	-	-	15
Minifuse - 58V	Fast	3A to 30A	IkA at 58VDC	_	-	16
Minifuse - 125V	Fast	3A to 15A	IkA at 125VDC	_	_	^
Autofuse - 32V	Fast	IA to 40A	IkA at 32VDC	_	_	17
Autofuse - 58V	Fast	0.5A to 40A	IkA at 58VDC	Ign.Pro*	_	^
Autofuse - 80V	Fast	0.5A to 40A	IkA at 80VDC	Ign.Pro*	_	16
Maxifuse - 32V	Slow	20A to 100A	IkA at 32VDC	igii.i i o		18
Maxifuse - 58V	Slow	20A to 100A	IkA at 58VDC	_	_	19
Maxifuse - 80V	Slow	20A to 100A	IkA at 80VDC	-	-	^
Maxi Plus - 32V	Slow	25A to 60A	IkA at 32VDC	-		19
M8 Compact	Slow	30A to 80A	IkA at 32VDC	-	-	^
MCase - 32V	Slow	15A to 40A	IkA at 32VDC	-	-	20
Mcase + Slot 32V	Slow	15A to 40A	IkA at 32VDC	-	-	20
	Slow	20A to 60A	I kA at 58VDC	-	-	20
Low P. JCase - 58V	Slow	20A to 60A	IkA at 32VDC	-	-	21
Jcase - 32V				-	-	21-22
Fusible Links - 32V	Slow	20A to 140A	I kA at 32VDC	-	-	
Midifuse - 32V	Slow	30A to 200A	I kA at 32VDC	-	-	24
Midifuse - 58V	Slow	30A to 200A	I kA at 58VDC	-	-	24
Strip Fuse - 36V	Fast	25A to 150A	TBA at 36VDC	-	-	23
Megafuse - 32V	Slow	40A to 500A	2kA at 32VDC	-	-	25
Megafuse - 70V	Slow	60A to 500A	2.5kA at 70VDC	-	-	25
Powerval - 32V	Slow	150A to 180A	2kA at 32VDC	-	-	26
MRBF - 58V	Slow	30A to 300A	2kA at 58VDC	Ign.Pro	IP66	28
Zcase - 32V	Slow	40A to 600A	2kA at 32VDC	-	-	29
Multi-Pole Fuse	Slow	20A to 60A	TBA	-	-	23
Battery Term Fuse	Slow	60A to 200A	I kA at 32VDC	-	-	30
FBT	Slow	35A to 500A	ТВА		-	26
ANL	Fast	35A to 750A	6kA - 2.7kA at 32VDC	Ign.Pro*	-	27
ANN	Very Fast	10A to 800A	2.7kA at 80VDC	-	-	27
ACK	Slow	10A to 400A	I 0kA at Rated Voltage	-	-	
JJN Class T	Very Fast	70A to 600A	20kA at 160VDC	-	-	31
EV10, EV20, EV30	Very Fast	5A to 400A	20kA at 500VDC	-	-	^
AE2 & AE5	Very Fast	10A to 700A	20-30kA at 500VDC	-	-	32
AE3	Very Fast	8A to 50A	20kA at 850VDC	-	-	33
AE7	Very Fast	60A to 600A	20kA at 800VDC	-	-	33
AE6 & AEX	Very Fast	5A to 600A	20-50kA at 1000VDC	-	-	34
FWH	Very Fast	35A to 800A	50kA at 500VDC	-	-	^
FWP	Very Fast	35A to 800A	50kA at 700VDC	-	-	^
FWJ	Very Fast	35A to 800A	50kA at 800VDC	-	-	^
ATX3	Very Fast	100A to 600A	50kA at 1000VDC	-	-	^
	,					

Symbol References: \* Contact sales for verification. ^ Contact sales for product information.

#### ABYC Definition of Ignition Protection (Ign.Pro) E11.4.15.

The design and construction of a device such that under design operating conditions:

(a) It will not ignite a flammable hydrocarbon mixture surrounding the device when an ignition source causes an internal explosion, or (b) It is incapable of releasing sufficient electrical or thermal energy to ignite a hydrocarbon mixture, or (c) The source of ignition is hermetically sealed.

What does this mean? Ignition Protected devices are designed to prevent the release of electrical or thermal energy (ie. sparks or heat) which could start a fire when operating in environments containing a mixture of air with gasoline, propane or CNG vapour. So when replacing or installing electrical equipment in these environments, make sure the product is specifically designated "Ignition Protected". As you can see in the above table, there are very few fuses that will meet this requirement, however we have a large range of circuit breakers that are Ignition Protected.



#### **FUSE SELECTION CHART**

With an ever growing product range sometimes it can be hard to describe which fuse you need. So the following visual identification chart can help you identify some of the more common styles available. For a more comprehensive range please refer to the website www.prolecproducts.com which showcases over 300 different product images.

Ferrule Cartridge Glass & Ceramic Case (Pages 10-12)



2 6AC Cartridge Torpedo Type (Page 12)



Micro2 & Micro3 (Page 13)



4 Low Profile Mini & Minifuse (Pages 14-16)



Autofuse & Maxifuse (Pages 16-19)



6 Fusible Links Female Terminal (Pages 20-21)



7 Fusible Links Male Terminal (Page 22)



8 Multi-Pole Fusible Link (Page 23)



Fuse Strip Element Only (Page 23)



Midi Fuse Bolted Tag (Page 24)



Megafuse Bolted Tag (Pages 25)



Powerval Calibre
Bolted Tag
(Pages 26)



Battery Fuse Strip Slotted Tag M10 (Page 26)



Lift Truck Fuse Slotted Tag M8 (Page 27)



Battery Fuse
Bar Mount
(Pages 28-29)



Battery Terminal Fuse (Page 30)



High Power Fuse
Centre Bolted
(Page 31)



Threaded (Contact Sales)



EV Fuses Cartridge (Page 32-34)



20 EV Fuses Offset Bolted (Page 32-34)



EV Fuses Centre Bolted (Page 32-34)



Fuse Kits &
Assortments
(Page 35-43)





#### **SFE GLASS CARTRIDGE FUSES 32V**



SFE fast acting automotive glass cartridge fuses are similar to the "AG" style fuses in that they have the same diameter however the length varies according to ampere rating to ensure accurate fuse replacement.

Part	Ampere	Imperial	Metric
Number	Rating	Length x Width	Length x Width
SFE004	4A	5/8" x 1/4"	15.90 x 6.35mm
SFE006	6A	3/4" x 1/4"	19.05 x 6.35mm
SFE07.5	7.5A	7/8" x 1/4"	22.24 x 6.35mm
SFE009	9A	7/8" x 1/4"	22.24 x 6.35mm
SFE014	I4A	I-I/I6" x I/4"	26.99 x 6.35mm
SFE020	20A	I-I/4" x I/4"	31.75 x 6.35mm
SFE030	30A	I-7/I6" x I/4"	36.51 x 6.35mm
SFE000AP	Assortmen	nt Pack 10pcs	NEW
	4A, 6A, 7.5	5A, 9A, 2x 14A, 2x	20A, 2x 30A





Voltage: 32VAC/32VDC (Factory certified)

Pack Size: 5, 10, 100, 500, 1000

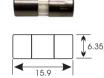
Assortment Pack

IAG / AGA

## 1AG (AGA) / 7AG (AGW) GLASS FUSES 32V

W	Littelfuse
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Part Number	Part Number	<b>Ampere Rating</b>
IAG.500	7AG.500	500mA
IAG00I	7AG001	IA
IAG002	7AG002	2A
IAG02.5	7AG02.5	2.5A
IAG003	7AG003	3A
IAG005	7AG005	5A
IAG07.5	7AG07.5	7.5A
IAG010	7AG010	I0A
IAG015	7AG015	15A
IAG020	7AG020	20A
IAG025	7AG025	25A
IAG030	7AG030	30A





**7AG / AGW** 

Dimensions in MM Imperial (5/8" x 1/4")

Dimensions in MM Imperial (7/8" x 1/4")

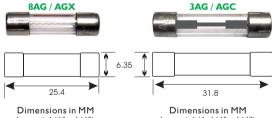
Voltage: 32VAC / 32VDC (Factory certified)

Characteristic: Fast Acting Pack Size: 5, 10, 100

## 8AG (AGX) / 3AG (AGC) GLASS FUSES 32V



Part Number	Part Number	Ampere Rating	
8AG001	AGC001R	IA	
8AG002	AGC002R	2A	100 178500
8AG003	AGC003R	3A	-
8AG004	AGC004R	4A	
8AG005	AGC005R	5A	
8AG006	AGC006R	6A	
8AG07.5	AGC07.5R	7.5A	
8AG008	AGC008R	8A	
8AG010	AGC010R	I0A	_
8AG015	AGC015R	I5A	
8AG020	AGC020R	20A	D
8AG025	AGC025R	25A	lm
8AG030	AGC030R	30A	
8AG035	AGC035R	35A	
-	AGC000AP	Assortment Pack	< 5pcs



Imperial (I" x I/4")

Imperial (I-I/4" x I/4")

Voltage: 32VAC / 32VDC (Factory certified)

Characteristic: Fast Acting Pack Size: 5, 10, 50, 100

Notes: Complete range of 3AG fuses see page 11. Approvals: 🕦 🌘 🕦 (E RoHS (Optional)

**RELATED PRODUCTS:** 

Fuse Assortment

Assortment Pack

**Fuse Puller Trade Kits** (see p.44) (see p.38)

**Fuse Holders** (see p.69 - 71)



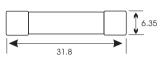
3A, 5A, 10A, 15A, 20A

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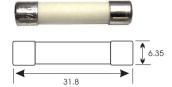
## **3AG GLASS / 3AB CERAMIC CARTRIDGE FUSES**







Dimensions in MM (1-1/4" x 1/4")



#### **3AG LBC FUSE GLASS BODY**

Fast Acting (F)	Slow Acting (T)	Ampere
Part Number	Part Number	Rating
3AGFB.200	3AGDA.200	200mA
3AGFB.250	3AGDA.250	250mA
3AGFB.300	3AGDA.300	300mA
3AGFB.375	3AGDA.375	375mA
3AGFB.500	3AGDA.500	500mA
3AGFB.600	3AGDA.600	600mA
3AGFB.750	3AGDA.750	750mA
3AGFB001	3AGDA001	IA
3AGFB01.5	3AGDA01.5	1.5A
3AGFB002	3AGDA002	2A
3AGFB02.5	3AGDA02.5	2.5A
3AGFB003	3AGDA003	3A
3AGFB004	3AGDA004	4A
3AGFB005	3AGDA005	5A
3AGFB006	3AGDA006	6A
	3AGDA6.25	6.25A
3AGFB007	3AGDA007	7A
3AGFB008	3AGDA008	8A
3AGFB010	3AGDA010	I0A
3AGFB012	3AGDA012	I2A
3AGFB015	3AGDA015	I5A
3AGFB020	3AGDA020	20A
3AGFB025	3AGDA025	25A
3AGFB030	3AGDA030	30A
3AGFB035		35A

#### Glass Body Voltage Ratings

(Fast): 250VAC (200mA to 10A) 32VAC (12A to 35A)

(Slow): 250VAC (200mA to 8A) 32VAC (9A to 30A)

I.R.: Contact sales for further information. Pack Size (bag): 5, 10, 100, 1000

Holders: Clips, Panel Mount, Inline & Blocks Notes: More ratings available, please contact sales.

\*Approvals may vary on the above.

\*Approvals Available: 🕦 🐧 🤇 🤃 RoHS

## 3AB HRC FUSE CERAMIC BODY

Fast Acting (F)	Slow Acting (T)	Ampere
Part Number	Part Number	Rating
_	3ABDA.200	200mA
3AB.250	3ABDA.250	250mA
-	3ABDA.300	300mA
3AB.375	3ABDA.375	375mA
3AB.500	3ABDA.500	500mA
	3ABDA.600	600mA
3AB.750	3ABDA.750	750mA
3AB001	3ABDA001	IA
_	3ABDA01.5	1.5A
3AB002	3ABDA002	2A
_	3ABDA02.5	2.5A
3AB003	3ABDA003	3A
3AB004	3ABDA004	4A
3AB005	3ABDA005	5A
3AB006	3ABDA006	6A
	3ABDA6.25	6.25A
3AB007	3ABDA007	7A
3AB008	3ABDA008	8A
3AB010	3ABDA010	I0A
3AB012	3ABDA012	I2A
3AB015	3ABDA015	I5A
3AB020	3ABDA020	20A
3AB025	3ABDA025	25A
3AB030	3ABDA030	30A
	_	35A

Ceramic Body Voltage Ratings (Fast): 250VAC (250mA to 30A)

(Slow): 250VAC (200mA to 30A)

I.R.: Contact sales for further information. Pack Size (bag): 5, 10, 100, 1000

Holders: Clips, Panel Mount, Inline & Blocks Notes: More ratings available, please contact sales.

\*Approvals may vary on the above.

\*Approvals Available: A ( ( P) ROHS

#### **RELATED PRODUCTS:**



Cartridge Fuse Pullers (see p.44)



Panel Mount Fuse Holders (see p.69)



Inline Fuse Holders (see p.69 - 71)



Fused Terminal Blocks (see p. 149)



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## **5AG (AGU) GLASS CARTRIDGE FUSES 32V**





Nickel Plated	Gold Plated	Ampere
Part Number	Part Number	Rating
AGU010	AGU010GP	I0A
AGU015	AGU015GP	I5A
AGU020	AGU020GP	20A
AGU025	AGU025GP	25A
AGU030	AGU030GP	30A
AGU035	AGU035GP	35A
AGU040	AGU040GP	40A
AGU050	AGU050GP	50A
AGU060	AGU060GP	60A



**Nickel Plated** 



**Gold Plated** 



Dimensions in MM  $(1-1/2" \times 13/32")$ 

#### Voltage: 32VAC / 32VDC Pack Size: 5, 10, 25, 50, 100

Features: Glass case allows for visual element inspection. Holders: Clips, Panel Mount, Blocks, Inline & Fuse Carriers.

**Notes:** Widely used to protect automotive and marine audio systems.

#### **MULTIMETER CARTRIDGE FUSES**

Part	Ampere	Voltage	Voltage	"A"	"B"
Number	Rating	AC	DC T	(mm)	(mm)
3AB-FF.315/1000V	315mA	1000V		31.8	6.35
3AB-FF.500/1000V	500mA	1000V		31.8	6.35
BBS001	IA	600V		34.9	10.3
BBS003	3A	600V		34.9	10.3
KTK015	I5A	600V		38. I	10.3
KTK020	20A	600V		38. I	10.3
DMM.440	440mA	1000V	1000V	34.9	10.3
MMF002	2A	1000V	1000V	38. I	10.3
MMF004	4A	1000V	1000V	38. I	10.3
MMF006	6A	1000V	1000V	38. I	10.3
MMF008	8A	1000V	1000V	38. I	10.3
MMF010	I0A	1000V	1000V	38. I	10.3
DMM011	HA	1000V	1000V	38. I	10.3
MMF012	I2A	1000V	1000V	38. I	10.3
MMF016	I6A	1000V	1000V	38. I	10.3
MMF020	20A	1000V	1000V	38. I	10.3

Characteristic: Fast acting Pack Size (box): 1, 10

Notes: Spare cartridge fuses suit most multimeters.

#### FAT-N Bussmann







BBS **DMM.440** 





DMM011

**MMF** 

## **GAC (GBC) EUROPEAN TORPEDO FUSE 32V**

Part Number	Ampere Rating	Body Co	lour
GBC005	5A .	Yellow	
GBC008	8A	White	
GBC016	I6A	Red	
GBC025	25A	Blue	
GBC000AP	Assortment Pack	5pcs	
	5A, 2 x 8A, 16A, 25A		

Voltage: 32VAC / 32VDC Characteristic: Fast Acting Body: Thermoplastic, colour coded.

Pack Size: 5, 10, 100 Holders: Inline fuse holders, contact sales.

Approvals: DIN 72581

Notes: Continental torpedo shaped fuse that was used in many older European cars.











Dimensions in MM



**Assortment Pack** 

#### **MICRO2 FUSE SINGLE ELEMENT 32V**

## **Littelfuse**

#### Features:

- Improved opening characteristics.
- Reduced footprint. The MICRO2™ blade fuses feature smaller 5.0mm centerline spacing that allows for 38% reduction in spacing per fuse.

Part Number	Ampere Ratings	Body Colo	ur
MICR2003	3A	Violet	
MICR2005	5A	Tan	
MICR207.5	7.5A	Brown	
MICR2010	I0A	Red	
MICR2015	I5A	Blue	
MICR2020	20A	Yellow	
MICR2025	25A	Natural	
MICR2030	30A	Green	
MICR2000AP	Assortment Pack 7	pcs	

POLICE EN MICROSOLI ASSOCIATION (COMPATIBLE)

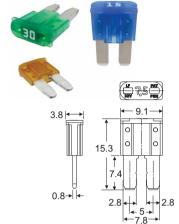
NEW

5A, 7.5A, 10A, 15A, 20A, 25A, 30A Assortment Pack

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Fast Acting Terminals: Zinc alloy, silver plated. Pack Size: 5, 10, 100, 500

Approvals: SAE 2741 and ISO 8820-4. RoHS



Dimensions in MM

#### **RELATED PRODUCTS:**













(see p.44)

Assortment Pack 35 (see p.36)

Assortment Kit (see p.37)

(see p.72)

(see p.83)

(see p.86)

Littelfuse

#### **MICRO3 FUSE DUAL ELEMENT 32V**

The MICRO3 $^{\text{\tiny{TM}}}$  fuse has 3 terminals and 2 fuse elements with a common center terminal. Its sub-miniature design meets the need for more circuits to be protected while utilizing less space and its ability to cope with high temperatures in adverse environments.

Part Number	Ampere Ratings	Body Cole	our
MICR3003	3A	Violet	NEW
MICR3005	5A	Tan	
MICR307.5	7.5A	Brown	
MICR3010	10A	Red	
MICR3015	15A	Blue	
MICR3000AP	Assortment Pack	•	
	5A, 7.5A, 10A, 15A	١.	Asso



**Assortment Pack** 



Voltage: 32VDC I.R.: 1000A at 32VDC Characteristic: Fast Acting Terminals: Zinc alloy, silver plated. Pack Size: 5, 10, 100, 500

Approvals: RoHS

#### **RELATED PRODUCTS:**



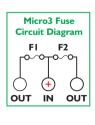


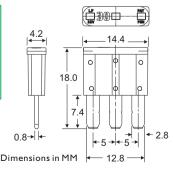


Assortment Kit (see p.37)



Add-a-circuit (see p.83)







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## **LOW PROFILE MINI FUSE 58V**



The low profile Mini fuse features a lower overall height thereby reducing space requirements whilst still retaining similar performance characteristics to the standard Mini fuse.





Part Number	Ampere Rating	Body Colour
LPM002	2A	Grey 🔳
LPM003	3A	Violet
LPM004	4A	Pink
LPM005	5A	Tan
LPM07.5	7.5A	Brown
LPM010	10A	Red
LPM015	15A	Blue
LPM020	20A	Yellow
LPM025	25A	Natural
LPM030	30A	Green
LPM000AP	Assortment Pack	5pcs
	7.5A, 10A, 15A, 20,	30A







Voltage: 58VDC I.R.: 1000A at 58VDC

Characteristic: Fast Acting Pack Size: 5, 10, 100, 1000

Terminals: Zinc alloy, silver plated.

Holders: PCB Clips and bases please contact sales.

Approvals: SAE ROHS

RELATED PRODUCTS:









CTS: Fuse Puller (see p.44)

Fuse Holder (see p.72)

Fuse Kit Add-a-circuit (see p.38) (see p.83)

## **MINI TYPE DEVICES**

Diode / Resistor Shunt / Transorb



Diode, Resistor, Shunt and Transorb vehicle-style electrical protection devices easily install in common Mini fuse holders and provide voltage and current limiting functionality to vehicle circuitry.



Part Number	Description	Profile	Brand
02400113P	Diode - IA, (400V PIV). Keyed*. Reverse current protector.	Standard	Littelfuse
22903-6	Diode - 6A. Keyed*. Reverse current protector.	Tall	Bussmann
22903-6V	Diode - 6A. Keyed & Wing*. Reverse current protector.	Tall	Bussmann
22902-68	Resistor - 5W. Resistance: 68Ω. Voltage drop device.	Tall	Bussmann
0297900*	Shunt - 20A Maximum continuous load rating.	Standard	Littelfuse NEW
22901-1.5	Transorb - Clamp Rating: 27VDC. Power Rating: I 500W.	Tall	Littelfuse
	Voltage spike protector.		

Materials: Thermoplastic housing, grey with metal cover (229 series).

Thermoplastic housing, black (02400113P).

Termination Type: 2.8mm blades. Compatible with ISO 280 type fuse blocks. Diode Key Feature\*: Standard key denotes installation direction.

Wing key available for error proof installation in Bussmann VEC. **Holders:** Please refer to our holder compatibility table on our QR datasheet.

Pack Size: Stock lines I pc. \*Indent items contact sales

Scan this QR Code for more information



QR Code: 3001

TVS









-₩-





**Diode** 02400113P

**Diode** 22903-6

**Diode** 22903-6V

22902-68

0297900

Transorb 22901-1.5



#### **MINI FUSE 32V**



Part Number	Ampere Rating	Body Color	ır
MIN002	2A	Grey	
MIN003	3A	Violet	
MIN004	4A	Pink	
MIN005	5A	Tan	
MIN07.5	7.5A	Brown	
MIN010	I0A	Red	
MIN015	15A	Blue	Pittico
MIN020	20A	Yellow	MAILUSE ARMINIST
MIN025	25A	Natural	Services.
MIN030	30A	Green	
MIN000AP	Assortment Pack	5pcs	
	5A, 10A, 15A, 20,	30A	<b>Assortment Pack</b>



Voltage: 32VDC I.R.: 1000A at 32VDC Characteristic: Fast Acting Terminals: Zinc alloy, silver plated.

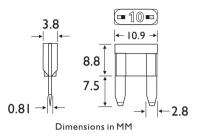
Options: 58VDC, 80VDC & 125VDC versions contact sales.

Pack Size: 5, 10, 100, 500, 1000, 3000

Holders: Clips, PCB Blocks, Inline, Add-a-Circuits,

Blocks & Power Distribution Modules.

Approvals: ISO 8820 / SAE J2077 / UL 248 (4) SAE ROHS



#### RELATED **PRODUCTS:**











35pc Assortment Pack (see p.36)

**Assortment Kit** (see p.38)

**Fuse Puller** (see p.44)

**Assortment Pack** 

Inline Holder (see p.72 - 73)

Normal state

3.8

Add-a-Circuit (see p.83)

Open fuse

PROL

## MINI FUSE LED INDICATING 32V

This fuse uses a patented bi-directional LED technology to indicate when a fuse has blown. It is a drop-in replacement for non-indicating Mini fuses.

Part Number	Ampere Rating	Body Colour
MIND003-32V	3A	Violet
MIND005-32V	5A	Tan
MIND07.5-32V	7.5A	Brown
MIND010-32V	10A	Red
MIND015-32V	15A	Blue
MIND020-32V	20A	Yellow
MIND025-32V	25A	Natural
MIND030-32V	30A	Green
MIND000AP	Assortment Pack 5pcs	
	104 154 20 254 204	

Voltage: 32VDC Characteristic: Fast Acting

Pack Size: 2, 5, 10, 100, 500, 1000

Holders: Clips, PCB Blocks, Inline, Blocks & Power Dist. Compliance: SAE SAE |2077, ISO 8820-3

**RELATED** PRODUCTS:



**Assortment Pack** (see p.36)



**Assortment Kit** (see p.38)

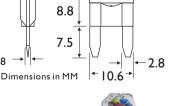


**Fuse Clips** (see p.68)



0.8

Inline Holder (see p.73)

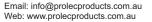


**-**20 **-**

**←**10.93→

Power Dist. Modules (see p.120 - 121)





#### **MINI FUSE 58V**





Part Number	Ampere Rating	Body Colour
MIN002-58V	2A	Grey
MIN003-58V	3A	Violet
MIN004-58V	4A	Pink
MIN005-58V	5A	Tan
MIN07.5-58V	7.5A	Brown
MIN010-58V	10A	Red
MIN015-58V	15A	Blue
MIN020-58V	20A	Yellow
MIN025-58V	25A	Natural
MIN030-58V	30A	Green

Voltage: 58VDC I.R.: 1000A at 58VDC Characteristic: Fast Acting Terminals: Zinc alloy, silver plated.

Pack Size: 3.000

Holders: Fuse Clips, Fuse Blocks, Power Distribution Modules. Options: 80VDC and 125VDC Ignition Protected contact sales.

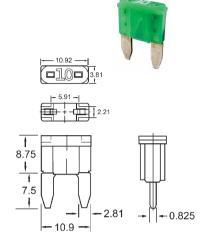
Notes: \*Please contact sales for specifications. Approvals: UL 248-14 RoHS

**RELATED** PRODUCTS:



Fuse Puller (see p.44)

**Power Dist. Modules** (see pl 19 - 146)



Dimensions in MM

#### **AUTO FUSE 80V**



Voltage: 80VDC I.R.: 1000A at 80VDC Characteristic: Fast Acting Terminals: Copper Alloy, Tin Plated.

Pack Size: 100, 500, 1000

Holders: Fuse Clips, Fuse Blocks, Fused Terminal Blocks. Product Options: 58VDC & 125VDC versions. Slotted

body design also available.

Notes: \*Please contact sales for specifications.

Approvals: c us RoHS





**Power Dist. Modules** 

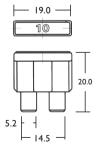


**Fuse Terminal Block** (see p.148)









5.0

0.6

13.5

6.5

Dimensions in MM



(see p.93)



#### **AUTO FUSE 32V**

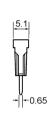


Part Number	Ampere Rating	Body Colour
ATOF001	IA	Black
ATOF002	2A	Grey
ATOF003	3A	Violet
ATOF004	4A	Pink
ATOF005	5A	Tan
ATOF07.5	7.5A	Brown
ATOF010	I0A	Red
ATOF015	15A	Blue
ATOF020	20A	Yellow
ATOF025	25A	Natural
ATOF030	30A	Green
ATOF035	35A	Blue/Green
ATOF040	40A	Orange <
ATOF000AP	Assortment Pack 5A, 10A, 15A, 20A, 3	•









Dimensions in MM

19.1

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Fast Acting

Options: 80VDC & 125VDC versions contact sales.

Pack Size: 5, 10, 100

Holders: Clips, PCB Mount, Inline, Add-a-circuit, Panels, Fuse Blocks, Fused Terminal Blocks & Modular Blocks.

Approvals: ISO 8820-3 (4) ( RoHS

#### **RELATED** PRODUCTS:



(see p.39)



(see p.44)







Inline Holder Add-a-Circuit (see p.74 - 78) (see p.83)

**Fuse Blocks** (see p.87 - 93, 137)

#### **AUTO FUSE LED INDICATING 32V**

This fuse uses a patented bi-directional LED technology to indicate when a fuse has blown. It is a drop-in replacement for non-indicating Auto fuses.

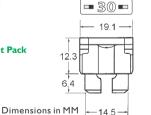
Part Number	Ampere Rating	Body Colour
ATFD003-32V	3A	Violet
ATFD005-32V	5A	Tan
ATFD07.5-32V	7.5A	Brown
ATFD010-32V	10A	Red
ATFD015-32V	15A	Blue
ATFD020-32V	20A	Yellow
ATFD025-32V	25A	Natural
ATFD030-32V	30A	Green
ATFD000AP	Assortment Pack 5pcs	
	10A, 15A, 20A, 25A, 30A	



Assortment Pack



**Normal state** Open fuse





Voltage: 32VDC Characteristic: Fast Acting

Pack Size: 2, 5, 10, 100

Holders: Clips, PCB Mount, Inline, Add-a-circuit, Panels, Fuse Blocks, Fused Terminal Blocks & Modular Blocks.

Compliance: SAE SAE J1284, ISO 8820-3 HF RoHS

#### **RELATED** PRODUCTS:



**Assortment Pack** (see p.36)



**Assortment Kit** (see p.39)



**Inline Holders** (see p.74 - 79)



Various Blocks & Panels (see p.87-93, 116-117, 138)



#### **MAXI FUSE 32V**



Part Number	<b>Ampere Rating</b>	<b>Body Colour</b>
MAX020	20A	Yellow
MAX025	25A	Grey
MAX030	30A	Green
MAX035	35A	Brown
MAX040	40A	Orange =
MAX050	50A	Red
MAX060	60A	Blue
MAX070	70A	Tan
MAX080	80A	Natural
MAXI00*	100A	Violet

Voltage: 32VDC I.R.: 1000A at 32VDC Characteristic: Slow Acting

Terminals: Zinc alloy, silver plated. Pack Size: 1, 10, 100, 500, 1200

Holders: Fuse Clips, Inline, Power Distribution Modules. Options: 58VDC & 80VDC versions contact sales. Notes: \*Please contact sales for specifications.

Approvals (20A to 80A): SAE | | 888 / ISO 8820 RoHS

## **-** 50 29.2 8.9 0 21.6 12.7 0.81 8 13

29.2 -

#### **RELATED** PRODUCTS:



**Fuse Puller** 

(see p.44)



**Fuse Kit** (see p.39)



**Fuse Holder** (see p.80)



Inline Fuse Holders (see p.79 - 80)



Dimensions in MM

Power Distribution (see p.112 & 138)

## **MAXI FUSE INDICATING 32V**



Day or night when a fuse blows, the fuse lights up to indicate immediately which fuse needs replacing which saves time and effort. This fuse uses a patented bi-directional LED technology to indicate when a fuse has blown. It is a drop-in replacement for non-indicating Maxi fuse.

Part Number	Ampere Rating	Body Colour
MAXD020	20A	Yellow
MAXD030	30A	Green
MAXD040	40A	Orange =
MAXD050	50A	Red
MAXD060	60A	Blue
MAXD070	70A	Tan
MAXD080	80A	Natural
MAXD100	100A	Violet

Voltage: 32VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100, 500, 1000

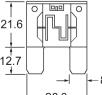
Holders: Fuse Clips, Inline, Fuse Blocks & Power Dist. Features: Maxi fuse with blown fault LED indicator.

#### RELATED **PRODUCTS:**



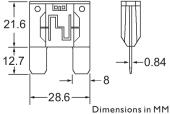
**Inline Fuse Holder** (see p.80)







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**Inline Fuse Holder** 

(see p.79 - 80)

#### **MAXI FUSE 58V**

Ampere Rating	Body Colour
30A	Green
40A	Orange =
50A	Red
60A	Blue
80A	Natural
	30A 40A 50A 60A

Voltage: 58VDC I.R.: 1000A at 58VDC Characteristic: Slow Acting Features: Element window. Terminals: Zinc alloy. Pack Size: 1, 10, 100, 500, 1000.

**Holders:** Fuse Clips, Inline, Power Distribution Modules.

**Notes:** \*Please contact sales for specifications. For other ampere ratings contact sales.

Complies With: ISO 8820-3 RoHS



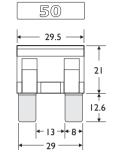
RELATED Fuse Puller PRODUCTS: (see p.44)



9.0 →

0.82 → | ←





Dimensions in MM

#### **MAXIPLUS COMPACT FUSE 32V**



The MAXI+ @ Fuse is new standard for vehicle circuit protection. Its miniature design meets the need for more circuits to be protected while utilizing less space, and its ability to cope with high temperatures in adverse environments makes the MAXI+ @ Fuse of recommended choice for protection.



Part Number	Ampere Rating	<b>Body Colour</b>
MAXP020	20A	Yellow
MAXP025	25A	Grey
MAXP030	30A	Green
MAXP035	35A	Brown
MAXP040	40A	Orange
MAXP050	50A	Red
MAXP060	60A	Blue

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting

Component Level Temperature Range:  $-40^{\circ}$ C to  $+125^{\circ}$ C System Level Temperature Range:  $-40^{\circ}$ C to  $+105^{\circ}$ C

105°C is a typical system level temperature requirement.

Terminals: Zinc alloy, silver plated.

**Features:** Maxi fuse opaque case to see fuse element. **Holders:** Fuse Clips, Inline, PDM's contact sales for details.

**Pack Size:** 1, 10, 100, 500, 1000

Approvals: ISO 8820-10: 2020

## RELATED PRODUCTS:

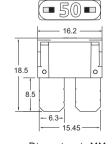
Terminals F630E (0.35 - 6.0mm<sup>2</sup>)





Fuse & Relay Module (# 0101695 contact sales)





Dimensions in MM



0.8

## MCASE UNSLOTTED FUSE LINKS 32V



2.8mm Term.	Ampere	Body
Part Number	Rating	Colour
MJC015	I5A	Grey
MJC020	20A	Lt.Blue
MJC025	25A	White
MJC030	30A	Pink
MJC040	40A	Green
MJC000AP	Assortmen	t Pack 5pcs
	15A, 20A,	25A, 30A, 40A



**Assortment Pack** 





Voltage: 32VDC I.R.: 1000A at 32VDC Fuse Charateristic: Slow Acting

Shunt: 30A Max Cont. Load Rating, P/N: 0695900.PXP. Contact Sales.

Pack Size: 1, 10, 100, 2000

Approvals: RoHS







Dimensions in MM

**¼** Littelfuse°

## MCASE + SLOTTED FUSE LINKS 32V

6.35mm Term. Part Number	Ampere Rating	Body Colour
MCPS015	I5A	Grey
MCPS020	20A	Lt.Blue
MCPS025	25A	White _
MCPS030	30A	Pink 📕
MCPS040	40A	Green
MCPS050	50A	Red
MCPS060	60A	Yellow
0695900.PXPS	50A Shunt ST	Black =
MCPS000AP	Assortment F	Pack 7pcs
	15A, 20A, 25	A, 30A,
	40A, 50A, 60	A

Voltage: 32VDC I.R.: 1000A at 32VDC Fuse Charateristic: Slow Acting Shunt: 50A Max Continuous Load Rating

Pack Size: 1, 10, 100, 2000 Holders: MiniFLEC Approvals: RoHS



The Mcase+ Slotted fuse has a unique design feature in that the fuse can be mounted directly onto a comb busbar.

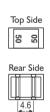
Accessories

Assortment Pack

0695900.PXPS Shunt

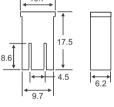
**NEW** 

**MCPS** Fuse









*PEC* 

Dimensions in MM

## **LOW PROFILE JCASE FUSE LINKS 58V**

6.35mm Term.	Ampere	Body
Part Number	Rating	Colour
LJC020	20A	Lt. Blue
LJC025	25A	White $\square$
LJC030	30A	Pink
LJC040	40A	Green
LJC050	50A	Red
LJC060	60A	Yellow

Voltage: 58VDC I.R.: 1000A at 58VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100

Holders: Inline, Panel Mount & Modules.

Approvals: RoHS



Power Input



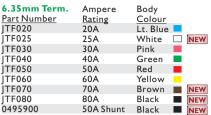




Dimensions in MM



## **JCASE FUSE LINKS 32V**



Voltage: 32VDC I.R.: 1000A at 32VDC Fuse Characteristic: Slow Acting Shunt: 50A Max Continuous Load Rating (ST)

Pack Size: 1, 10, 100, 500

Approvals: ISO 8820 / JASO D612 RoHS

Holders: Inline & Power Fuse / Relay Dist. Module.



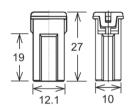
Fuse Top Side 4.6

Rear Side

I← 14.1 →

Shunt Top Side

12



Dimensions in MM



A) PEC



**ICASE Shunt** 

A) PEC

## **LARGE FUSE LINK 32V**

Part	Ampere	Body
Number	Rating	Colour
ASF020	20A	Lt. Blue
ASF030	30A	Pink
ASF040	40A	Green
ASF050	50A	Red
ASF060	60A	Yellow
ASF070	70A	Brown
ASF080	80A	Black
ASFI00	100A	Blue

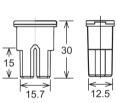
Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100, 500

Approvals: ISO 8820 / IASO D612 RoHS









Dimensions in MM

## **FUSE LINK WITH LOCK 32V**

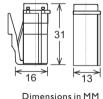
Part	Ampere	Body	Body
Number	Rating	Type	Colour
SHF025	25A	Small	Lt. Brown
SHF030	30A	Small	Lt. Green

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100, 500

Approvals: ISO 8820 / JASO D612 RoHS





4 PEC

**Small Body** (25A to 30A)

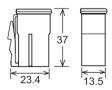
Part Number	Ampere Rating	Body Type	Body <u>Colour</u>
LHF045	45A	Large	Red
LHF065	65A	Large	Black
LHF075	75A	Large	Grey -

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting

Pack Size: 1, 10, 100 Approvals: ISO 8820 / JASO D612 RoHS





Dimensions in MM



Large Body (45A - 75A)



## **FUSE LINK SMALL BENT MALE TERMINAL 32V**

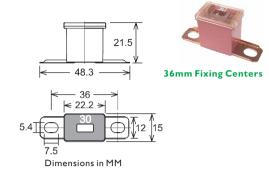


Small Body Part Number	Ampere Rating	Body Colour	
SBF030	30A	Pink	
SBF040	40A	Green	
SBF050	50A	Red	
SBF060	60A	Yellow	
SBF070	70A	Brown	
SBF080	80A	Black	
SBF100	100A	Blue	
SBF120	120A	White	
SBF140	140A	Maroon	

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100

Approvals: ISO 8820 / IASO D612 RoHS



## **FUSE LINK LARGE BENT MALE TERMINAL 32V**



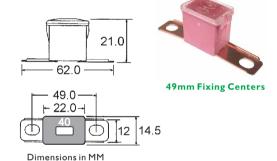
Large Body Part Number	Ampere	Body Colour	
LBF030	Rating 30A	Pink	
LBF040	40A	Green	
LBF050	50A	Red	
LBF060	60A	Yellow	
LBF070	70A	Brown	
LBF080	80A	Black	
LBF100	100A	Blue	
LBFI20	120A	White	
LBFI40	140A	Maroon	

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting

Pack Size: 1, 10, 100

Approvals: ISO 8820 / IASO D612 RoHS



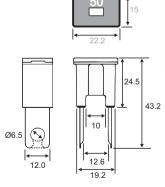
## **FUSE LINK STRAIGHT MALE TERMINAL 32V**

Bolt Hole Terminal	Cut Out Terminal	Ampere	Body	
Part Number	Part Number	Rating	Colour	_
BTF030	BTCF030	30A	Pink	
BTF040	BTCF040	40A	Green	
BTF050	BTCF050	50A	Red	
BTF060	BTCF060	60A	Yellow	
BTF070	BTCF070	70A	Brown	
BTF080	BTCF080	80A	Black	
BTF100	BTCF100	100A	Blue	
BTF120	BTCF120	120A	White	
BTF140	BTCF140	140A	Maroon	

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting Pack Size: 1, 5, 10, 100

Approvals: ISO 8820 / JASO D612 RoHS







**PEC** 

**Cut Out Type** 



## **MULTI-POLE FUSE LINKS (3-IN-1) 32V & 58V**

**EAT•N** Bussmann

Bussmann multi-pole fuses (MPF) are cartridge fuses containing three fuse elements of the same or differing ampere ratings for protecting three circuits with a single design. They are the OEM equivalent to the fuses used on popular Infiniti, Lexus. Nissan and Toyota vehicles manufactured since 2002.



Part Number	Ampere Ratings	Voltage	Colour Code
MPF-433X	40A + 30A + 30A	32VDC	Pink
MPF-444X	40A + 40A + 40A	32VDC	Green
MPF-533X	50A + 30A + 30A	32VDC	Red
MPF-534X	50A + 30A + 40A	32VDC	Blue
MPF-633X	60A + 30A + 30A	32VDC	Yellow
MPF2-324X	30A + 20A + 40A	58VDC	Yellow
MPF2-433X	40A + 30A + 30A	58VDC	Pink
MPF2-444X	40A + 40A + 40A	58VDC	Green
MPF2-533X	50A + 30A + 30A	58VDC	Red
MPF2-534X	50A + 30A + 40A	58VDC	Blue
MPF2-535X	50A + 30A + 50A	58VDC	Black
MPF2-555X	50A + 50A + 50A	58VDC	Maroon









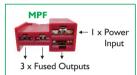
MPF (32VDC) 32.6 x 15.6 x 28mm  $(L \times W \times H)$ 

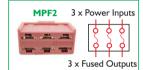
**MPF2 (58VDC)** 28.5 x 16 x 16mm  $(L \times W \times H)$ 

Voltage: See table I.R.: 1000A at rated voltage Element: Copper Alloy Feature: Element Window Housing Flammability: UL 94

Pack Size: Varies, please contact sales.

Approvals: ISO8820-4, JASO D612-4 RoHS

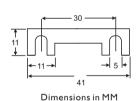




## **FUSE STRIP LUG TYPE WITHOUT HOUSING 36V**



Part Number FBM030 FBM040 FBM050 FBM060 FBM070 FBM080 FBM100	Ampere Rating 30A 40A* 50A 60A* 70A* 80A 100A





90° Fork Type Lugs

Voltage: 36VDC I.R.: 625A

Mounting: M5 studs. Material: Zinc

Pack Size: 10, 100, 2000

Holders: In-Line Holder & Blocks (Midi fuse type) Notes: Can be replaced by 58V Midi fuse (see p.24) Approvals: DIN 72581/2 \*Not DIN standard. RoHS

## **FUSE STRIP RING TYPE WITHOUT HOUSING 32V**



Original equipment fuses suitable for older model Volkswagen, Audi, Seat, Skoda cars.

Part Number 00940402ZP

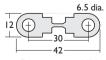
Assortment Pack Contains 8pcs (Ipc): 30A, 40A, 50A, 60A,

(Ipc) 80A, II0A, I50A, I75A

Voltage: 32VDC I.R.: 1000A

Material: Zinc Alloy Mounting: M6 studs. Notes: Can be replaced by 58V Midi fuse (see p.24)

Approvals: DIN 72581/2 RoHS



Dimensions in MM







Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

#### MIDI FUSE M5 32V

## **Littelfuse**

- Space saving fuse provides for high current wiring protection.
- Bolted fixing ensures optimum electrical connection.
- · Low to high amperage ratings.

Part Number	Ampere Rating	Font Colour
MID023-32V	23A	White
MID030-32V	30A	Orange
MID040-32V	40A	Green
MID050-32V	50A	Red
MID060-32V	60A	Yellow
MID070-32V	70A	Brown
MID080-32V	80A	White
MID100-32V	100A	Blue
MID125-32V	125A	Pink
MID150-32V*	150A	Lt. Grey
MID175-32V*	175A	Dark Grey
MID200-32V*	200A	Violet

16 30

Dimensions in MM

Amp Ratings В 8.0 23A-80A 041 4 0 100A-200A 0.63 4.3

I.R.: IkA at 32VDC. Voltage: 32VDC Characteristic: Slow Acting

Features: Element window (except 23A).

Terminal: Tin plated copper. Mounting: M5 stud only.

Options: Shunt Midi, contact sales. Holders: In-line, Fuse Blocks & Fused

Power Distribution Units.

Pack Size: 1, 10, 100, 500, 1000 Notes: \* Short circuit protector only.

Approvals: ISO 8820-5 RoHS

#### RELATED **PRODUCTS:**



**Fuse Assortment Kit** (see p.41)



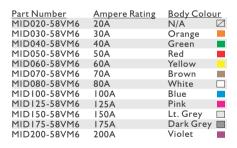
**Inline Fuse Holder** (see p.81 - 82)



Fuse Blocks & PDM (see p.94 - 118)

*PEC* 

## MIDI FUSE M6 65V - 58V



I.R.: IkA at rated voltage.

Voltage: 65VDC (20A), 58VDC (30A-200A)

Characteristic: Slow Acting.

Features: Element window (except 20A).

Terminal: Tin plated copper. Mounting: M5 or M6 stud. Options: 70V version - 36mm fixing centers -70VSF36. Holders: In-line, Fuse Blocks & Power Distribution Unit.

Pack Size: 1, 10, 100, 500, 1000

Approvals: ISO 8820-5 RoHS

#### RELATED PRODUCTS:

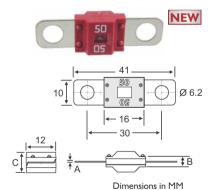




Fuse Blocks (see p.94)



**Fuse Block** (see p.98)



Amp Ratings

100A-200A

20A-80A



В

0.63 4.3

0 41

40 80

(see p.110 - 117)



## **MEGA FUSE RIVETED 32V**



50.8

29.23 68.58

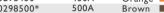
Dimensions in MM

1.02

1.83

Designed and patented by Littelfuse, the MEGA fuse is ideal for battery, alternator connectors and other heavy gauge cables.

32V	Ampere	Font	
Part Number	Rating	Colour	
0298040	40A	White	
0298060	60A	White	
0298080	80A	Red	
0298100	100A	Yellow	
0298125	125A	Green	
0298150	150A	Orange	
0298175	175A	White	
0298200	200A	Blue	
0298225	225A	Tan	
0298250	250A	Pink	
0298300*	300A	Grey	
0298350*	350A	Green	
0298400*	400A	Purple	
0298450*	450A	Orange	
0298500*	500A	Brown	



Voltage: 32VDC I.R.: 2kA at 32VDC. Characteristic: Slow Acting \* Short circuit protectors only. Terminals: 40A & 60A (Silver plated) Brass, 80A - 500A Copper.

Mounting: M8 or 5/16" studs.

Options: I20VDC, 60A to 650A, 56mm fixing, 0888 Series.

Pack Size: 1, 10, 100, 500 Approvals: ISO 8820-5 RoHS



Inline Fuse Holder



19.05

8.64

16,26

Amp Ratings

300A - 500A

40A - 250A

**Fuse Blocks** (see p.96 - 101)



9.9

10.67

**Fused Distribution Module** (see p113 - 115)

PROVEG

**NEW** 





(see p.41)

(see p.82)

## **MEGAFUSE 32V & 70V**

32V	70V	Ampere	Font / Body
Part Number	Part Number	Rating	Colour
MEG040	MEG040-70V	40A	White
-	MEG050-70V	50A	White $\square$
MEG060	MEG060-70V	60A	Lt. Blue
MEG080	MEG080-70V	80A	Red
MEGI00	MEG100-70V	100A	Yellow
MEG125	MEG125-70V	125A	Green
MEGI50	MEG150-70V	150A	Orange
MEG175	MEG175-70V	175A	White $\square$
MEG200	MEG200-70V	200A	Blue
MEG225	MEG225-70V	225A	Tan
MEG250	MEG250-70V	250A	Pink
MEG300	MEG300-70V	300A	Grey
MEG350	MEG350-70V	350A	Green
MEG400	MEG400-70V	400A	Purple
MEG450	MEG450-70V	450A	Orange =
MEG500	MEG500-70V	500A	Brown

Voltage (32VDC): I.R.: I.0kA at 32VDC Voltage (70VDC): I.R.: 2.5kA at 70VDC Characteristic: Slow Acting

Pack Size: 1, 10, 100, 400

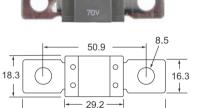
Holders: Inline, Blocks & Power Dist. Unit.

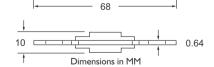
Mounting: M8 or 5/16" studs. Approvals: ISO 20934 RoHS





Fuse Block (see p.97)







**Fuse Block** (see p.99)



**Fuse Block** (see p. 100)



**Fuse Block** (see p. 101)



#### **POWERVAL CALIBRE FUSE 32V**



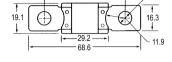
8.6

- Designed for high current circuit protection to protect starter cables.
- Ideal for starter and alternator connectors.
- These fuses allow the load of a starter motor or winch to operate without blowing the fuse, however they will open in the case of a direct short.



	Continuous	Minimum	Maximum	Cable		
Part	Rated	Melting	Melting	Size	Body	
Number	Current	Current	Current	(mm <sup>2</sup> )	Colour	
POWCALI	150A	380A	2000A	16	Grey	
POWCAL2	150A	400A	2000A	25	Black	
POWCAL3	180A	530A	2000A	50	Red	
POWCAL4	180A	600A	2000A	50	Lt.Brown	
POWCAL5	180A	700A	2000A	50	Dk. Brown	





50.8

Dimensions in MM

Voltage: 32VDC I.R.: 2000A at 32VDC

Characteristic: Slow Acting Mounting: M8 or 5/16" studs

Terminal: (POWCALI - 2) Tin Plated Zinc Alloy. (POWCAL3 - 5) Tin plated Copper.

Pack Size: 1.10.100

Holders: Inline, Fuse Blocks, Power Dist. Unit.

Approvals: REACH ROHS

**RELATED** 

PRODUCTS:





Inline Fuse Holder (see p.82)



**Fuse Block** (see p.96-101)



**Fused PDU** (see p.111-115)

11.0





PROL

#### **FUSE STRIP WITH HOUSING 48V - 80V**

Part <u>Number</u> FBT030	Ampere Rating 30A	NEW	Part <u>Number</u> FBT250	Ampere Rating 250A	
FBT035	35A		FBT275	275A	NEW
FBT040	40A	NEW	FBT300	300A	
FBT050	50A		FBT325	325A	
FBT060	60A	NEW	FBT350	350A	NEW
FBT080	80A		FBT355	355A	NEW
FBT100	100A		FBT400	400A	
FBT125	125A		FBT425	425A	
FBT130	130A	NEW	FBT500	500A	NEW
FBT150	150A	NEW	FBT600	600A	NEW
FBT175	175A	NEW	FBT675	675A	NEW
FBT200	200A		FBT750	750A	NEW
FBT225	225A	NEW	FBT800	800A	NEW



Straight Fork and 90 Degree Type Lugs

0

61.0

0

Voltage: 48VDC (30A-425A), 80VDC (500A-800A) I.R.: 2.5kA at 48VDC. 4kA at 80VDC. Characteristic: Fast Acting

Mounting: MIO studs. Feature: Element window. Pack Size: 1, 10, 20, 50

Notes: Suitable for battery-powered vehicles.

Approvals: Ref: UL 248, DIN 43560 CNUS RoHS

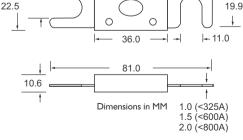
#### RELATED PRODUCTS:



(see p.101)









Forklift truck and battery isolator fuses are specially designed for the heavy duty loads associated with DC battery powered equipment such as forklift trucks, hand trucks, motorized work platforms, and other DC battery operated systems. Rugged construction and stud mounted bolt-in design assure a long life in adverse conditions.

Part	Ampere	Part	Ampere
Number	Rating	Number	Rating
ANL035	35A	ANL225	225A
ANL040	40A	ANL255	250A
ANL050	50A	ANL275	275A
ANL060	60A	ANL300	300A
ANL080	80A	ANL325	325A
ANL100	100A	ANL350	350A
ANL125	125A	ANL400	400A
ANL130	130A	ANL500	500A
ANL125	125A	ANL400	400A
ANLI30	130A	ANL500	500A
ANLI50	150A	ANL600	600A
ANLI75	175A	ANL675	675A
ANL200	200A	ANL750	750A

I.R.: 6kA (35A to 500A, 32VAC), 2.7kA (600A to 750A, 32VAC) 2.7kA (All ratings, 80VDC)

Voltage: 32VAC / 80VDC Characteristic: Fast Acting

Features: Ignition Proof (<500A). Silver plated copper link.

Mounting: M8 or 5/16" studs

Features: Element visible inspection mica window.

Holders: Block. Pack Size: 1, 5, 10, 100

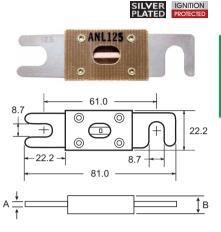
Approvals: SAE Ignition Protected (35A to 500A) (600A, 675A & 750A ratings)

**RELATED** 

PRODUCTS: Fuse Block

(see p.101)





ANL Series	Dimensio	ns in MM
Ampere Rating	<u>A</u>	<u>B</u>
35A to 200A	0.45	7.55
225A to 325A	1.40	8.70
350A to 675A	2.70	9.50
750A	3.35	10.9

• ANN250 •

## **ANN LIFT TRUCK FUSES 80V**

Part	Ampere	Part	Ampere
Number	Rating	Number	Rating
ANN010	10A	ANN225	225A
ANN035	35A	ANN250	250A
ANN040	40A	ANN275	275A
ANN050	50A	ANN300	300A
ANN060	60A	ANN325	325A
ANN080	80A	ANN350	350A
ANN090	90A	ANN400	400A
ANN 100	100A	ANN500	500A
ANN 125	125A	ANN600	600A
ANN 150	150A	ANN700	700A
ANN 175	175A	ANN800	800A
ANN200	200A		

I.R.: 2.5kA (125VAC), 2.7kA (80VDC) Voltage: 125VAC / 80VDC

Characteristic: Very Fast Acting Mounting: M8 or 5/16" studs

Features: Element visible inspection mica window.

Holders: Block. Pack Size: 1, 5, 10, 100 Notes: ANN series is not ignition proof

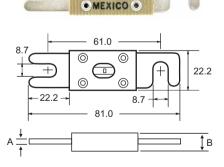
Approvals: **(35A-400A, 500A DC only)** 

**RELATED** 

PRODUCTS: **Fuse Block** (see p. 101)



#### FAT.N Bussmann



ANN Series	Dimension	ons in MM
Ampere Rating	<u>A</u>	<u>B</u>
10A to 300A	1.19	9.12
325A to 600A	4.47	12.70
700A to 800A	5.94	13.49

#### **BATTERY FUSE - MARINE RATED 58V**

EAT•N Bussmann







#### Marine Rated Battery Fuses - Designed for the most demanding environment to provide high current protection for the tightest space constraints. Suitable for main and auxiliary circuit protection such as alternator outputs, starter motor inputs, and accessory circuits. The breaking capacity meets the requirements of conventional vehicle batteries and 12V, 24V and 42V electrical networks.

#### Features

- Extensive amperage range 30A to 300A.
- Voltage rating 58VDC max.
- Ignition protected per SAE II I I 7.
- Weatherproof (IP66).
- Functional after 500 hours salt spray and salt fog test.
- Clear element window, visual indication of blown condition.
- Colour coded for easy amperage identification.
- Several mounting options. Accept mounting terminal size M8 max.
- Performance requirements per ISO8820-6.

Part Number	Ampere Rating	Face Colour
MRBF030	30A	Lt. Green
MRBF040	40A	Lt. Blue
MRBF050	50A	Red
MRBF060	60A	Gold
MRBF075	75A	Brown
MRBF080	80A	Lime
MRBF090	90A	Purple
MRBF100	100A	Yellow
MRBF125	125A	Green
MRBF150	150A	Orange =
MRBF175	175A	White $\square$
MRBF200	200A	Blue
MRBF225	225A	Tan
MRBF250	250A	Pink
MRBF300	300A	Grey

Voltage: 58VDC

I.R.: 2kA at 58VDC, 5kA at 32VDC, 10kA at 14 VDC

Characteristic: Slow Acting

Pack Size: 1, 10, 100

Housing: UL-rated 94V0 thermoplastic

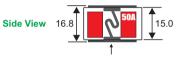
Body: Ceramic

Ring Terminals: Tin plated Holders: Battery Fuse Bar. Mounting: 1/4"-20 or M8 studs Approvals: ISO8820-6 SAE





Transparent cover with colour coded front face.



Fuse Element

Ø8.2 Stud Hole 27.8

**Top View** 

Scan this OR Code

for more

Dimensions in MM



QR Code: 3000



**RELATED PRODUCTS:** 

**Marine Rated Battery Fuse Assortment Kit** (see p.41)



Fuse Bar Single Pole Kit (see p.106)



Fuse Bar **Double Pole Kit** (see p.106)



**Bussed Fuse Block** Multi Pole (see p.108)



#### **BATTERY FUSE - ZCASE STARTER FUSE 32V**



The Zcase Single Mega Starter Fuse is a minimal footprint bolt down fuse with a wide rating range up to 600A in the same packaging size. The Time Current characteristic is similar to the well known Mega fuse and fuse ratings up to 250A can used for full wire protection. Higher fuse ratings mostly used for typically Starter Fuse application as a protector fuse. The fuse can used directly on a battery post or busbar connection. Littelfuse is offering a complete solution for the necessary stud and different busbar connections including some battery clamps.

#### Features:

- Extensive amperage range 40A to 600A.
- Voltage rating 32VDC max.
- Accept mounting terminal size M8 max.
- Several mounting options, stud and post.
- Multi position busbar fed fuse blocks available.

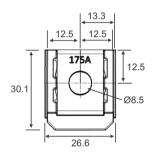
M8 Part Number	Ampere Rating	Wire Size	
3298040	40A	4mm²	NEW
3298060	60A	6mm²	NEW
3298080	80A	I0mm <sup>2</sup>	NEW
3298100	100A	I6mm <sup>2</sup>	NEW
3298125	125A	16mm <sup>2</sup>	
3298150	150A	25mm <sup>2</sup>	
3298175	175A	25mm <sup>2</sup>	
3298200	200A	35mm <sup>2</sup>	
3298225	225A	35mm <sup>2</sup>	
3298250	250A	50mm <sup>2</sup>	
3298300	300A	35mm <sup>2</sup>	
3298350	350A	35mm <sup>2</sup>	
3298400	400A	50mm <sup>2</sup>	
3298500	500A	50mm <sup>2</sup>	
3298600	600A	50mm <sup>2</sup>	
3298900	Shunt	50mm <sup>2</sup>	NEW





**ZCASE Shunt** 

7CASE Fuse



Dimensions in MM



Terminal: Copper Tin Plated

Mounting: M6 or M8 stud (40A - 250A), M8 stud (300A - 600A).

Pack Size: 1, 5, 10, 100, 480

**RELATED** 

Holders: Stud Terminal Mount I Way and 2 Stacked. Top Post Terminal Mount 2 and 3 Way.

Fuse Block 5 and 7 Way.

#### Zcase Options with MIO Mounting Terminal Type:

- Battery Fuse Zcase M10: 32V (80A to 600A), #3298xxx.ZXM10.
- Battery Shunt Zcase M10: 32V, #3298900.ZXM10.
- Materials Handling Fuse Zcase M10: 80V (70A to 600A), #3998xxx.ZXM10.
- Materials Handling Shunt Zcase M10: 80V, #3998900.ZXM10.
- Sealed Battery Fuse Zcase MIO: 600A 80VDC. Explosion Proof version is also available with Sealed Fuse Mount.

Please contact sales for further information on all of the above variants.



M8 Terminal Fuse Bar & Cover Stud Mount (p. 107)

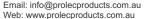


**Battery Mount** Fuse Bar & Cover Post Mount (p.107 & 109)



Multi-Pole **Fuse Blocks** (see p. 108 - 109)





9.4 8

## **MULTI-POLE BATTERY TERMINAL FUSES 32V**

FAT-N

Bussmann

NEW

Battery terminal fuses are fuses containing one or more fuse elements of different ampere ratings for protecting circuits directly from the battery's terminal. Their function is to protect the conductors and not the devices on the circuit(s). They are the OEM equivalent to those part numbers used on popular models of Chrysler, Ford, Lexus, Lincoln, Mitsubishi, Nissan, Subaru, Suzuki, and Toyota vehicles since 2001.

Part	Nbr.	Ampere
Number	Poles	Ratings
BTF-1P-80	1	80A
BTF-1P-100	1	100A
BTF-1P-120	1	120A
BTF-1P-140	1	140A
BTF-2P-180120	2	180A, 120A
BTF-2P-200100	2	200A, 100A
BTF-2P-250125	2	250A, I25A
BTF-3P-1206080	3	120A, 60A, 80A
BTF-3P-1208080	3	120A, 80A, 80A
BTF-5P-1010868	5	100A, 100A, 80A, 60A, 80A
BTF-5P-1210868	5	120A, 100A, 80A, 60A, 80A
BTF-5P-141010108	5	140A, 100A, 100A, 100A, 80A
BTF-5P-25010888	5	250A, 100A, 80A, 80A, 80A
BTF-5P-225106108	5	225A, 100A, 60A, 100A, 80A





Fuse Fuse

Output

Fuse Input









BTF-5P Contact sales for circuit diagram.

#### Body: PS-S-GF35 Element: Copper Alloy

Clear Fuse Cover: Amp stamp

**Pack Size:** 1, 3, 5

Voltage: 32VDC I.R.: 1000A at 32VDC

Approvals: ISO8820-4, JASO D612-4 RoHS

Operating Temperature: -40°C to + I 20°C.

## **MULTI SLOW BLOW FUSES 32V**

**EAT•N** Bussmann

The new line of Bussmann series multi slow-blow fuses address the automotive manufacturers' move to design custom circuit protection technology for their vehicles.



Part	Nbr.	Ampere
Number	Poles	Ratings
MUSB-A1	2	100A, 70A
MUSB-A2	2	120A, 70A
MUSB-A3	2	100A, 40A
MUSB-A4	2	I 20A, 40A
MUSB-L1-2	6	70A, 30A, 40A, 20A, 30A, 100A
MUSB-L1-4	6	70A, 40A, 20A, 40A, 30A, 120A
MUSB-L3-I	4	20A, 20A, 20A, 20A
MUSB-L3-3	4	30A, 30A, 30A, 30A
MUSB-L3-5	4	30A, 40A, 30A, 40A
MUSB-M2-I	11	50A, 60A, 60A, 30A, 30A, 30A,
		30A, 40A, 30A, 20A, 20A
MUSB-M4-I	10	50A, 60A, 60A, 50A, 30A, 30A,
		40A, 30A, 30A, 40A
MUSB-T I	4	125A, 100A, 325A, Shunt
MUSB-T4	4	125A, 80A, 300A, Shunt
MUSB-T5	4	Shunt, 285A, 200A, 125A

Voltage: 32VDC I.R.: 1000A at 32VDC

Clear Fuse Cover: Element window

Pack Size: To be confirmed.



**MUSB-A** 



MUSB-M2



MUSB-L3



**NEW** 

**MUSB-T** 



MUSB-M4



**MUSB-LI** 







#### Features

- Circuit protection for devices including most inverter manufacturers.
- High interrupt capacity for large battery banks including Lithium-Ion and TPPL batteries.
- 200kA interrupting rating provides high ratings at all circuit locations.
- Current limitation for non-inductive circuits, Current-limiting response to short-circuit conditions.
- Small footprint allows more efficient use of available space.

Part	Ampere	Part	Ampere
Number	Rating	Number	Rating
JJN070	70A	JJN225	225A
JN080	80A	JN250	250A
JN090	90A	JJN300	300A
JIN I 00	100A	JJN350	350A
JINII0	II0A	JN400	400A
JN 125	125A	JJN450	450A
JN 150	150A	JN500	500A
JN 175	175A	JJN600	600A
JN200	200A		

Voltage: 300VAC (70A to 600A) 160VDC (70A to 600A) I.R.: 200kA at 300VAC (70A to 600A)

20kA at 160VDC (70A to 600A) Characteristic: Very fast acting

Extended Ratings: IA-60A & 700A-1200A contact sales.

**Modular Fuse Blocks** 

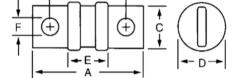
**ELECTRIC VEHICLE FUSES - INTRODUCTION** 

Holders: Blocks

RELATED

Pack Size: Varies 1, 5, 10. Approvals: 例 **(**()





Dimensions in MM

Ampere Rating	Α	В	С	D	E	F
70A to 100A	54.8	39.7	19.1	20.6	21.4	7.2
110A to 200A	61.9	42.9	22.2	27.0	21.4	8.7
225A to 400A	69.9	46.8	25.4	33.3	21.0	10.3
450A to 600A	77.8	51.6	31.8	40.5	22.4	12.3

#### PRODUCTS: (see p. 104)



Just as every other car, electrical vehicles contain electrical components which need to be protected from dangerous over current and short circuits. On top of these lower-voltage components, EVs also have high voltage DC parts like high-capacity battery packs, power conversion devices and other auxiliary circuits. Being direct current, fuses for these applications must meet special requirements for a safe and reliable operation. The same applies to EV fast charging stations which are able to deliver high DC currents. They are an important pillar of emobility and the appropriate protection is important for making them reliable and available.

To fit the needed electrical fuses into the automotive environment, ADLER decided to develop completely new fuse designs. Ordinary semiconductor fuses with ceramic bodies are simply not suitable for the high mechanical and thermal stress inside a car. Adler EV fuses are designed in compliance with automotive standards, for example ISO 8820-8 and JASO D622. Additionally, they are available with melamine laminated glass fiber bodies which are able to withstand mechanical shocks and vibrations to avoid long-term damages. With a product portfolio ranging from 200 VDC to 1000 VDC and different sizes, we can offer the right fuse for your application - be it main or auxiliary circuits for electric vehicles, charging stations or DC converters.

#### SMD, PCB, Cartridge Fuses, **Blocks & Clips**







#### Flush Tag Fuses & Blocks



100A - 400A @ 800Vdc 5A - 50A @ 850Vdc 5A - 500A @ 1000V

100A - 300A @ 1500Vdc

#### Threaded, Centre Tag Fuses & Blocks





50A - 700A @ 500Vdc 60A - 600A @ 800Vdc 5A - 50A @ 850Vdc 10A - 800A @ 1000Vdc



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

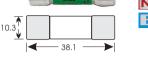
#### **ELECTRIC VEHICLE AUXILIARY FUSES AE2 500V**

General purpose fuse for EV / HEV auxiliary protection.

Cartridge	Flush Bolted	
Part Number	Part Number	Ampere Rating
AE22100607	AE22100605	I0A
AE22150607	AE22150605	I5A
AE22200607	AE22200605	20A
AE22250607	AE22250605	25A
AE22300607	AE22300605	30A
AE22350607	AE22350605	35A
AE22400607	AE22400605	40A
AE22500607	AE22500605	50A

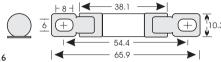
Ferrule Cartridge

38.1



Flush Bolted Tag





Voltage: 500VDC I.R.: 20kA at 500VDC. Time Constant: 1-3ms

Holders (Cartridge): Clips, Blocks, Carriers & Inline. Holders (Flush Bolted): Fuse block.

Terminal Options: PCB Mount & Centre tag.

Approvals: SU UL 248-20, A TUV, ISO 8820-8; GB/T 31465.6

#### **RELATED PRODUCTS:**

**Fuse Clips** BC800 (see p.68)



**Cartridge Fuse Block** BH114-1C (see p.102) BH114-CN (see p.102)



Flush Tag Fuse Block BH114-IM (see p.102) BH114-CN (see p.102)



#### **ELECTRIC VEHICLE PDU FUSES AE5 500V**

Special purpose fuse for EV / HEV automotive use. Ideal for high power EV PDU and battery protection. 500VDC EV high-speed power fuse.

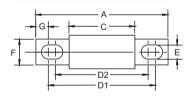
Part Number	Ampere Rating
AE52500620	50A
AE52600620	60A
AE52700620	70A
AE52800620	80A
AE53100620	100A
AE53125620	125A
AE53150620	150A
AE53100625	100A
AE53125625	125A
AE53150625	150A
AE53175625	175A
AE53200625	200A
AE53225625	225A
AE53250625	250A
AE53200631	200A
AE53225631	225A
AE53250631	250A
AE53300631	300A
AE53350631	350A
AE53400631	400A
AE53400638	400A
AE53500638	500A
AE53500651	500A
AE53600651	600A
AE53700651	700A











#### Dimensions in MM

Series	<u>Amperage</u>	<u>A</u>	<u>B</u>	<u>C</u>	DI	<u>D2</u>	<u>E</u>	<u>F</u>	<u>H</u>
AE5620	50A-150A	81	21	40	66	57	8.5	15	3.2
AE5625	100A-250A	89	25	44	73	7 I	9.0	18	3.2
AE5631	200A-400A	92	3 I	53	76	69	8.5	22	5
AE5638	400A-500A	110	38	53	88	70	10.5	24.8	6
AE5651	500A-700A	110	51	53	90	7 I	10.5	38	6

I.R.: 50kA (Self Cert.), 30kA (TUV) at 500VDC

Voltage: 500VDC

Time Constant: (L/R) 2 +/- 0.5ms Ref: JASO D622, ISO 8820-8, GB/T 31465 Approvals: A TUV (50A-400A) RoHS REACH **RELATED PRODUCTS:** 



**Fixed EV Fuse Blocks** (see p103.)



**Modular Fuse Blocks** (see p104.)



## **ELECTRIC VEHICLE AUXILIARY FUSES AE3 850V**

General purpose fuse for EV / HEV auxiliary protection.

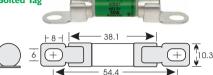


Cartridge	Flush Bolted	
Part Number	Part Number	Ampere Rating
AE31500i07	AE31500i05	5A
AE31800i07	AE31800i05	8A
AE32100i07	AE32100i05	I0A
AE32150i07	AE32150i05	15A
AE32200i07	AE32200i05	20A
AE32250i07	AE32250i05	25A
AE32300i07	AE32300i05	30A
AE32350i07	AE32350i05	35A
AE32400i07	AE32400i05	40A
AE32450i07	AE32450i05	45A
AE32500i07	AE32500i05	50A

38.1

Flush Bolted Tag

Ferrule Cartridge



65.9

Voltage: 850VDC I.R.: 20kA at 850VDC.

Time Constant: 1-3ms

Pack Size: 10pcs.

Holders (Cartridge): Fuse clips, Fuse block, Carrier, Inline.

Holders (Flush Bolted): Fuse block.

Terminal Options: PCB Mount & Centre tag also available. Product Options: 1000VDC 5A-15A version also available AE6. Approvals: UL 248-20, JASO D622, ISO 8820-8; GB/T 31465.6

#### **RELATED PRODUCTS:**

**Fuse Clips** BC800 (see p.68)



Cartridge Fuse Block BH114-IC (see p.102) BH114-CN (see p.102)



Flush Tag Fuse Block BH114-IM (see p.102) BH114-CN (see p.102)



## **ELECTRIC VEHICLE PDU FUSES AE7 800V**

Part Number	<b>Ampere Rating</b>
AE72600i25	60A
AE72700i25	70A
AE72800i25	80A
AE73100i25	100A
AE73125i25	125A
AE73150i25	150A
AE73175i38	175A
AE73200i38	200A
AE73250i38	250A
AE73300i38	300A
AE73350i38	350A
AE73400i38	400A
AE73450i51	450A
AE73500i51	500A
AE73560i51	560A
AE73600i51	600A



I.R.: 50kA at 800VDC Voltage: 800VDC

Time Constant: (L/R) 2 +/- 0.5ms Holders: Modular fuse blocks. Approvals: IEC 60269-4, ISO 8820

# D2 D1

#### Dimensions in MM

<u>Series</u>	<u>Amperage</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D1</u>	<u>D2</u>	<u>E</u>	E	Н
AE7i25	60A-150A	111	25	66	95	93	9	18	3
AE7i38	175A-400A	129	38	72	107	89	10.5	25	6
AE7i5 I	450A-600A	129	5 I	72	109	90	10.5	38	6

**RELATED PRODUCTS:** 



**Fixed EV Fuse Blocks** (see p103.)



**Modular Fuse Blocks** (see p104.)



## **ELECTRIC VEHICLE PDU FUSES AE6 1000V**

Engineered to provide best in class auxiliary and high performance protection in managing systems of electrical and hybrid electrical vehicles.





Cartridge	Flush Bolted Tag	Ampere
Part Number	Part Number	Rating
AE61500A00	AE61500A02	5A
AE61600A00	AE61600A02	6A
AE61800A00	AE61800A02	8A
AE62100A00	AE62100A02	I0A
AE62150A00	AE62150A02	I5A
AE62200A00	AE62200A02	20A
AE62250A00	AE62250A02	25A
AE62300A00	AE62300A02	30A
	AE62200B02	20A
	AE62250B02	25A
	AE62300B02	30A
AE62350C00	AE62350C02	35A
AE62400C00	AE62400C02	40A
AE62500C00	AE62500C02	50A
AF62600C00	AF62600C02	60Δ

**Ferrule** Cartridge В Series Amperage AE6...A00 10 38 5A-30A AE6...B00 20A-30A 14 51 AE6...C00 35A-60A 65

Flush **Bolted Tag** D

Voltage: I000VDC I.R.: 20kA at I000VDC.

Time Constant: 2 ± 0.5 ms

Terminal Options: Centre tag & PCB mount.

Approvals: UL 248-20, JASO D622, ISO 8820-8; GB/T 31465.6

#### **RELATED PRODUCTS:**





**Fuse Clips** (see p.68) (see p. 102)

#### Dimensions in MM

Series	Amperage	Α	В	С	D	Е	F	G
AE6A02								
AE6B02	20A -30A	14.2	5 I	72.0	86	6.5	12	9.4
AE6C02	35A -60A	14.2	65	87.0	101	6.5	12	9.4

## **ELECTRIC VEHICLE PDU FUSES AEX 1000V**

Special purpose fuse for EV / HEV automotive use. Ideal for high power EV PDU and battery protection. I000VDC EV high-speed power fuse.

Part Number	Ampere Rating
AEX2700731	70Å
AEX2800731	80A
AEX2900731	90A
AEX3100731	100A
AEX3125738	125A
AEX3150738	150A
AEX3175738	175A
AEX3200738	200A
AEX3250751	250A
AEX3300751	300A
AEX3350751	350A
AEX3400751	400A
AEX3500751	500A
AEX3600764	600A

Voltage: I000VDC I.R.: 50kA at I000VDC Time Constant: (L/R) 2 ± 0.5ms

#### **RELATED PRODUCTS:**

Approvals Ref: IÈC 60269-4

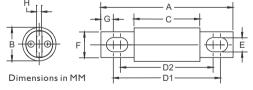




**Fixed Fuse Blocks Modular Fuse Blocks** (see p103.) (see p104.)







Series	<u>Amperage</u>	Α	В	<u>C</u>	DI	D2	<u>E</u>	E	H
AEX731	70A-100A	125	3 I	86	109	102	8.5	22	5
AEX738	125A-200A	140	38	83	118	100	10.5	25	6
AEX751	250A-500A	146	5 I	89	126	107	10.5	38	6
AEX764	600A	196	64	88	162	122	13	50	10



#### **EMERGENCY FUSE ASSORTMENT PACKS**



Assortment of genuine original equipment fuse types. Suits most models. Ideal for glove box offering instant replacement when on the road. The clear plastic container features a snap lock closing lid.





Part Number Pack Contains

MICR000AP Micro 2 Blade Fuses: MICR2 (Ipc): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Micro3 Blade Fuses: MICR3 (Ipc): 5A, 7.5A, IOA, I5A Mcase Fuse Links: MJC (1pc): 15A, 20A, 25A, 30A, 40A



Part Number Pack Contains

Auto Fuses: ATOF (Ipc): 5A, I0A, I5A, 20A, 25A, 30A ATMN000AP

Mini Fuses: MIN (1pc): 3A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Fuse Puller: Auto / Mini (Ipc)

#### Chrysler, Dodge, Jeep Fuse Assortment - 16pcs

Part Number CDI000AP

Pack Contains

Mini Blade Fuses: MIN (1pc): 7.5A, 25A, 30A, (3pcs): 10A, 15A, (2pcs) 20A

Jcase Fuse Links: JTF (1pc):20A, 30A, 40A, 50A

Fuse Puller: (Ipc) Mini, Jcase

#### Ford & GM Fuse Assortment - 20pcs

Part Number FDGM000AP

Pack Contains

Mini Blade Fuses: MIN (1pc): 7.5A, 25A, 30A, (3pcs): 10A, 15A, (2pcs) 20A

Low Profile Mini Fuses: LPM (Ipc): 10A, 15A Low Profile | case Fuse Links: L|C (1pc):30A, 40A Jcase Fuse Links: JTF (1pc):20A, 30A, 40A, 50A Fuse Puller: (Ipc) Mini, Low Profile Mini, Icase



#### Hyundai, Kia, Genesis Fuse Assortment - 24pcs

Part Number HYD000AP

Pack Contains

Micro2 Blade Fuses: MICR2 (Ipc): 10A, 15A, 20A, 25A, 30A

Mini Fuses: MIN (Ipc): 10A, 15A, 20A, 25A, 30A

Low Profile Mini Fuses: LPM (Ipc): 7.5A, 10A, 15A, 20A, 25A, 30A

Low Profile Jcase Fuse Links: LJC (1pc):20A, 30A, 40A Jcase Fuse Links: JTF (Ipc):30A, 40A, 50A Fuse Puller: (Ipc) Micro2, Mini, Low Profile Mini

Fuse Puller: (Ipc) Jcase, Low Profile Jcase

## Nissan & Infiniti Fuse Assortment - 29pcs

Part Number NSN000AP

Pack Contains

Auto Fuses: ATOF (Ipc): 5A, 7.5A, IOA, I5A, 20A, 30A, 40A

Mini Fuses: MIN (Ipc): 2A, 3A, 4A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Micro 2 Blade Fuses: MICR2 (Ipc): 5A, IOA, I5A, 20A, 30A Mcase + Fuse Links: MCPS (1pc):30A, 40A, 50A, 60A Fuse Pullers: (Ipc) Micro 2, Auto, Mini, (Ipc) Mcase



#### Toyota & Lexus Fuse Assortment - 15pcs

Part Number TYT000AP

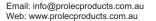
Pack Contains

Micro2 Blade Fuses: MICR2 (Ipc): 5A, 7.5A, I0A, I5A, 20A, 25A, 30A Low Profile Mini Fuses: LPM (Ipc): 5A, 7.5A, IOA, I5A, 20A, 30A

Fuse Puller: (Ipc) Micro2, Low Profile Mini

















#### **FUSE ASSORTMENT PACKS**

## PROLEG

#### Features:

- Genuine original equipment fuses.
- Clear plastic re-sealable container.
- Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit retail peg boards and counter stands.
- Detailed product information on rear side.



#### Micro2 Blade Fuse Assortment - 35pcs

Part Number Pack Contains

MICR2-KIT2 MICR2 (5pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A





## **Low Profile Mini Blade Fuse Assortment - 35pcs**

Part Number Pack Contains

LPM (5pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A LPM-KIT2





#### Mini Blade Fuse Assortment - 35pcs

Part Number

Pack Contains

MIN (5pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A MINI-KIT2





## **Auto Blade Fuse Assortment - 35pcs**

Part Number

Pack Contains

AUTO-KIT2 ATOF (5pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A



**5 Cavities** 

#### **LED INDICATING FUSE ASSORTMENT PACKS**



Prolec's LED indicating blade fuse assortment packs were a finalist in the Australian Automotive Aftermarket Associations product category for the Most Innovative New Packaging.

## **LED Mini Blade Fuse Assortment - 16pcs**

Part Number

Pack Contains MIND-KIT2

MIND (2pcs): 3A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Bonus Fuse Puller (Ipc): FP-7AM







Ronus **Fuse Puller** 

Back

**Front** 

#### **LED Auto Blade Fuse Assortment - 16pcs**

Part Number Pack Contains

ATFD (2pcs): 3A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A ATFD-KIT2

Bonus Fuse Puller (Ipc): FP-7AM







Ronus **Fuse Puller** 

**Product Details** 

**5 Cavities** 



# FUSE ASSORTMENT KITS - MICRO2, MICRO3 & MCASE



- · Genuine original equipment fuses.
- Clear plastic re-sealable container.
- Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit trade workshop, store or mobile van.
- Detailed product information on rear side.

# Micro2 Blade Fuse Assortment - 90pcs





Part Number MICR2-KIT

Kit Contains Micro2 Blade Fuses;

MICR2 (10pcs): 5A, 7.5A, 15A, 25A, 30A

MICR2 (20pcs): 10A, 20A



Micro2



# Micro2 & Micro3 Blade Fuse Assortment - 55pcs Littelfuse



Part Number MICR2+3-KIT Kit Contains

Micro2 Blade Fuses;

MICR2 Blade Fuses (5pcs): 5A, 7.5A, 10A, 15A, MICR2 Blade Fuses (5pcs): 20A, 25A, 30A

Micro3 Blade Fuses:

MICR3 Blade Fuses (5pcs): 5A, 7.5A, 10A, 15A



Micro2



Micro3



# Micro Fuse Range Assortment - 136pcs Littelfuse







Part Number MICROASST-KIT Kit Contains

Micro2 Blade Fuses:

MICR2 (10pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Micro3 Blade Fuses;

MICR3 (10pcs): 5A, 7.5A, 10A, 15A

Mcase Fuse Links:

MJC (5pc): 15A, 20A, 25A, 30A, 40A

Micro2 & Micro3 Fuse Puller; Fuse Puller (Ipc): 00970025



**Fuse Puller** 



Micro<sub>2</sub>



Micro3



Mcase





# FUSE ASSORTMENT KITS - AGC, LOW PROFILE MINI & MINI



- · Genuine original equipment fuses.
- Clear plastic re-sealable container.
- Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit trade workshop, store or mobile van.
- Detailed product information on rear side.

### **AGC 3AG Fuse Assortment - 100pcs**



Part Number AGC-KIT

Kit Contains

AGC (10pcs): IA, 3A, 5A, 7.5A, 10A, AGC (10pcs): 15A, 20A, 25A, 30A, 35A Note: Imperial Dimensions (I-I/4" x I/4") Metric Dimensions (6.35 x 31.8 mm)



AGC/3AG



# **Low Profile Mini Blade Fuse Assortment - 100pcs**

Part Number Kit Contains

LPM-KIT LPM (10pcs): 3A, 5A, 7.5A, 15A, 25A, 30A.

LPM (20pcs): 10A, 20A

Bonus Fuse Puller (Ipc): FP-7AM







Low Profile Mini

**Littelfuse** 



# Mini Blade Fuse Assortment - 100pcs

Part Number Kit Contains

MINI-KIT MIN (10pcs): 3A, 5A, 7.5A, 15A, 25A, 30A,

MIN (20pcs): 10A, 20A



Mini



# **LED Mini Blade Fuse Assortment - 80pcs**

Part Number Kit Contains MIND-KIT

MIND (10pcs): 3A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Bonus Fuse Puller (Ipc): FP-7AM



**Fuse Puller** 



**LED Mini / ATM** 





NEW

# FUSE ASSORTMENT KITS - LOW PROFILE MINI, AUTO & MAXI



### Features:

- · Genuine original equipment fuses.
- Clear plastic re-sealable container.
- Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit trade workshop, store or mobile van.
- Detailed product information on rear side.

# Auto Blade Fuse Assortment - 100pcs Littelfuse

Part Number Kit Contains

AUTO-KIT ATOF (10pcs): 3A, 5A, 7.5A, 15A, 25A, 30A

ATOF (20pcs): 10A, 20A



Auto / ATO



# **LED Auto Blade Fuse Assortment - 80pcs**

Part Number ATFD-KIT

t Number Kit Contains

ATFD (10pcs): 3A, 5A, 7.5A, 10A, ATFD (10pcs): 15A, 20A, 25A, 30A

Bonus Fuse Puller



Fuse Puller



**LED Auto / ATC** 



# Maxi Blade Fuse Assortment - 32pcs Littelfuse

Part Number Kit Contains

MAX (4pcs): 20A, 30A, 40A

MAX (4pcs): 50A, 60A, 70A MAX (4pcs): 80A, 100A



Maxi



# **LED Maxi Blade Fuse Assortment - 17pcs**

Part Number MAXD-KIT

MAXI-KIT

Kit Contains

MAXD (2pcs): 20A, 30A, 40A MAXD (2pcs): 50A, 60A, 70A

MAXD (2pcs): 80A, 100A

Fuse Puller (1pc): 00970026



**Fuse Puller** 



LED Maxi / MAX





Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

NEW

# FUSE ASSORTMENT KITS - MCASES, JCASE, LINKS & MAXI



- · Genuine original equipment fuses.
- Clear plastic re-sealable container.
- Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit trade workshop, store or mobile van.
- Detailed product information on rear side.

# Mcase+ Slotted Fuse Assortment - 29pcs Littelfuse



Part Number MCASEPS-KIT Kit Contains

MCPS (4pcs): 15A, 20A, 25A, 30A

MCPS (4pcs): 40A, 50A, 60A

**Bonus Fuse Puller** 

(Ipc): 00970054







# **Mcase Fuse Assortment - 50pcs**

Part Number Kit Contains

MCASE-KIT MIC (10pcs): 15A, 20A, 25A MIC (10pcs): 30A, 40A



**Fuse Puller** 



Mcase (Unslotted)



# 

Kit Contains

Low Profile Icase Fuses; LJC (4pcs): 20A, 25A, 30A LJC (4pcs): 40A, 50A, 60A

Fuse Puller; (Ipc): 00970053



**Fuse Puller** 



Low Profile **Icase** 



NEW

NEW

# Jcase Fuse Assortment - 15pcs





Part Number

LPICASE-KIT25

Kit Contains Original Icase Fuses;

JTF (2pcs): 20A, 40A, ITF (2pcs): 50A, 60A ITF (4pcs):30A JTF (Ipcs): 70A, 80A

Fuse Puller; (Ipc): 00970053



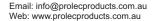
**Fuse Puller** 



**Icase** 







# FUSE ASSORTMENT KITS - MIDI, MEGA, BATTERY & BLADED



### Features:

- · Genuine original equipment fuses.
- Clear plastic re-sealable container.
- Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit trade workshop, store or mobile van.
- Detailed product information on rear side.

# Midi Fuse Assortment - 20pcs



Part Number MIDI-KIT2

Kit Contains

MID (2pcs): 30A, 40A, 50A MID (2pcs): 60A, 70A, 80A

MID (2pcs): 100A, 125A, 150A

MID (2pcs): 200A



**Littelfuse** 



# Midi Fuse & Block Installer Kit - 51 pcs

MTAI



Part Number

Kit Contains Fuses & Fuse Blocks MIDIPRO-KIT MID (4pcs): 23A, 30A, 40A,

MID (4pcs): 50A, 60A, 70A, MID (4pcs): 80A, 100A, 125A, MID (4pcs): 150A, 175A, 200A

Fuse Block (2pcs): I 25A MIDFBB Fuse Block (Ipc): 200A 0101499



MIDERR (see page 82)



0101499 (see page 96)

**Littelfuse** 





# **Mega Fuse Assortment - 20pcs**



Part Number MEGA-KIT2

Kit Contains

MEG (2pcs): 80A, 100A, 125A MEG (2pcs): 150A, 175A, 200A

MEG (2pcs): 225A, 250A, 300A

MEG (2pcs): 500A





# Battery Fuse Assortment - 28pcs FIT•N Bussmann



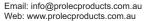
Kit Contains

MRBF (2pcs): 30A, 40A, 50A MRBF (2pcs): 60A, 75A, 80A MRBF (2pcs): 100A, 125A, 150A

MRBF (2pcs): 175A, 200A, 225A MRBF (2pcs): 250A, 300A









# **MULTI FUSE ASSORTMENT KIT**



- Genuine original equipment fuses.
- Designed and assembled locally.
- Custom kits are also available upon request.
- Contact Prolec for further information.

# 







Part Number BLADE-KIT300 Kit Contains

Low Profile Mini Fuses:

LPM (10pcs): 7.5A, 10A, 15A, 20A, 25A, 30A

Mini Fuses:

MIN (20pcs): 7.5A, 10A, 15A, 20A, 25A, 30A

**Auto Fuses:** 

ATOF (20pcs): 5A, 10A, 15A, 20A, 25A, 30A



Low Profile MINI









Maxi & Auto Fuse Link Assortment - 36pcs







Part Number LINK-KIT36

Kit Contains

Maxi Blade Fuses:

MAX (2pcs): 20A, 30A, 40A

MAX (4pcs): 50A, 60A, 80A

Icase Fuse Links: ITF (2pcs): 30A

ASF Fuse Links;

ASF (2pcs): 30A, 60A ASF (4pcs): 40A

BTF Fuse Links;

BTF (2pcs): 60A, 80A, 100A



MAXI





ITE





# Commercial & Fleet Fuse Assortment - 50pcs Littelfuse





30A 2

266 2

Part Number CFA-KIT

Kit Contains

Mini (2pcs): 2A, 3A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Auto Fuses (2pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Maxi Fuses (2pcs): 20A, 25A, 30A, 40A, 50A

Midi Fuses (Ipc): 30A, 100A, 125A, 150A, 175A, 200A

Mega Fuses (Ipc): I50A, 250A

Fuse Pullers (Ipc): Mini / Auto, (Ipc): Maxi



















**AUTO MAXI** 

MIDI

FUSE PULLER

MINI / ATO MAXI

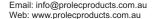
EA 2 2NA 2 3NA 1 1998 1 7.58 2 3NA 2 1998 1 1798 1 168 2 308 2 1258 1 2068 1

160A 1

2A 2 10A 3A 2 15A 5A 2 20A 7.5A 2 28A

**MEGA** 





Fuse caddies offer a full array of fuses for automotive repair facilities to meet your automotive fuse replacement needs. Each caddy is specially stocked to cover the majority of cars, light trucks, SUVs and RVs on the road today. Easy to transport with folding handle and security latch. Replacement trays & individual product refills can be ordered as required.

- The 5 kit capacity caddy contains 275 fuses in popular ratings.
- 4 x ten-cavity kits contain ATM, low-profile ATM, ATC and MAX fuses.
- Ix five-cavity kits contains FMX fuses.

Part Number FUSE-CADDYI Dimensions in MM 188 (W) x 114 (D) x 198 (H)





Mini Fuses



Low Profile Mini Fuses



Auto Fuses



Maxi Fuses

FATON



Icase Fuses

Bussmann

# **FUSE ASSORTMENT CADDY 10 TRAY - 372PCS**

- •The 10 kit capacity caddy contains 372 fuses in popular ratings. • 7 x kits contain an assortment of ATM, Low-Profile ATM, ATC.
- MAX, FMM, Low-Profile FMX, FLF, FLS, ATR, ATL Micro fuses.
- 3 x kits contain FMX, FLB, FLD, FLM, AMG & AMI fuses.
- Together, all ten kits meet virtually any automotive blade and high amp fuse replacement need.

Part Number FUSE-CADDY2

**ATM** 

Mini Fuses

Dimensions in mm 376 (W) x 114 (D) x 198 (H)



ATM-LP Low Profile Mini Fuses



ATC Auto Fuses



MAX Maxi Fuses



ATR & ATL Micro 2 & 3



FMM & FMX-LP Mcase, LP Jcase



FLF & FLS Female Fuse Links



**FMX** Icase Fuses



FLB. FLD & FLM Male Fuse Links



AMI & AMG Midi & Mega Fuses



Winner of the Australian Auto Aftermarket Innovation Award for Most Innovative New Packaging.







QR Code: 3002



# **BLADE FUSE, FUSIBLE LINK & BLADED BREAKER PULLERS**



### Features

• Fuse pullers allow quick and easy removal of a fuse.

• They can also be used to replace a fuse.

Part Number	Extracts Various Fuse Types
00358	Mini, Low Profile Mini & Auto Blade Fuses
FP-7AM	Mini, Low Profile Mini & Auto Blade Fuses
00970025	Micro2 & Micro3 Blade Fuses
00970026	Maxi Blade Fuse (Previously # 097027)
00970054	Mcase Fusible Link
00970053	case & Low Profile  case, Low Profile Mini & Mini Fuses
32013BS	Low Pro Mini, Mini Fuse & Mini Breaker

MIAN

00358



FP-7AM

Pack Size: 1, 10, 100



# **CARTRIDGE & AUTO BLADE FUSE PULLERS**

# FAT•N

Bussmann

### -eatures

• Quick, safe and easy way to extract cartridge fuses.

• FP-A3 can extract cartridge and auto blade fuses.

### Part

Number Extracts Various Fuse Types

FP-A3 Cartridge 'AG' 6.35mm Dia. & Auto Fuse FP-2 Cartridge 'EV' 10.3mm Diameter Fuse

Pack Size: 1.10.100





Autofuse Blade Fuse

3AG / AGC Cartridge Fuse

# **BLADE FUSE PULLER & FUSE TESTER**

### **Features**

- Combination fuse puller and fuse tester.
- Designed for easy one-handed use.
- Prevents fuse clip terminal & fuse holder damage.
- LED glows when fuse is good.
- Replaceable battery included.
- Tests Low Profile Mini, Mini, Auto, Maxi and various dimension Glass Cartridge Fuses.

Part Number FT-3 Extracts Various Fuse Types Low Profile Mini, Mini, Auto & Maxi

Voltage: 24VDC max. Pack Size: 1, 10, 100

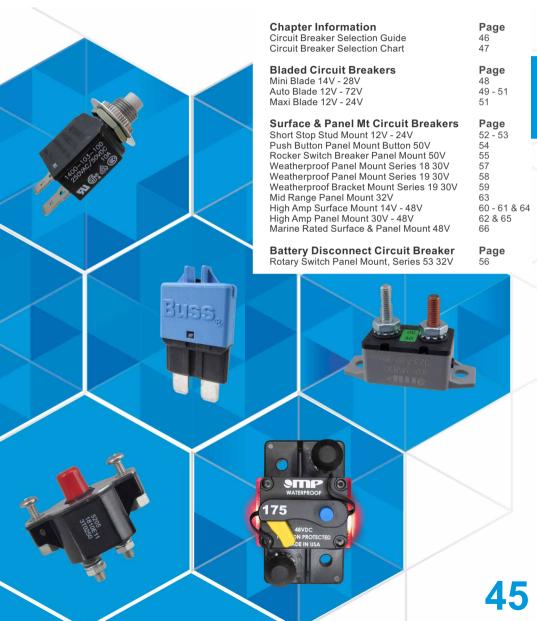
Notes: Do NOT test electrical fuses in the fuse panel.





# Circuit Breakers & Accessories

# Innovation is where we begin.



# **CIRCUIT BREAKER SELECTION GUIDE**

Series & Type	Reset	Ampere	Voltage	I.R. at Voltage	Ignition	IP	Page
71	Action	Range			Protect	Rating	
211 - Mini Blade	Automatic	5A to 30A	14Vdc	I 50A to 450A at I 4Vdc	-	-	48
212 - Mini Blade	Modified	5A to 30A	14Vdc	150A to 450A at 14Vdc	-	-	48
233 - Mini Blade	Manual	5A to 30A	28Vdc	100A to 300A at 28Vdc	_	-	48
227 - Auto Blade	Manual	5A to 30A	28Vdc	2kA at 28Vdc	Ign.Pro	-	49
435T -Auto Blade	Manual / PTT	250mA to 10A	72Vdc	2kA at 72Vdc	-	-	49
221 - Auto Blade	Automatic	5A to 30A	I4Vdc	150A to 450A at 14Vdc	Ign.Pro	-	50
222 - Auto Blade	Modified	5A to 30A	14Vdc	150A to 450A at 14Vdc	Ign.Pro	-	50
AT I - Auto Blade	Automatic	5A to 30A	28Vdc	2kA at 28Vdc	Ign. Pro	-	50
UCB - Auto Blade	Automatic	6A to 30A	12Vdc	TBA	-	-	51
191 - Maxi Blade	Automatic	8A to 50A	14Vdc	150A to 750A at 14Vdc	Ign.Pro	-	51
192 - Maxi Blade	Modified	8A to 40A	14Vdc	150A to 600A at 14Vdc	Ign.Pro	-	#
193 - Maxi Blade	Manual	8A to 50A	28Vdc	150A to 750A at 14Vdc	Ign.Pro	-	51
194 - Maxi Blade	Automatic	8A to 50A	28Vdc	150A to 750A at 14Vdc	Ign.Pro	-	51
195 - Maxi Blade	Modified	8A to 40A	28Vdc	150A to 600A at 14Vdc	Ign.Pro	-	#
321 - Stud Mt.	Automatic	3A to 50A	12Vdc	2.5kA at 12Vdc	Ign.Pro*	IP66 ^	53
323 - Stud Mt.	Manual	3A to 50A	24Vdc	2.5kA at 12Vdc	Ign.Pro*	IP66 ^	53
121 - Stud Mt.	Automatic	5A to 50A	14Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	IP66 ^	52
122 - Stud Mt.	Modified	5A to 50A	14Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	-	#
I 23 - Stud Mt.	Manual	5A to 50A	28Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	IP66	52
124 - Stud Mt.	Automatic	5A to 50A	28Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	IP66 ^	#
125 - Stud Mt.	Modified	5A to 50A	28Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	-	#
14 - Panel Mt.	Manual	3A to 20A	50Vdc	IkA at 50Vdc, 3kA at 32Vdc	Ign.Pro	-	54
15 - Panel Mt.	Manual	3A to 40A	50Vdc	IkA at 50Vdc	Ign.Pro	-	54
16 - Panel Mt.	Manual	500mA to 70A	50Vdc	IkA at 50Vdc, 3kA at 32Vdc	Ign.Pro	-	#
24 - Panel Mt.	Manual / PTT	100mA to 30A	50Vdc	TBA	-	IP54*	55
53 - Panel Mt.	Manual / PTT	10A to 60A	32Vdc	3kA at 14Vdc	Ign.Pro	IP67	56
1801 - Panel Mt.	Automatic	5A to 40A	32Vdc	3kA at 32Vdc	Ign.Pro	IP66	#
1811 - Panel Mt.	Automatic	10A to 70A	32Vdc	5kA at 32Vdc	Ign.Pro	IP66	#
1800 - Panel Mt.	Manual	5A to 40A	32Vdc	3kA at 32Vdc	Ign.Pro	IP66	57
1810 - Panel Mt.	Manual	10A to 70A	32Vdc	5kA at 32Vdc	Ign.Pro	IP66	57
19A - Panel Mt.	Automatic	25A to 200A	30Vdc	2.5kA at 30Vdc	Ign.Pro	IP69K	58
19M - Panel Mt.	Manual	25A to 200A	30Vdc	2.5kA at 14Vdc*	Ign.Pro	IP69K	58
251 - Panel Mt.	Automatic	10A to 50A	32Vdc	2.5kA at 32Vdc	Ign.Pro	IP66	63
255 - Panel Mt.	Manual / PTT	10A to 50A	32Vdc	2.5kA at 32Vdc	Ign.Pro	IP66	63
171 - Panel Mt.	Automatic	25A to 200A	48Vdc*	3kA at 30Vdc*	Ign.Pro	IP67	62
171 - Surface Mt.	Automatic	25A to 200A	48Vdc*	3kA at 30Vdc*	Ign.Pro	IP67	60
171 - Panel Mt.	Automatic	225A to 300A	12Vdc	2.5kA at 14Vdc	Ign.Pro	IP67	62
171 - Surface Mt.	Automatic	225A to 300A	12Vdc	2.5kA at 14Vdc	Ign.Pro	IP67	60
175 - Panel Mt.	Manual / PTT	25A to 200A	48Vdc*	3kA at 30Vdc*	Ign.Pro	IP67	62
175 - Surface Mt.	Manual / PTT	25A to 200A	48Vdc*	3kA at 30Vdc*	Ign.Pro	IP67	60-6
174 - Panel Mt.	Manual	225A to 250A	12Vdc	I.5kA at I4Vdc	Ign.Pro	IP67	62
174 - Surface Mt.	Manual	225A to 250A	12Vdc	I.5kA at I4Vdc	Ign.Pro	IP67	60-6
875-Smd & Pnl Mt		25A to 250A	48Vdc	5kA at 14Vdc	Ign.Pro	IP67	#
181 - Panel Mt.	Automatic	25A to 150A	30Vdc	3kA at 30Vdc	Ign.Pro	IP67	#
181 - Surface Mt	Manual	25A to 150A	30Vdc	3kA at 30Vdc	Ign.Pro	IP67	64
184-Smd & Pnl Mt		25A to 150A	42Vdc	3kA at 30Vdc*	Ign.Pro	IP67	#
185 - Panel Mt.	Manual / PTT	25A to 150A	42Vdc	3kA at 30Vdc*	Ign.Pro	IP67	#
185 - Surface Mt.	Manual / PTT	25A to 150A	42Vdc	3kA at 30Vdc*	Ign.Pro	IP67	#
285 - Panel Mt.	Manual / PTT	25A to 150A	48Vdc	3kA at 48Vdc	Ign.Pro	IP67	65
285 - Surface Mt.	Manual / PTT	25A to 150A	48Vdc	3kA at 48Vdc	Ign.Pro	IP67	64
187 - Panel Mt.	Manual / PTT	25A to 130A	48Vdc*	5kA at 14Vdc*	Ign.Pro	IP66	66
187 - Surface Mt.	Manual / PTT	25A to 200A 25A to 200A	48Vdc*	5kA at 14Vdc*	Ign.Pro	IP66	66
107 - Juliace Fit.	i iuliuai/ i I I	23/10 200/A	.0140	Contact sales f			

### ABYC Definition of Ignition Protection (Ign.Pro) E11.4.15.

(\*) verification. The design and construction of a device such that under design operating conditions: (^)Plastic cover only. (a) It will not ignite a flammable hydrocarbon mixture surrounding the device when an ignition source causes an internal explosion, or (b) It is incapable of releasing sufficient electrical or thermal energy to ignite a hydrocarbon mixture, or (c) The source of ignition is hermetically sealed.

What does this mean? Ignition Protected devices are designed to prevent the release of electrical or thermal energy (ie. sparks or heat) which could start a fire when operating in environments containing a mixture of air with gasoline, propane or CNG vapour. So when replacing or installing electrical equipment in these environments, make sure the product is specifically designated "Ignition Protected". As you can see in the above table, there are very few fuses that will meet this requirement, however we have a large range of circuit breakers that are Ignition Protected.



# **CIRCUIT BREAKER SELECTION CHART**

With an ever growing product range sometimes it can be hard to describe which circuit breaker you need. So the following visual identification chart can help you identify some of the more common styles available. For a more comprehensive range please refer to the website www.prolecproducts.com which showcases over 300 different product images.

Fuse Clip Cartridge CBF AGC Replacement Type II (Contact sales)



Mini Blade Type I, II & III (Page 48)



Low Profile Mini Type III (Contact sales)



Auto Blade Snap Blade Type I (Page 51)



Auto Blade Low Profile Type I (Page 50)



Auto Blade Type I & II (Page 50)



Auto Blade Type III (Page 49)



Auto Blade Type III PTT (Page 49)



Maxi Blade Type I & III (Page 51)





**Short Stop** 10 Type I & III (Pages 52-53)





Push Button 3A-40A Type III (Page 54)



Push Button 0.5A-70A 12 Type III (Contact Sales)



Type III PTŤ (Page 55)

Rocker Style Panel





Rotary Style Panel Type III PTT (Page 56)





Series 18 Type I & III (Page 57)



16 Series 19 Type I & III (Page 58)



Series 19 With Bracket Type I & III (Page 59)





**Hi Amp Surface** 18 Type I & III PTT (Pages 60 & 64)



Hi Amp Surface SxS Type III PTT (Page 61)



20 Mid Range Panel Type I & III PTT (Page 63)



Hi Amp Panel Type I & III PTT (Page 62 & 65)



**Marine Rated** Type III Switchable (Page 66)







# **CIRCUIT BREAKERS - MINI BLADE 14V**

14VDC	14VDC	
Automatic TI	Modified TII	Ampere
Part Number	Part Number	Rating
21105-00	21205-00	5A
21175-00	21275-00	7.5A
21110-00	21210-00	I0A
21115-00	21215-00	I5A
21120-00	21220-00	20A
21125-00	21225-00	25A
21130-00	21230-00	30A

Voltage: I4VDC

I. R.: 150A at 14VDC (5A to 10A) 225A at 14VDC (15A) 300A at I4VDC (20A) 450A at I4VDC (25A to 30A)

Operating Temp: -40°C to 85°C Storage Temp: -40°C to 125°C Pack Size: 1, 10, 100pcs Approvals: SAE J553 RoHS

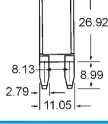
# **RELATED**









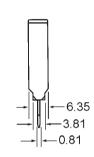


Automatic TI

► 12.45 ·



**Modified TII** 



# **PRODUCTS**

Mini Breaker Puller

(see p.44)

Inline Holder (see p.77)

(see p.120 - 146)

# **CIRCUIT BREAKERS - MINI BLADE 28V**

- Cover is colour coded to amperage ratings.
- Matches Mini fuse footprint, 2.8mm wide blades.
- Manual reset button on top face.

# 28VDC

Manual TIII	Ampere	Body
Part Number	Rating	Colour
23305-00	5A	Tan 🔳
23375-00	7.5A	Brown
23310-00	I0A	Red
23315-00	15A	Blue
23320-00	20A	Yellow
23325-00	25A	White $\square$
23330-00	30A	Green

### Voltage: 28VDC

I. R.: 100A at 28VDC (5A to 10A) 150A at 28VDC (15A) 200A at 28VDC (20A) 300A at 28VDC (25A to 30A) Operating Temp: -40°C to 85°C

Storage Temp: -40°C to 125°C Pack Size: 1, 10, 100pcs Approvals: SAE J553

**RELATED** PRODUCTS:

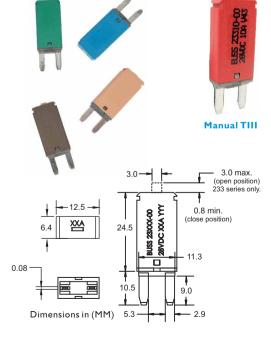


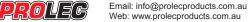




**PDM** (see p.120 - 146)

### FATON Bussmann





# **CIRCUIT BREAKERS - AUTO BLADE L.P 28V**

# **EAT•N** Bussmann

### Features:

- Low profile design.
- Ignition Protected.
- Colour coded body matches amperage ratings.
- Matches auto fuse footprint of 5.2mm wide blades making it compatible with existing auto fuse fuse blocks and panels.
- Manual reset button with protective walls.

### 28VDC

Manual TIII	Ampere	Body
Part Number	Rating	Colour
22705-00	5A	Tan 🔳
22706-00	6A	Green
22775-00	7.5A	Brown 🔳
22710-00	I0A	Red
22715-00	I5A	Blue
22720-00	20A	Yellow -
22725-00	25A	White
22730-00	30A	Green 🔳

Voltage: 28VDC I.R.: 2000A @ 28VDC Reset Mechanism: Type III, Manual Reset. Features: Ignition Protected

**Body:** UL-Rated 94V-0 thermoplastic. **Terminals:** Tin plated copper alloy.

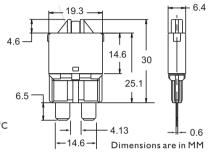
Operating Temp: -40°C to 85 °C Storage Temp: -40°C to 125°C

Pack Size: 1, 10, 100, 250

Holders: Inline, Blocks, Panels and DIN Rail Fused Terminals.

Approvals: SAE J553, J1171.

# IGNITION PROTECTED



# **CIRCUIT BREAKERS - AUTO BLADE 72V**

### Features:

- Miniaturised single pole thermal circuit breaker.
- Low to middle amperages.
- Suitable for both AC and DC Voltage.
- Manual push on push off button.
- Reliable snap-acting and trip-free mechanism.
- Labeling feature. Equivalent to E-T-A 1180

### 72VDC

Manual TIII - PTT	Ampere
Part Number	Rating
435T0025	250mA
435T0050	500mA
435T0100	IA
435T0200	2A
435T0300	3A
435T0400	4A
435T0600	6A
435T0800	8A
435T1000	I0A

**Voltage:** 250VAC / 72VDC (UL & CSA) 250VAC / 65VDC (VDE)

I.R.: 2000A @ rated voltage (UL)

Reset Mechanism: Type III, Manual Reset / Manual Trip Typical life: 6,000 operations at 1 x In (low-inductance)

3,000 operations at 1 x ln (inductive) 500 operations at 2 x ln (inductive)

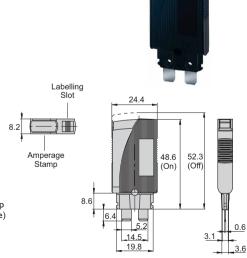
Operating Temp: -20°C to 60°C

Pack Size: Stock lines I pc, indent items 20pcs.

Holders: DIN rail mount fused terminal blocks (Page 148)

Approvals: (4) (6) CBE standard EN/IEC 60934

# MORSETTITALIA



Dimensions are in MM



# **CIRCUIT BREAKERS - AUTO BLADE TYPE**

# Russmann

IGNITION

12VDC	12VDC	
Automatic TI	Modified TII	Ampere
Part Number	Part Number	Rating
22105-400	22205-400	5A
22175-400	22275-400	7.5A
22110-400	22210-400	I0A
22115-400	22215-400	I5A
22120-400	22220-400	20A
22125-400	22225-400	25A
22130-400	22230-400	30A

**Automatic TI** 



**Modified TII** 



Voltage: I4VDC

I. R.: 150A at 14VDC (5A to 10A) 225A at 14VDC (15A) 300A at 14VDC (20A) 450A at I4VDC (25A to 30A)

Operating Temp: -40°C to 85°C Storage Temp: -40°C to 125°C Material: UL 94-V0 Thermoplastic housing.

Type I (Gold Metal Cover), Type II (Silver Metal Cover)

Features: Ignition Protected

Holders: Blocks

Pack Size: Stocked lines 1, Indentitems 250pcs.

Approvals: SAE |553, |1171

### **RELATED** PRODUCTS:



(see p.68)







27.54

6.3

12.9

7.32 8.0 3.0 3.8 6.35

PROLEG

**NEW** IGNITION

# **CIRCUIT BREAKERS - AUTO BLADE LOW PROFILE**

### 24VDC

Ampere	Body
Rating	Colour
5A	Tan
7.5A	Brown 🔳
I0A	Red
I5A	Blue
20A	Yellow
25A	White $\square$
30A	Green
	Rating 5A 7.5A 10A 15A 20A 25A

Voltage: 28VDC I. R.: 2000A at 28VDC

Reset Mechanism: Type I, Automatic Reset

Operating Temp: -30°C to 75°C Storage Temp: -30°C to 105°C

Material: UL 94-V0 Thermoplastic housing. Features: Ignition Protected, Low Profile Housing

Holders: Blocks

Pack Size: 1, 10, 100, 250pcs. Compliance: SAEJ553, SAEJ1171

### **RELATED PRODUCTS:**



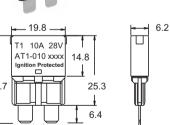
Clips & Bases

(see p.68)









31.7 -5.2 0.6

Dimensions are in MM



**Fuse Panels** (see p.87)



(see p.92)



# **CIRCUIT BREAKERS - AUTO BLADE TYPE**

# EAT•N Bussmann

- Use in place of the ATO and ATC type fuses.
- Blades can be snapped off to fit three different lengths.
- Colour coded cover to match amperage ratings.

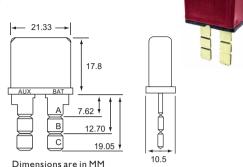
### 12VDC

Ampere	Body
Rating	Colour
6A	Plain
8A	Brown
I0A	Red
I5A	Blue
20A	Yellow -
25A	Plain 🔳
30A	Green -
	Rating 6A 8A 10A 15A 20A 25A

Voltage: I2VDC

Reset Mechanism: Type I, Automatic Reset Termination: Auto fuse footprint. Brass.

Pack Size: 1, 5, 10, 100, 250 Approvals: SAE |553



UCB breakers feature "snap-off" universal blades to fit tight fuse block spacing or recessed fuse terminals.

# **CIRCUIT BREAKERS - MAXI BLADE TYPE**

### F1T.N Bussmann

12VDC	24VDC	12/24VDC	
Automatic TI	Automatic TI	Manual TIII	Ampere
Part Number	Part Number	Part Number	Rating
19108-01M	19408-01M	19308-01M	8A
19110-01M	19410-01M	19310-01M	I0A
19115-01M	19415-01M	19315-01M	I5A
19120-01M	19420-01M	19320-01M	20A
19125-01M	19425-01M	19325-01M	25A
19130-01M	19430-01M	19330-01M	30A
19135-01M	19435-01M	19335-01M	35A
19140-01M	19440-01M	19340-01M	40A
19150-01M	19450-01M	19350-01M	50A

SAR TERES, 1995



**IGNITION** 

Automatic TI (No Button)

Manual TIII (With Reset Button)

Voltage: 14VDC (191 & 193 series) 28VDC (193 & 194 series)

I. R.: 150A at 14VDC (8A to 10A), 225A at 14VDC (15A) 300A at I4VDC (20A), 450A at I4VDC (25A to 30A) 600A at I4VDC (35A to 40A), 750A at I4VDC (50A)

Operating Temp: -40°C to 85°C Storage Temp: -40°C to 125°C Features: Ignition Protected

Pack Size: Stock lines 1 pc, indent items 250 pcs Termination Notes: Also available with auto blade terminals. Contact sales for further information.

Notes: Metal cover aids heat dissipation.

Option: Manual reset button available in two colour choices. Part Number suffix - I (Black) and -2 (White).

Approvals: SAE |553, | | | 7 |

# **RELATED PRODUCTS:**

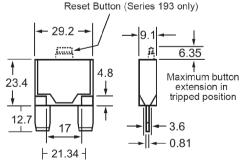




**Power Dist. Modules** (see p. 138)



**Covers and Brackets** (see p.140)



Blade Width 12.7

Dimensions are in MM



**EAT•N** Bussmann

Applications include Battery chargers, trucks, buses, RVs, trolling motors, etc. Function options include Auto (TI), Manual (TIII) or optional Modified Reset Circuit (TII) Breakers.











12VDC Automatic TI **Plastic Cover Parallel Bracket** 

12VDC - 24VDC Manual TIII **Plastic Cover** Parallel Bracket

12VDC Automatic T1 **Metal Cover** Parallel Bracket

12VDC Automatic TI Metal Cover Cross Bracket

				Ampere
Part Number	Part Number	Part Number	Part Number	Rating
121A05-B2P	123A05-B2P	121A05-B2M	121A05-A2M	5A
121A08-B2P	123A08-B2P	121A08-B2M	121A08-A2M	8A
121A10-B2P	123A10-B2P	121A10-B2M	121A10-A2M	I0A
121A15-B2P	123A15-B2P	121A15-B2M	121A15-A2M	I5A
121A20-B2P	123A20-B2P	121A20-B2M	121A20-A2M	20A
121A25-B2P	123A25-B2P	121A25-B2M	121A25-A2M	25A
121A30-B2P	123A30-B2P	121A30-B2M	121A30-A2M	30A
121A35-B2P	123A35-B2P	121A35-B2M	121A35-A2M	35A
121A40-B2P	123A40-B2P	121A40-B2M	121A40-A2M	40A
121A50-B2P	123A50-B2P	121A50-B2M	121A50-A2M	50A

Voltage: 14VDC (121 Series), 28VDC (123 & 124 series)

I.R.: 2.5kA @ 12VDC (Branch circuit protection). Contact sales for further info.

Operating Temperature: -40°C to 85°C. Storage Temperature: -40°C to 125°C Features: Ignition Protected

Ingress Protection Rating: IP66\* (Plastic cover only, except terminals).

Pack Size: Stock lines I pc, indent items 250 pcs.

Mounting Hole: Bracket mounting holes 4.98 mm diameter.

Notes: Keps lock nuts included with circuit breakers.

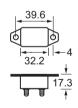
Approvals: SAE J553, J1171

# **Terminal Specs:**

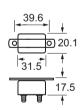
Two 10-32 studs



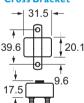
### **Plastic Cover Parallel Bracket**



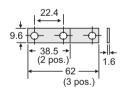
**Metal Cover** Parallel Bracket



Metal Cover Cross Bracket



Connect the short stud to battery (+), connect the long stud to auxiliary circuit(s).



### **RELATED PRODUCTS:**

Part	
Number	Description
CBBP	Clear Cover Parallel TIII 🗆
CBBR	Red PVC Terminal Boot
CBBB2	2 Position Brass Tin Busbar
CBBB3	3 Position Brass Tin Busbar
CBBB6	6 Position Brass Tin Busbar







Notes: CBBP covers are IP64 water resistant. They protect the manual reset circuit breaker button against dust and water. The CBBR PVC boots protect terminal connections from accidental shorts. Use to comply with ABYC E-9, USCG 33pl & ISO 10133. Fits breakers with or without brackets. Both T1 & TIII. Cable entry 18-10AWG. Busbars suitable for breakers fitted with a parallel bracket or without bracket.



# **CIRCUIT BREAKERS - SERIES 32 COLOUR CODED**



**IP66**\*

TIII Manual

**Reset Button** 

### Features

• Single pole thermal circuit breakers are available in ratings in ratings 5 to 50 Amps.

• Three mounting styles: Cross mounting bracket, parallel mounting bracket or no bracket.

• Three reset options: automatic (TI), modified reset (TII) and manual reset (TIII).

• Now includes colour coded stamped amperage sticker.

• Laser etched brand, part numbered and batch coded.

I 2VDC Automatic TI Parallel Brkt	I 2-24VDC Manual TIII Parallel Brkt	I2VDC Automatic TI Cross Brkt	Colour Code
r ar anci Brice	r ar arreit Brite	GI GSS BI KC	Ampere
Part Number	Part Number	Part Number	Rating
321-A2P-05	323-A2P-05	321-A1P-05	5A
321-A2P-08	323-A2P-08	321-A1P-08	8A
321-A2P-10	323-A2P-10	321-AIP-10	IOA
321-A2P-12	323-A2P-12	321-A1P-12	I2A 🗆
321-A2P-15	323-A2P-15	321-AIP-15	15A
321-A2P-20	323-A2P-20	321-A1P-20	20A
321-A2P-25	323-A2P-25	321-A1P-25	25A 🔳
321-A2P-30	323-A2P-30	321-A1P-30	30A
321-A2P-35	323-A2P-35	321-A1P-35	35A
321-A2P-40	323-A2P-40	321-A1P-40	40A
321-A2P-50	323-A2P-50	321-A1P-50	50A

Voltage: I2VDC (Type I), I2-24VDC (Type III).

I.R.: 2.5kA @ 12VDC.

Operating Temp: -10°C to 60°C

Body Type: Plastic case (standard). Metal case (optional).

Features: Ignition Protected

Ingress Protection Rating: IP66\* (Plastic, except terminations).

Reset Overload Capacity: 6 x rated current.

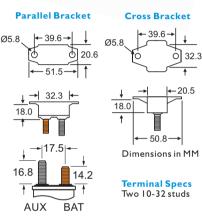
Pack Size: Stock lines I pc, indent items 500 pcs.

Mounting Hole: Bracket mounting holes 5.8 mm diameter.

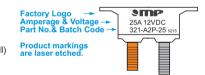
Notes: Keps lock nuts included with circuit breakers.

Approvals: **SAE** |553, || | 7 | RoHS

Extended Product Options: Indent Only.



Connect the short stud to battery (+), connect the long stud to auxiliary circuit(s).



Bushar

# Reset Type Mounting Options Body Type Options 32 [ (TI, 12VDC) 32x-AQ (No Bracket) 32x-AxM (Metal TI & TII) 322 (TII 12VDC) 32x-Al (Cross Bracket) 32x-AxP (Plastic TI & TIII) 323 (TIII 24VDC) 32x-A2 (Parallel Bracket) 32x-Ax§ (Metal Sealed TI & TII)

### **RELATED PRODUCTS:**

### 



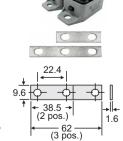
Cover NEW



**New Feature** 

Colour Coded

Amp Sticker



Notes: CBBP covers are IP64 water resistant. They protect the manual reset circuit breaker button against dust and water. The CBBR PVC boots protect terminal connections from accidental shorts. Use to comply with ABYC E-9, USCG 33pl & ISO 10133. Fits breakers with or without brackets. Both T1 & TIII. Cable entry 18-10AWG. Busbars suitable for breakers fitted with a parallel bracket or without bracket.



# **CIRCUIT BREAKERS - SERIES 14 & 15**



### Features:

- Miniature size panel mount or dash mount. Snap mount also available upon request.
- Wide range of common amperages 3A-40A suitable for both AC & DC voltages.
- Custom versions with alternative termination, mounting, button and reset options are also available.





3/8"-27 Bushing	3/8"-27 Bushing	7/16"-28 Bushing	
I/4" QC Straight	# Screw - Bent 90°	I/4" QC Straight	
Terminal (TIII)	Terminal (TIII)	Terminal (TIII)	Ampere
Part Number	Part Number	Part Number	Rating
1480-103-030	1480-123-030	1400-103-030	3A
1480-103-040	1480-123-040	1400-103-040	4A
1480-103-050	1480-123-050	1400-103-050	5A
1480-103-060	1480-123-060	1400-103-060	6A
1480-103-070	1480-123-070	1400-103-070	7A
1480-103-080	1480-123-080	1400-103-080	8A
1480-103-100	1480-123-100	1400-103-100	I0A
1480-103-120	1480-123-120	1400-103-120	I2A
1480-103-150	1480-123-150	1400-103-150	I5A
1480-103-160	1480-123-160	1400-103-160	I6A
1480-103-200	1480-123-200	1400-103-200	20A
1580-101-250	1580-131-250	1500-101-250	25A
1580-101-300	1580-131-300	1500-101-300	30A
-	1580-131-350	-	35A
-	1580-131-400	-	40A



#6-32 & #8-32 Screw Bent 90° Terminal

# Weatherproof Boot Options\*

Part Number	Descript	ion
1680-318-1	3/8"-27	Clear
1680-330-I	3/8"-27	Black
1600-382-1	7/16"-28	Clear
1600-382-2	7/16"-28	Black





Black

Rear

Front

D

29.2mm

A Closed



Voltage: 250VAC / 50VDC. I.R.: IkA at 250VAC / 50VDC.

Reset Mechanism: Type III, Manual Reset.

Button: White button with black ampere rating stamp. Mounting: Panel mount - includes Pal nut & Knurl nut.

Terminals (Quick Connect): 3A-30A (6.3mm). Terminals (Screw): 3A-20A (#6-32), 25A-40A (#8-32).

Screw terminals include screws & lock washers.

Features: Ignition Protected UL 1500.

Optional: Ampere ratings (500mA-2.5A & 45A-70A). Pack Size: Stock lines I pc, Indent items 50 pcs.

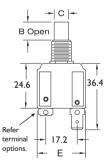
Approvals: RoHS

(5A to 20A at 250VAC / 50VDC) (1) (6) (1) (25A to 40A at 250VAC / 50VDC) (1) (1) (1)



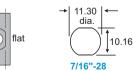


→ 13.47 ← 3.56 Series Dim. 'E' 1400 & 1480 26.7mm



**Panel Cutout** 3/8"-27 Bushing

Reset Button W/Amp Stamp



Reset Button W/Amp Stamp

1500 & 1580



Dimensions in MM

Bushing 3/8"-27 0.76 6.10 6.10 10.3 7/16"-28 4.07 8.64 7.63 12.8







**Panel Cutout** 

7/16"-28 Bushing

# **Hardware Options**



Knurl Nut Lrg Black Nylon Pal Nut Aluminum



Scan this OR

information

Code for more

QR Code: 10001

### **RELATED PRODUCTS:**

**Breaker Panels** 







# **CIRCUIT BREAKERS - SERIES 24 ROCKER**

- Rocker style, switchable circuit breaker offering trip-free protection.
- It operates as a latched mechanism in which the switch function (Power On / Off) is independent of the trip function (Overload Protection). The latch mechanism is extremely simple in design providing reliable operation and provides the convenience of a switch and circuit breaker in one device. Fewer components means less space and therefore a more compact equipment design. UL 1500 Ignition Protection.
- Designed for use in compact, snap-in panel mount applications. Amperage range 100mA to 30A.

### **Custom Ordering Options:**

- As a switch, circuit breaker or combined switch / breaker. One or two pole device.
- Switch guard options; (a) standard rocker, (b) rocker + splash guard, (c) standard rocker + actuator guard, (d) rocker with splash and actuator guard.
- With a variety of switch markings & colours, green, red, amber & white translucent actuators for both lit and unlit applications, as well as unlit black. With or without illumination (incandescent or neon).
- Ouick connect or screw terminations.
- Two panel cut-out sizes: 50.5 x 21.6mm (Standard), 44.5 x 21.6mm (Optional).
- Complete range of ampere ratings also available upon request; I 00mA, 200mA, 300mA, 400mA, 500mA, 600mA, 800mA, 1A, 1.25A, 1.5A, 2A, 2.5A, 3A, 3.5A, 4A, 4.5A, 5A, 6A, 7A, 8A, 10A, 12A, 14A, 15A, 16A, 18A, 20A, 25A, 30A.

### Single Pole Breaker 50VDC (TIII-PTT) Black Switch (I/O marking)

Part Number 2410-100-159-050 2410-100-159-100 2410-100-159-150 2410-100-159-200 2410-100-159-250 2410-100-159-300	Ampere Rating 5A 10A 15A 20A 25A 30A
2410-100-159-300	30A



Voltage: 250VAC / 50VDC Max.

Short Circuit Rating (IEC): 2.5A to 20A: 150A (1 pole). Reset Mechanism: Type III, Manual Reset Switchable

Dielectric Strength: 2000V (IEC)

Terminals (Combination): 2 x 2.8mm or 6.3mm Q.C.

Operating Temp: -30°C to 60°C Ingress Protection\*: IPxx Ratings

IP00 for the terminal area, per IEC 529/DIN 40050.

IP40 for the operating area. IP54 with splash protection.

Pack Size: Stocked items I pc.

Notes: \*Red illuminated switch features an incandescent light which requires 10 to 14VDC to operate.

Lamp current draw is 38mA at 12VDC.

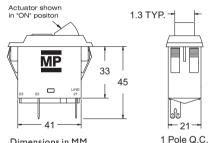
Approvals: W UL 1077 recognised, @ certified

♠ (0.5A to 20A), IEC (0.5A to 20A), ((0.5A to 20A))

# Single Pole Breaker 10-14VDC (TIII-PTT) Red Illuminated Switch\* (no marking)

Part Number	Ampere Rating
2410-102-120-050	5A
2410-102-120-100	I0A
2410-102-120-150	I5A
2410-102-120-200	20A
2410-102-120-250	25A
2410-102-120-300	30A





Dimensions in MM

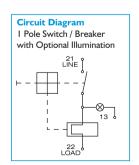
**Panel Cutout** Front Face

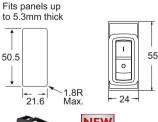
# **RELATED PRODUCTS:**

### **Switch Breaker Panels**

Custom made & standard 4, 6 & 8 way switch breaker panels see page 175.











# **BATTERY DISCONNECT CIRCUIT BREAKER SERIES 53**



The Series 53 Branch Disconnect / Circuit Breaker incorporates into a single device both traditional battery disconnect switching (non-engine) and circuit protection. This unique combination of features in a single rotary switch allows OEM cost savings by eliminating the added components, material and labour of a separate battery switch and circuit breaker / fuse. For the end user or maintenance personnel, the Series 53 provides a quick means to disconnect traditional downstream circuit(s) while preventing unintentional battery drain or allowing for disconnected battery power during storage and/or maintenance.











### **Features**

- Series 53 is available in current ratings 10A to 70A.
- One piece terminal stud design never loosens over time.
- Designed for panel mounting (front or rear of panel).
- Ignition protected and weatherproof (IP66 & IP67).
- Designed and manufactured in USA.

Ampere Rating
I0A
I5A
20A
30A
35A
40A
45A
50A
60A
70A







**Disconnect and Protect to 32VDC** 

### Voltage: 32VDC.

Interrupt Capacity: Per SAE J553 & UL 1077\* (U3) at 14 & 28VDC,

I.5kA @ I4VDC per ABYC (SAE J553 & UL 1077\* U3), 3kA @ I4VDC.

Mounting Options (3): Rear panel mount, Front panel mount & Surface mount.

Mounting eyelet hole size #10 with #8-32 nuts pre-installed.

Ingress Protection Rating: IP66 / IP67. (IEC 60529).

Ignition Protection: ISO 8846\*, USCG, ABYC, UL1500\* and SAE J1171

Dielectric Strength: 2000VAC minimum UL1107. Housing: Thermoplastic.

Shock, Vibration, Corrosion: MIL-STD-202, UL1077\*, UL1107\*

Endurance: Per SAE J553 (100 overload trip cycles at 400% of rated current at 28VDC).

Min / Max Ultimate Trip: Must Hold 100% of rated current at 25°C/77°F. Must Trip at 135% of rated

current within I hour. Unique / specific higher ambient calibrations are available, contact sales.

Operating Temperature: -40°C to 85°C

Inrush Capacity: The Series 53 will not trip at 35X rated capacity for ½ cycle (0.008 sec.).

Note: This product is not rated for an engine starter circuit. \*Tested per methods of standard.

Approvals: UL 1077, SAE J553, ABYC, CE

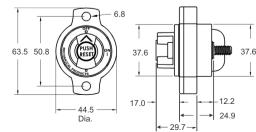
### **Series 53 Disconnect Function**

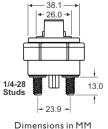
Switch ON, Continuity - Breaker is active and circuit is active.

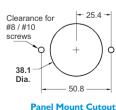
Switch ON, NO Continuity - Breaker is tripped. Push the PUSH TO RESET button to reset the breaker.

Switch OFF, NO Continuity - Breaker is not operable. Circuit is Off.









Front or Rear



# **CIRCUIT BREAKERS - SERIES 18**



### Features:

- Designed for the harshest of environments. Weatherproof and ignition proof.
- All materials used are resistive to UV and flammability. Strong thermoplastic case.
- Double break design to achieve increased short-circuit interruption capability.
- The push-to-reset actuator is trip-free, ensuring the breaker cannot be forced to continuously maintain a closed circuit if an overload condition exists.
- Suitable for Marine, Heavy Equipment, Trucks, Buses & Battery Chargers. Made in USA.







Manual (TIII)	Manual (TIII)		Screw Term		Stud Terminals
# 8-32 Screw	#10-32 Stud		(1800E112E s	series) (I	810E113T series)
Terminal	Terminal	Ampere			-
Part Number	Part Number	Rating			
1800E112E0050	_	5A	and the second second		
1800E112E0100	1810E113T0100	IOA NEW			100
1800E112E0125	1810E113T0125	12.5A			ω⇒en
1800E112E0150	1810E113T0150	15A	1800E11		5205 1810E1 3T0250
1800E112E0200	1810E113T0200	20A	2E0100 4417		87
1800E112E0250	1810E113T0250	25A			
1800E112E0300	1810E113T0300	30A	181	Locking Nuts	
1800E112E0350	1810E113T0350	35A		Fitted	
1800E112E0400	1810E113T0400	40A	A		Ī
_	1810E113T0500	50A	Ţ		
_	1810E113T0600	60A	#8-32 Screw	#8-32 Mounting	#10-32 Stud
_	1810E113T0700	70A <b>NEW</b>	Terminals	Locking Nuts Inclu	ded Terminals

Voltage: 125VAC / 32VDC.

I.R. (1800 series): 3kA at 120VAC / 32VDC (Standard Calibration) I.R. (1810 series): 3kA at 120VAC, 5kA at 32VDC (High Ambient\*)

Reset Mechanism: Type III, Manual Reset. 1800 & 1810 Series. Reset Button: Red with 45° white ampere stamp.

Reset Option: Type I, Automatic reset available. 1801 & 1811 series, no button. Contact sales for information.

Mounting Standard: #10 eyelet hole with attached self-locking nut (includes 2 x #8-32 screws). Mounting Option: 1800T0 & 1810T0 series: #10 eyelet hole only, no fitted locking nut. Indent only.

Terminals (1800 series): Screw terminals includes #8-32 screws and lock washer.

Terminals (1810 series): Threaded stud includes #10-32 nuts and lock washer. Stud is 11.4mm long.

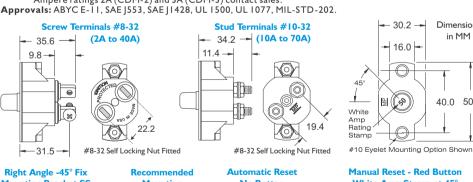
Vibration Rating: 10g per MIL-STD-202, Method 204, Test Condition A.

Features: Ignition Protected UL 1500. Housing: UL 94 V-0 Black Thermoplastic.

Pack Size: 1, 20, 40, 160, 320, 640

Note: \*High Ambient style increases trip rating from 100% to 110% (min.) & 135% to 143% (max.) at 25 deg C.

Ampere ratings 2A (CDM-2) and 3A (CDM-3) contact sales.





Part Number: PROBRK018A

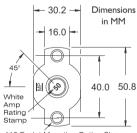
# **Mounting**



# No Button



Product Series: 1801 / 1811



### Manual Reset - Red Button White Amp Stamp at 45°



Product Series: 1800 / 1801



# **CIRCUIT BREAKERS - SERIES 19**

### Features:

- Wide range of ratings from 25A to 200A.
- Smallest breaker in range for 175A & 200A Ratings.
- Superior Ingress Protection, rated to IP67 & IP69K.
- Designed for harsh applications to 30VDC.
- Optional LED tripID version for open circuits.
- Front panel or rear panel mounting options.
- Trip free.
- Wide bracket version available in natural or black.
- Made in USA. Some subassembly made in Australia.

Auto Reset	<b>Manual Reset</b>	Manual Reset	
(Thru Hole)	(Thru Hole)	(Mounting Nut)	Ampere
Part Number	Part Number	Part Number	Rating
19A-P10-N-025	19M-P10-B-025	19M-P11-B-025	25A
19A-P10-N-030	19M-P10-B-030	19M-P11-B-030	30A
19A-P10-N-035	19M-P10-B-035	19M-P11-B-035	35A
19A-P10-N-040	19M-P10-B-040	19M-P11-B-040	40A
19A-P10-N-045	19M-P10-B-045	19M-P11-B-045	45A
19A-P10-N-050	19M-P10-B-050	19M-P11-B-050	50A
19A-P10-N-060	19M-P10-B-060	19M-P11-B-060	60A
19A-P10-N-070	19M-P10-B-070	19M-P11-B-070	70A
19A-P10-N-080	19M-P10-B-080	19M-P11-B-080	80A
19A-P10-N-090	19M-P10-B-090	19M-P11-B-090	90A
19A-P10-N-100	19M-P10-B-100	19M-P11-B-100	100A
19A-P10-N-105	19M-P10-B-105	19M-P11-B-105	105A
19A-P10-N-120	19M-P10-B-120	19M-P11-B-120	120A
19A-P10-N-135	19M-P10-B-135	19M-P11-B-135	135A
19A-P10-N-150	19M-P10-B-150	19M-P11-B-150	150A
19A-P10-N-175	19M-P10-B-175	19M-P11-B-175	175A
19A-P10-N-200	19M-P10-B-200	19M-P11-B-200	200A



IP69K

MIL-STD

19M-P10 Series, Manual Reset TIII

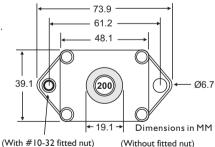
Thru Hole, No Nuts



19M-P11 Series, Manual Reset TIII #10-32 Mounting Nut



19A-P10 Series, Automatic Reset TI Non Indicating



Voltage: 30VDC

I.R. (25A - 150A): 2.5kA at 14VDC, 1.5kA at 28VDC

I.R. (175A - 200A): 2.5kA at 30VDC

Auto Reset Stocked Version: No indicator.

Auto Reset Indent Options: Red LED or Clear LED Indicator.

Manual Reset Stocked Version: Red Button.

Manual Reset Indent Options: Red LED or Clear LED Button.

All manual reset buttons feature a white ampere marking.

**Panel Mounting Hardware Options:** 

•Thru-hole, no nuts (19x-P10)

•2 x # 10-32 fitted nuts (19x-P11)

Threaded Studs: 1/4"-28 (12.5mm long), includes 1/4"

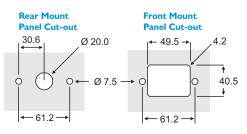
stainless steel sems nuts.

Housing: UL 94-V0 rated black thermoplastic. Operating Temp: -40 deg. C to 85 deg. C

Pack Size: I pc stock lines (9pcs non stock lines).

Approvals: SAE | 1625, SAE | 1171, ABYC E-11, UL 1077,

Mil-STD-202 (101, 106, 213), Mil-STD-204.





**QR Code** for more

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# **CIRCUIT BREAKERS - SERIES 19 WIDE MOUNT**



### Features:

- Wide range of ratings from 25A to 200A.
- Superior Ingress Protection, rated to IP67 & IP69K.
- Designed for harsh applications to 30VDC.
- Optional LED tripID version for open circuits.
- Wide bracket version available in natural or black.
- Circuit breaker made in USA. Subassembly made in Australia.

Auto Reset	Manual Reset	
Natural Bracket	Natural Bracket	Ampere
Part Number	Part Number	Rating
19A-P21-N-025	19M-P21-B-025	25A
19A-P21-N-030	19M-P21-B-030	30A
19A-P21-N-035	19M-P21-B-035	35A
19A-P21-N-040	19M-P21-B-040	40A
19A-P21-N-045	19M-P21-B-045	45A
19A-P21-N-050	19M-P21-B-050	50A
19A-P21-N-060	19M-P21-B-060	60A
19A-P21-N-070	19M-P21-B-070	70A
19A-P21-N-080	19M-P21-B-080	80A
19A-P21-N-090	19M-P21-B-090	90A
19A-P21-N-100	19M-P21-B-100	100A
19A-P21-N-105	19M-P21-B-105	105A
19A-P21-N-120	19M-P21-B-120	120A
19A-P21-N-135	19M-P21-B-135	135A
19A-P21-N-150	19M-P21-B-150	150A
19A-P21-N-175	19M-P21-B-175	175A
19A-P21-N-200	19M-P21-B-200	200A
19A-P21-N-175	19M-P21-B-175	175A
19A-P21-N-200	19M-P21-B-200	200A

Voltage: 30VDC

I.R. (25A - 150A): 2.5kA at 14VDC, 1.5kA at 28VDC

I.R. (175A - 200A): 2.5kA at 30VDC

Auto Reset Stocked Version: No indicator.

Auto Reset Indent Options: Red LED or Clear LED Indicator.

Manual Reset Stocked Version: Red Button.

Manual Reset Indent Options: Red LED or Clear LED Button.

All manual reset buttons feature a white ampere marking.

Mounting Plate: Natural finish standard, black finish optional.

Threaded Studs: 1/4"-28 (12.5mm long), includes 1/4"

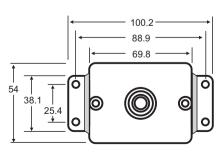
stainless steel sems nuts.

Housing: UL 94-V0 rated black thermoplastic. Operating Temp: -40 deg. C to 85 deg. C

Pack Size: I pc stock lines (36pcs non stock lines).

Approvals: SAE J1625, SAEJ1171, ABYC E-11, UL1077,

Mil-STD-202 (101, 106, 213), Mil-STD-204.



Dimensions in MM













19M-P21-B-xxx Series **Manual Reset TIII** Wide Mounting Bracket Natural Finish



19M-P21-B-xxxB Series Manual Reset TIII Wide Mounting Bracket Black Finish Option



19A-P21-N-xxx Series Automatic Reset TI Wide Mounting Bracket Natural Finish

### **Rear View**



Battery I/4"-28 Input Stud

Stud Barrier

Auxiliary 1/4"-28 Output Stud



# **CIRCUIT BREAKERS - SERIES 17 SURFACE MOUNT DIAG**

# Mechanical Products

### Features

- Ignition protected and weatherproof.
- Superior moisture seal.
- Robust thermoplastic case.
- Corrosion resistant studs & hardware.
- 1/4" or 3/8" stainless steel stud options.
- Stronger rubber stud cap lead.
- Accommodates new tripID™
- Made in USA.





4	IP6/
	MIL-STD

Automatic (TI)	Manual (TIII)	Manual (TIII)	
1/4" & 3/8" Stud	I/4" Stud	3/8" Stud	
Diagonal	Diagonal	Diagonal	Ampere
Part Number	Part Number	Part Number	Rating
171-S0-025	175-S0-025	175-S2-025	25A
171-S0-030	175-S0-030	175-S2-030	30A
171-S0-035	175-S0-035	175-S2-035	35A
171-S0-040	175-S0-040	175-S2-040	40A
171-S0-050	175-S0-050	175-S2-050	50A
171-S0-060	175-S0-060	175-S2-060	60A
171-S0-070	175-S0-070	175-S2-070	70A
171-S0-080	175-S0-080	175-S2-080	80A
171-S0-090	175-S0-090	175-S2-090	90A
171-S0-100	175-S0-100	175-S2-100	100A
171-S0-110	175-S0-110	175-S2-110	II0A
171-S0-120	175-S0-120	175-S2-120	120A
171-S0-135	175-S0-135	175-S2-135	135A
171-S0-150	175-S0-150	175-S2-150	150A
171-S0-175	175-S0-175	175-S2-175	175A
171-S0-200	175-S0-200	175-S2-200	200A
171-S2-225 ^	-	174-S2-225*	225A NE
171-S2-250 ^	-	174-S2-250*	250A NE
171-S2-275 ^	-	-	275A NE
171-S2-300 ^	-	-	300A NE
( ^ 3/8" Stud only)		* Not PTT - (Pus	h To Trip)

Automatic Reset 1/4: Studs



NEW NATURE OF THE PROJECTED OF THE PROJE

Manual Reset 3/8" Studs

Voltage Ratings:

Type TI: (25A-200A): 30VDC, (225A-300A): 14VDC. Type TIII: (25A-150A): 48VDC, (175A-200A): 30VDC. Type TIII: (225A-250A): 14VDC.

I.R.Ratings:

Type TI (25A-150A): 3kA at 30VDC, (175A-200A): 1.5kA at 30VDC.

Type TI (225A-300Á): 2.5kA at 14VDC.

Týpe TIII (25A-150A): 2.5kA at 14VDC, 1.5kA at 48VDC. Type TIII (175A-200A): 2.5kA at 14VDC, 1.5kA at 30VDC.

Type TIII (225A-250A): 1.5kA at 14VDC.

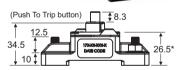
Pack Size: Stock lines 1 pc. Indentitems 36pcs. Housing: UL94 V-0 rated black thermoplastic. Termination: Diagonal 1/4" or 3/8" stud options.

Terminal Hardware: Stainless steel sems nuts included.

Stud Insulator Caps: Included.

Operating Temp: -40°C to 85 °C. Ingress Protection Rating: IP67 Indicator: Bright yellow colour reset mechanism provides visual indication of tripped condition on manual reset breakers (Type TIII).

Approvals: SAE | 1625, | 171, ABYC E-11, MIL-STD-202, UL 1077 (4)



### \*Overall height of 171 series.

# RELATED PRODUCTS TripID™

TripID Surface mount accessory. Provides a red lit visual indication of an open circuit. Can be reused. Simply snap on and off as required.

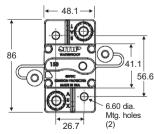


Part Number: 17LED-R Voltage: 10-30VDC

# Breaker with TripID

Manual reset only.





Dimensions in MM



# **CIRCUIT BREAKERS - SERIES 17 SURFACE MOUNT SBS**

- Ignition protected and weatherproof.
- Superior moisture seal.
- Robust thermoplastic case.
- Corrosion resistant studs & hardware.
- 1/4" or 3/8" stainless steel stud options.
- Stronger rubber stud cap lead.
- Accommodates new tripID™
- Made in USA.





MIL-STE

Manual (TIII)	Manual (TIII)	
I/4" Stud	3/8" Stud	
Side by Side	Side by Side	Ampere
Part Number	Part Number	Rating
175-S1-025	175-S3-025	25A
175-51-030	175-S3-030	30A
175-51-035	175-S3-035	35A
175-S1-040	175-S3-040	40A
175-51-050	175-S3-050	50A
175-S1-060	175-S3-060	60A
175-S1-070	175-S3-070	70A
175-S1-080	175-S3-080	80A
175-S1-090	175-S3-090	90A
175-SI-100	175-S3-100	100A
175-SI-110	175-S3-110	II0A
175-SI-120	175-S3-120	120A
175-S1-135	175-S3-135	135A
175-S1-150	175-S3-150	150A
175-S1-175	175-S3-175	175A
175-S1-200	175-S3-200	200A
-	174-S3-225*	225A
_	174-53-250*	250A

**Manual Reset** Type TIII PTT I/4" Studs Side by Side



**Manual Reset** Type TIII PTT 3/8" Studs Side by Side



\* 174 Series Not PTT - (Push To Trip) Manual reset only.

Voltage Ratings:

Type TI: (25A-200A): 30VDC, (225A-300A): I4VDC Type TIII PTT: (25A-150A): 48VDC, (175A-200A): 30VDC.

Type TIII: (225A-250A): 14VDC.

I.R.Ratings:

Type TI (25A-150A): 3kA at 30VDC, (175A-200A): 1.5kA at 30VDC.

Type TI (225A-300A): 2.5kA at 14VDC.

Type TIII PTT (25A-150A): 2.5kA at 14VDC, 1.5kA at 48VDC. Type TIII PTT (175A-200A): 2.5kA at 14VDC, 1.5kA at 30VDC.

Type TIII (225A-250A): 1.5kA at 14VDC.

Reset Function: Manual Reset. Automatic Reset Optional.

Housing: UL94 V-0 rated black thermoplastic.

**Termination:** Side by Side 1/4" or 3/8" stud options.

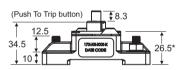
Terminal Hardware: Stainless steel sems nuts included.

Stud Insulator Caps: Included.

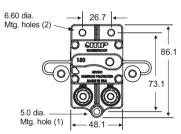
Operating Temp: -40°C to 85 °C. Ingress Protection Rating: IP67 Indicator: Bright yellow colour reset mechanism provides visual indication of tripped condition on manual reset breakers (Type TIII).

Pack Size: Stock lines I pc, indent items 9 or 36pcs.

Approvals: SAE | 1625, | 1171, ABYC E-11, MIL-STD-202, UL1077 (1)



\*Overall height of 174 series.



Dimensions in MM

# RELATED PRODUCTS - TripID™

Surface mount accessory. Provides a red lit visual indication of an open circuit.



Part Number: I7LED-R Voltage: 10-30VDC Mounting: Snap on.









**Red LED Lit** 

# **CIRCUIT BREAKERS - SERIES 17 PANEL MT**



### Features:

**Auto Reset** 

- Ignition protected and weatherproof.
- Standard or 90 degree stud orientation.
- Robust thermoplastic case.
- Corrosion resistant studs & hardware.

**Manual Reset** 

- · Largest amperage range available.
- 1/4" or 3/8" stainless steel stud options. • Superior moisture seal.

300A

NEW

**Manual Reset** 

Breaker made in USA. Bracket made in AU.







Type TI	Type TIII PTT	Type TIII PTT		
I/4" Studs	I/4" Studs	Type TIII *		
3/8" Studs ^		3/8" <b>Studs</b>	Ampei	^e
Part Number	Part Number	Part Number	Rating	
171-P0-025	175-P0-025	175-P2-025	25A	
171-P0-030	175-P0-030	175-P2-030	30A	
171-P0-035	175-P0-035	175-P2-035	35A	
171-P0-040	175-P0-040	175-P2-040	40A	
171-P0-050	175-P0-050	175-P2-050	50A	
171-P0-060	175-P0-060	175-P2-060	60A	
171-P0-070	175-P0-070	175-P2-070	70A	
171-P0-080	175-P0-080	175-P2-080	80A	
171-P0-090	175-P0-090	175-P2-090	90A	
171-P0-100	175-P0-100	175-P2-100	100A	
171-P0-110	175-P0-110	175-P2-110	II0A	
171-P0-120	175-P0-120	175-P2-120	120A	
171-P0-135	175-P0-135	175-P2-135	135A	
171-P0-150	175-P0-150	175-P2-150	150A	
171-P0-175	175-P0-175	175-P2-175	175A	NEW
171-P0-200	175-P0-200	175-P2-200	200A	NEW
171-P2-225 ^	-	175-P2-225	225A	NEW
171-P2-250 ^	-	174-P2-250*	250A	NEW
171-P2-275 ^	-	-	275A	NEW

171-P2-300 ^ ( ^ 3/8" Stud only) \* Not PTT - (Push To Trip) Manual reset only.

**Auto Reset** Type I Std. Orientation







**Rear View** I/4" Studs Std. Orientation



Rear View 3/8" Studs Std. Orientation



I.R.Ratings:

Type TI (25A-150A): 3kA at 30VDC, Type TI (175A-200A): 1.5kA at 30VDC. Type TI (225A-300A): 2.5kA at 14VDC.

Type TIII (25A-150A): 2.5kA at 14VDC, 1.5kA at 48VDC. Type TIII (175A-200A): 2.5kA at 14VDC, 1.5kA at 30VDC.

Type TIII (225A-250A): 1.5kA at 14VDC.

Voltage Ratings:

Type TI: (25A-200A): 30VDC, (225A-300A): 14VDC. Type TIII: (25A-150A): 48VDC, (175A-200A): 30VDC.

Type TIII: (225A-250A): 14VDC.

Pack Size: Stock lines I pc, indent items 9pcs. Housing: UL 94-V0 rated black thermoplastic. Termination: 1/4" or 3/8" Stainless steel studs.

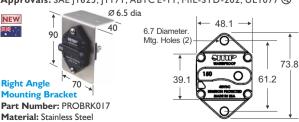
Terminal Hardware: Stainless steel Sems nuts included.

Operating Temp: -40°C to 85°C. Ingress Protection Rating: IP67 Indicator: Bright yellow colour reset mechanism provides visual indication of tripped condition on manual reset breakers (TIII).

Options: 90 Degree position studs suit horizontal busbar.

(17x-PI Series is an indent item only)

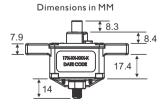
Approvals: SAE J1625, J1171, ABYC E-11, MIL-STD-202, UL1077 (9)



**Gasket Accessory** Part Number: B156-7003-1 Material: Black Santoprene.









IGNITION

This single pole thermal circuit breaker is typically used in DC power systems in marine applications (as a main or branch circuit breaker), truck, bus & RV systems, add-on protection for accessories, etc. Some models are sealed for engine compartment and bilge applications.

### Features:

- Ignition protected and weatherproof.
- Elastomer over mold front.

Auto Reset Type TI	Manual Reset Type TIII - PTT	Manual Reset Type TIII - PTT	
Threaded Mt	Threaded Mt	Non-Threaded Mt	Ampere
Part Number	Part Number	Part Number	Rating
25110-B-I	25510-B-I	25510-A-I	I0A
25115-B-I	25515-B-I	25515-A-I	I5A
25 I 20-B-I	25520-B-I	25520-A-I	20A
25 I 25-B-I	25525-B-I	25525-A-I	25A
25 I 30-B-I	25530-B-I	25530-A-I	30A
25 I 35-B-I	25535-B-I	25535-A-I	35A
25 I 40-B-I	25540-B-I	25540-A-I	40A
25150-B-I	25550-B-I	25550-A-I	50A

**Auto Reset** No Button (251 series)

35A

Manual Reset **Push To Trip - Button** (255 series)



Voltage: 32VDC

I.R.: 2.5kA as per ABYC E-II.

**Reset Mechanism:** Type I = Automatic Reset,

Type III PTT = Manual Reset with Push To Trip feature. Indicator: The 255 series has a unique highly visible yellow colour reset mechanism which provides a visual indication of tripped condition & features a

push-to-trip (PTT) option.

Mounting Torque Rating: 2.0Nm max.

**Mounting Hole Types:** -A-I (suffix) = #10 Thru-hole insert (not threaded).

-B-I (suffix) = #8-32 (threaded inserts).

Terminal Hardware: Nylock nuts installed. Termination: #10-32 Threaded studs.

Operating Temp: -40°C to 85°C Storage Temp: -40°C to 125°C

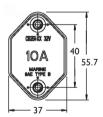
Body: UL 94 V-0 thermoset plastic Ingress Protection Rating: IP66

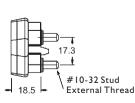
Pack Size: Stock lines I pc, indent items 60 pcs. Approvalsea | 1553, | 1171 & ABYC E-11.

**Rear View** #10-32 Studs

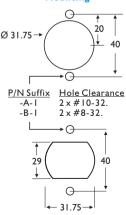


### Automatic Type 25 I series





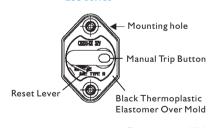
### Front Panel **Mounting**



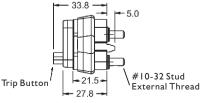
**Rear Panel** 

Mounting

### **Manual Type** 255 series



Dimensions in MM

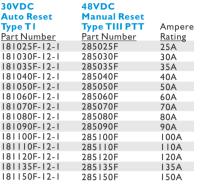




CIRCUIT BREAKERS

IGNITION PROTECTED

Typically used in auxiliary and accessory circuits for automotive & marine applications. Some models are sealed for engine compartment and bilge area applications.





**Auto Reset** 



I.R.: 3kA at 30VDC (Series 181) 3kA at 48VDC (Series 285) Voltage: 30VDC (Series 181), 48VDC (Series 285)

Pack Size: Stock lines Ipc, indent items 60pcs **Termination:** 1/4"-28 threaded studs (Series 181) M6 threaded studs (Series 285)

Operating Temp: -40°C to 85°C (All Series) Storage Temp: -34°C to 149°C (Series 181), -40°C to 125°C (Series 285).

Ingress Protection Rating: IP67 Housing: UL 94 V-0 thermoset plastic.

Indicator: Reset mechanism provides visual indication of tripped condition on manual reset breakers.

Black colour (184 & 185 Series), Yellow colour (285 Series).

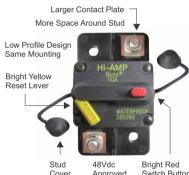
Features: Ignition Protected and weatherproof.

Stud Insulator Caps: Included

Terminal Hardware: Stainless steel nuts and lock washers installed. Notes: The 285 series is a drop in replacement for the 185 series. 184 series also available which is manual reset only, no PTT bright red switch button feature.

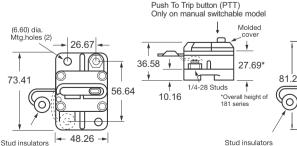
Approvals: SAE 11625, SAE 11171, ABYC E-11

# 285 Series Feature Upgrades

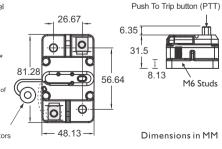


Switch Button Approved

### 181 Series (Standard Profile, Compact Body)



### 285 Series (Low Profile, Extended Body)





Typically used in auxiliary and accessory circuits for automotive & marine applications. Some models are sealed for engine compartment and bilge area applications.



**IP67** 

Manual Reset	
Type TIII PTT	Ampere
Part Number	Rating
285025P	25A
285030P	30A
285035P	35A
285040P	40A
285050P	50A
285060P	60A
285070P	70A
285080P	80A
285090P	90A
285 I 00P	100A
285110P	II0A
285 I 20P	120A
285 I 35P	135A
285150P	150A



**Rear View** 

M6 Studs



**Manual Reset PTT** 

I.R.: 3kA at 48VDC Voltage: 48VDC

Termination: M6 threaded studs. Operating Temp: -40°C to 85°C. Storage Temp: -40°C to 125°C. Ingress Protection Rating: IP67 Housing: UL 94 V-0 thermoset plastic.

Indicator: Bright yellow colour reset mechanism provides visual indication of tripped condition on manual reset breakers.

Features: Ignition Protected and weatherproof.

Terminal Hardware: Stainless steel nuts and lock washers installed. Pack Size: Stock lines I pc, indent items 60pcs

Notes: The 285 series is a drop in replacement for the 185 series. 184 series also available which is manual reset only, no PTT feature.

**Approvals:** SAE | 1625, SAE | 1171, ABYC E-11 €

### **Gasket Accessory** B156-7003-I





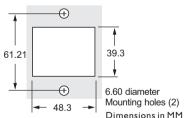
Gasket Fitted

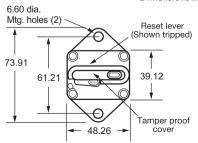
To Breaker

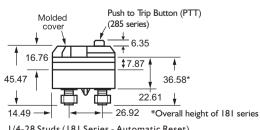
Gasket Part Number: B156-7003-1 Material: Black Santoprene.

Notes: Optional flange mount gasket for through wall applications. Gasket wraps around breaker to provide a seal between the circuit breaker housing and the panel.

### **Suggested Mounting Cutout**







1/4-28 Studs (181 Series - Automatic Reset) M6 Studs (285 Series - Manual Reset PTT)



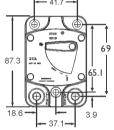
Typically used in DC power systems in marine applications (as a main or branch circuit breaker), truck and bus systems, RV systems, add-on protection for accessories, lift gates, etc.

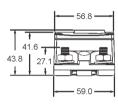
### IGNITION PROTECTED **IP66**

- Single lever for manual reset switching operations.
- Capable of withstanding 3000 on/off cycles at 48VDC.
- Ignition Protected and weatherproof.
- Corrosion resistive materials.
- Large clearance around studs to accept large gauge wire lugs.

Surface Mount Manual Reset TIII	Panel Mount Manual Reset TIII	
Switchable	Switchable	Amper
Part Number	Part Number	Rating
187025F-03-I	187025P-03-1	25A
187030F-03-I	187030P-03-1	30A
187035F-03-I	187035P-03-1	35A
187040F-03-I	187040P-03-1	40A
187050F-03-1	187050P-03-1	50A
187060F-03-I	187060P-03-1	60A
187070F-03-1	187070P-03-1	70A
187080F-03-I	187080P-03-1	80A
187100F-03-1	187100P-03-1	100A
187110F-03-1	187110P-03-1	II0A
187120F-03-1	187120P-03-1	120A
187135F-03-I	187135P-03-1	135A
187150F-03-1	187150P-03-1	150A
187200F-03-1	187200P-03-I	200A







5/16"-18 Threaded Studs

### Voltage: 48VDC

I.R.: Main Breaker Protection.

5kA at I4VDC, 3kA at 28VDC, I.5kA at 48VDC

Reset Mechanism: Type TIII, Manual reset & switchable.

Pack Size: Stock lines I pc, indent items 60pcs. Mounting Options: Surface or Panel Mount.

Operating Temp: -40°C to 85°C. Storage Temp: -40°C to 125°C

Materials: Base UL-Rated 94V-0 thermoset plastic.

Cover & lever UL-Rated 94V-0 thermoplastic. Marking: Standard marking includes amp/volt ratings.

Terminal Hardware: Stainless nuts & lock washers installed.

Termination: 5/16"-18 threaded studs.

Torque Rating: 8.5Nm max.

Mounting Torque Rating: 5.6Nm max.

Ingress Protection Rating: IP66

Approvals: SAE | | | | 7 | , ABYC E-| | (6





### **Panel Mount Manual Reset**

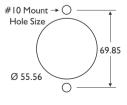
# NEW Series 87. Marine Rated Circuit Breakers Panel or Surface Mount 48VDC 25A through to 250A.



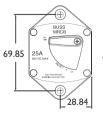
Scan this OR Code for more information

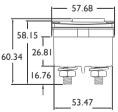
# QR Code: 10004

### Recommended Panel **Mounting Cut-Out**



### **Recessed Mounting** Hole for #10 Screws





Dimensions in MM

5/16"-18 Threaded Studs



# Fuse Holders, **Fuse Blocks & Panels**

# Quality built products.



**Fuse Clips & PCB Mount Holders** Mini Fuse, Auto Fuse & Maxi Fuse EV Cartridge Midget Fuse (5AB)

**Panel Mount Holders** 3AG Fuses

In-line Holders 3AG / AGC Fuses Low Profile Mini Fuse Micro2 Fuse Mini Fuse / LED Mini Fuse Auto Fuse / LED Auto Fuse Maxi Fuse / LED Maxi Fuse Mini & Auto Bladed Breakers Jease Fusible Link Midi Fuse Mega Fuse

Add-A-Circuit Holders Micro2 & Micro3 Fuse

Low Profile Mini Fuse Mini Fuse Auto Fuse Mini & Auto Taps Ground Taps 3 Way Mini & Auto Blade Socket Connectors Mini & Auto Blade Socket Current Loops Fuse Diagnostic Kit For Mini & Auto Blade

Fuse Blocks

Micro2 Fuse Block Mini Fuse Block Auto Fuse Block Auto Fuse Block Sealed Midi Fuse Block Mega Fuse Block Lift Truck Fuse Block EV Midget Cartridge Fuses (5AB) EV Midget Bolted Tag Fuses (5AB) High Power DC Bolted Tag Fuses EV / EVSE Bolted Tag Fuses

**Fuse Panels** 

Auto Fuse Auto Bladed Breaker

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### Page 69

### Page 69 - 71 72 72 72 - 73 74 - 78

# Page

82

# 85 85 Page

# 103 - 104 103 - 104 Page

102

87, 90 - 92 87, 91 - 92





Part Number	<u>Holder</u>	Fuse Type	Rating	Orientation	Mounting Method
FC-MINV	Clip	Mini Blade	I5A	Vertical	Thru Hole Mount
FC-MINH	Clip	Mini Blade	I5A	Horizontal	Thru Hole Mount
FC-ATOV	Clip	Auto Blade	I5A	Vertical	Thru Hole Mount
FC-ATOH	Clip	Auto Blade	I5A	Horizontal	Thru Hole Mount
FC-MAXV	Clip	Maxi Blade	50A	Vertical	Thru Hole Mount
FCB-26	Board	Mini Blade	I5A	Vertical	Thru Hole Mount
FCB-25	Board	Auto Blade	20A	Vertical	Thru Hole Mount



Material: Tin plated spring brass. Pack Size: Varies, please contact sales. Note Clips: 2pcs required per fuse.

Data Sheet: Contact sales

Approvals: RoHS





Mini Fuse Board THM

**Auto Fuse Board THM** 









Mini Clips Vertical

Mini Clips Horizontal

Auto Clip **Vertical** 

**Auto Clips** Horizontal

23.2

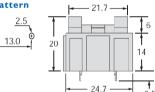
3.5

**AUTO FUSE HOLDER BOARD MOUNT** 

Part Number Description Fuse holder 00420 00359 Clear cover

Rating: I5A Voltage: 32V Body: Black PA66, UL94 V2. Mounting: Thru Hole Mount. Cover: Transparent PC Terminals: Tin plated phosphor bronze. Inox-steel clip included.

Feature: Stackable end or side. Pack Size: 1, 10, 100, 1000 Notes: Auto fuse is not included. Mounting **Pattern** 



Dimensions in MM

23.5



**RELATED** PRODUCTS:

**Auto Fuse** (see p. 17)



# **EV CARTRIDGE FUSE CLIPS 10.3MM DIAMETER**

Part Number Mounting Type BC800 Thru Hole Mount

Rating: 32A

Voltage: 250V-1500V

Clip Material: Brass, Tin plated. Pack Size (bag): 2, 10, 100, 1000

Feature: Fuse end stop

Suits EV Cartridge Fuse: 10.3 x 38.1mm.

Approvals: RoHS

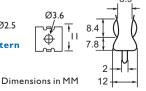


RELATED **EV Cartridge Fuses** (see p.32 - 34)











**PRODUCTS:** 



Terminal Type / Angle Part Number Knob Type HTB-26I-R Fingergrip 1/4" Q/C (6.35mm) Straight 3/16" Q/C (4.8mm) or Solder, Straight HTB-22I-R Fingergrip HTB-34I-R Screwdriver 3/16" Q/C (4.8mm) or Solder, Right

Voltage: 250V Rating: 20A

Terminals: Tin plated brass.

Mounting Standard: Low profile, rear hex nut.

Mounting Option: High profile, please contact sales. Ambient Temperature: -55°C to +85°C. Body: Flame retardant thermoplastic UL 94VO.

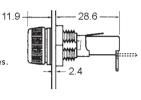
Accessories: Includes plastic nut and spacer. Options: Finger-grip type holders may be ordered with 'splash proof' knob, please contact sales.

Pack Size: 1, 10, 100

Note: Maximum panel Thickness: 7.62mm

Notes: Fuse is not included.

Approvals: 🕦 🏽 (S) 🙉 (E RoHS)



### Finger Grip Knob





### Mounting Hole Double D Type



Dimensions in MM



# I/4" Terminal Types

Straight 6.35mm (1/4") Quick Connect (Q/C)



Right 6.35mm (1/4") Quick Connect (Q/C)

# 3/16" Terminal Types



Straight 4.8mm (3/16") Quick Connect (Q/C) or Solder



Right 4.8mm (3/16") Quick Connect (Q/C) or Solder

# 3AG 250V / 500V IN-LINE FUSE HOLDERS

# **///** Littelfuse

### Features:

- High voltage rating accommodates many power applications.
- Single piece molded body minimizes component count.
- Wire leads are pre-attached to fuse clips for quick assembly.
- UL Recognized.

Part Number Description

150322 15A 500VAC / 500VDC 150332 15A 250VAC / 250VDC

Terminals: Tin plated brass.

Wire Gauge: 0.8mm<sup>2</sup> (#18 AWG) Black, 150°C stranded. Wire Length: 200mm each side of the body included.

Pack Size: 1, 10, 100, 1000 Note: 3AG fuse not included.

Approvals: SU UL/CSA 4248.1, E14721 RoHS

# **NEW** Clamshell Open / Close

### **RELATED PRODUCTS:**



(see p. 10 & 11)



**3AB** Fuses (see p. II)

59.0 **1** 12.2 - 13.0 203.0 -

Dimensions in MM



Flammability: UL 94 HB (phenolic body) Temperature Rating (RTI): 150°C

Holder Type: Bayonet Type

Ingress Protection: IP64 Rating for exposed locations.

Contacts: Copper crimp

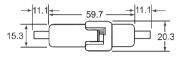
Crimp Terminal: I - 3mm<sup>2</sup> (#16-12AWG) copper wire.

Crimp Tool: Thomas & Betts WT-112M

Pack Size: 1, 10, 20, 100, 500

Approvals: RoHS

Crimp Terminal



Dimensions in MM

### **RELATED PRODUCTS:**





AGC / 3AG Fuses (see p. 10 & 11)

3AB Fuses (see p. II)

# 3AG 32V IN-LINE HOLDER & 20A FUSE

Part Number Description 20A Bayonet holder HRI

Voltage: 32V

**FUSE HOLDERS** 

Temperature Rating (RTI): 140°C. Wire Thickness: 2mm<sup>2</sup> (#14 AWG). Wire Length: 480mm loop. Pack Size: 1, 10, 100, 500, 1000

### **Bonus Feature:**

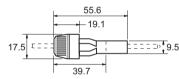
Fuse holder includes 3AG 20A fuse. # AGC020 Fuse specifications: Glass case 6.35 x 31.8mm 20A 32VAC/DC



AGC020 Fuse (Included)

# ET•N Bussmann





Dimensions in MM

# **3AG 32V IN-LINE HOLDER**

Part Number Description HHN 30A Twist lock holder

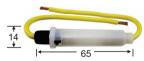
Voltage: 32V

Body: Nylon Heavy Duty White Body. Wire Thickness: 3mm² (#12 AWG) yellow. Wire Length: 2 x 100mm lengths of wire.

Pack Size: 1, 10, 100, 500, 1000 Notes: Fuse is not included

### FAT-N Bussmann

**NEW** 





## **RELATED PRODUCTS:**





(see p.38)

Body: Nylon (high visibility yellow colour).

Flammability: UL 94 V2

Wire Thickness: 1 - 3mm<sup>2</sup> (#16-12 AWG). Wire not included.

Crimp: Simple crimp assembly, copper tin plated.

Crimp Tools: Thomas & Betts ERG4001, Channelock No.909,

General Electric - U.S. & Metric Electrical Terminal Tool.

Assembled Holder Option: Can be ordered assembled with

#14 AWG insulated leads in lengths of either 204mm or 483mm.

Lead colour options; red, black, yellow). Contact sales for further information.

Suits Fuses: Cartridge fuse types 7AG, 8AG and 3AG.

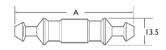
Pack Size: 1, 10, 100, 500, 1000

Approvals: RoHS



**Crimp Terminal** 





With Fuse Installed 7AG (AGW)

8AG (AGX) 3AG (AGC) "A" Dimension 53.34mm 57.19mm 61.5mm

RELATED PRODUCTS:







**AGC Fuse Kit** (see p.38)

# **3AG 32V IN-LINE HOLDER SPLASH PROOF**

EAT•N Bussmann

**IP67** 

### Features:

- Ideal for harsh environments. Water, salt spray, ultraviolet light, Ozone.
- Withstands many organic solvents, rigorous shock and vibration.

Part Number HFB-R

Rating: 30A Voltage: 32V

Body: Thermoplastic rubber, high visibility yellow colour.

Contacts: Tin plated copper

Temperature Range: -40°C to + 150°C

Flammability: UL 94 HB

Wire Thickness: 0.8 - 3mm<sup>2</sup> (#18-12 AWG) wire not included. Ingress Protection: IP67 Rating for exposed locations.

Crimp Tools: Thomas & Betts WT-112M, Channelock No.909.,

California Terminal Products No. I 250

Pack Size: 1. 10. 100 Approvals: RoHS

**Crimp Terminal** 

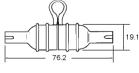


### RELATED PRODUCTS:



**Possible Mounting Arrangement** 





Dimensions in MM



# **LOW PROFILE MINI FUSE IN-LINE HOLDER**

PROLEG

Part Number Description

FHL002 30A Holder with cover

Voltage: 58VDC Body: Black Nylon PA66.

Terminals: Tin / Nickel plated Bronze. Wire Gauge: 3mm² (# I 2AWG) red. Wire Length: 2 x I 33mm lengths of wire.

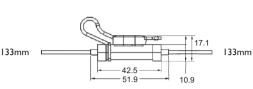
Pack Size: 1, 10, 100, 1000 Notes: Fuse is not included.

RELATED PRODUCTS:

Low Profile Minifuse (see p. 14)







Dimensions in MM

# MICRO2 IN-LINE HOLDER SPLASH PROOF

Part Number Description

FHC002 30A Holder with cover

Voltage: 32V

Wire: 3mm<sup>2</sup> (#12AWG) stranded.

Wire Length: 305mm red wire loop. Body: Black PVC.

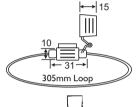
Terminals: Tin plated brass.

Pack Size: 1, 10, 100, 1000.

RELATED PRODUCTS:

Micro2 Fuse (see p. l 3)









PROVER

Dimensions in MM

# **MINI FUSE IN-LINE HOLDERS**

Part Number Fuse Holder Kits Include;
01400K1 Fuse holder body and 2 x

01400K1 Fuse holder body and 2 x 10A terminals 01400, 2 x 07209BK (0.5 - 1mm²) 01400K2 Fuse holder body and 2 x 14A terminals

01400, 2 x 07212BK (1.5 - 2.5mm<sup>2</sup>)

Voltage: 32V

Body: Polyamide 6.6 (PA66)

Features: Gangable. Lateral or snap mount fixing.

Fuse Holder Kit Pack Size: 1, 10, 100 Mounting Plate Pack Size: 1000

Notes: Fuse and fixing plate are not included.

Approvals: RoHS

# Gangable Feature Mini Fuse — Fuse Holder — Body Terminals

### **RELATED PRODUCTS:**

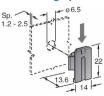




Mini Fuse LED Mini Fuse (see p.15) (see p.15)



Fixing Plate Snap Mount # 00395

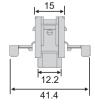


**Mounting Option** 

Fixing Plate



Dimensions in MM





# MINI FUSE IN-LINE HOLDERS



FHM001

22

IGNITION

Part Number Description

FHM001 20A with cover, 2.1mm<sup>2</sup> #14AWG Black FHM002 30A with cover, 3.3mm<sup>2</sup> #12AWG Orange

Voltage: 32V-58V

Wire: 125°C rated, GXL wires, tinned stranded copper.

Body: Black thermoplastic Ignition Proof: UL94 Ignition Protection: V-2 / V-0

Ingress Rating: IP67 Cover dustproof & waterproof.

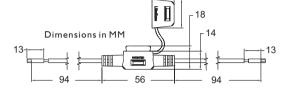
Pack Size: 1, 10, 100, 1000 Note: Fuses are not included.

Approvals: RoHS





Mini Fuse 58V **RFI ATFD** Mini Fuse PRODUCTS: (see p.15) (see p. 16)



FHM002

# MINI FUSE IN-LINE HOLDER

Part Number Description

HHL 20A with cover. I.0mm<sup>2</sup> # I6AWG

Voltage: 32V

Wire: Black, 26 strand copper, no plating. Contact Material: Brass, tin-plated. Insulation Body: Santoprene TPV. Feature: Cover is splash proof Pack Size: 1, 10, 100, 1000

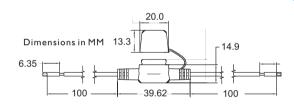
Approvals: (1) 3266, SAE | 2030 RoHS

RELATED PRODUCT: Mini Fuse (see p.15)



# **Bussmann IP66**

FATON



# MINI FUSE IN-LINE HOLDERS CLEAR



FHM00XCLR is a transparent inline fuse holder with protective cap that when used with a LED indicating mini blade fuse it lights up when a fuse is blown.

Part Number Description

FHM001CLR 20A with clear cover, I.0mm<sup>2</sup> # I6AWG FHM002CLR 30A with clear cover, 3.3mm<sup>2</sup> # I2AWG

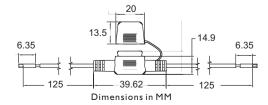
Blown LED Mini Fuse Lights Up Clear Cover

Voltage: 32V Wire Length: 2 x 125mm lengths of wire **Body:** Transparent thermoplastic Feature: Cover is splash proof Pack Size: 1, 10, 100, 1000

Approvals: RoHS

**LED Mini Fuse** RELATED PRODUCT: (see p.15)







Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# **AUTO FUSE IN-LINE HOLDERS**

# Littelfuse Littelfuse

- Capable of snap-mounting to panel from rear.
- Fuse holders gang together (stackable).

Fuse Holder Kits Include; Part Number

15532011 Fuse holder kit includes holder & terminals 20A

868-062-000 & 2 x 913-008-001

155430U Fuse holder kit includes holder & terminals 30A

868-062-000 & 2 x 913-007-001

Part Number Individual Component Ordering 868-062-000 Fuse holder body only (black) snap lockable 913-008-001 Terminal 2.1 mm² (# Í 4 AWG stranded wire) 913-007-001 Terminal 5.3 mm² (# 10 AWG stranded wire)

Voltage: 32V

**Body:** Black thermoplastic (UL 94V2)

Terminals: Tin plated brass (snap-lock into body)

Ambient Temp:  $-40^{\circ}$ C to  $+85^{\circ}$ C Panel Thickness: 1.02mm / 1.98 mm

Notes: Fuse is not included.

Approvals: RoHS

### Auto Blade Fuse











### **RELATED PRODUCTS:**





**Auto Fuse LED Auto Fuse** (see p.17) (see p.17)

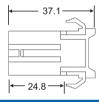
# **Mounting Hole**



# **Gang Mount Option**



### **Fuse Holder Body**



# **AUTO FUSE IN-LINE HOLDER**

Easy to install. Simply locate fuse holder at a convenient spot along the wire between power source and the appliance. Use pliers to crimp fuse holder closed around wire to pierce insulation automatically.

Part Number Description FH-302 20A Fuse holder.

Voltage: 32V

Body: Royal blue polypropylene Terminals: Self stripping

Wire: 0.8-2.0mm<sup>2</sup> (#18-14AWG). Maximum Cable Outer Dia: 3.7mm

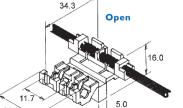
Contacts: Nickel plated brass Pack Size: 10, 100, 1000 Notes: Fuse is not included.

### **RELATED PRODUCTS:**

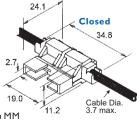


(see p.17)





22.8 Dimensions in MM





# **AUTO FUSE IN-LINE HOLDER**

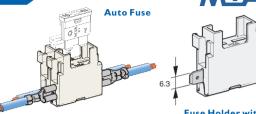
Part Number Description

00341 Fuse holder with 1/4" OC 20A 00352 Fixing plate includes screw.

Voltage: 32V Body: White PA 66

Feature: Gangable. Fuse holders interlock.

Pack Size: 1, 10, 100 Notes: Fuse is not included.



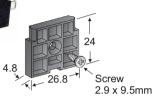
Gangable Feature

Fuse Holder with 6.3mm QC Terminals

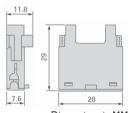




**Auto Fuse LED Auto Fuse** (see p.17) (see p. 17)







Dimensions in MM

# **AUTO FUSE IN-LINE HOLDER (PANEL MT)**

Part Number Description

00330 Fuse holder with 1/4" QC 20A terminals 00357 Secondary terminal lock (optional)

Voltage: 32V Body: Black PA 66.

**Body Options:** Also available without terminals (#00331).

Terminal Options: Crimp type with or without clip (14A, 20A, 37A). Terminal Packaging Options: BK = Bulk Pack, RL = Reel Pack

Contact sales for further information. Fuse Holder Pack Size: 1, 10, 100

Secondary Lock Pack Size: 250 Notes: Fuses & circuit breakers are not included.

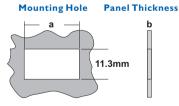


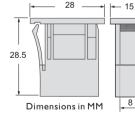
Fuse Holder 00330 with Auto Fuse

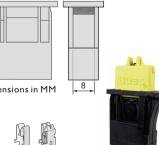
**Ouick Connect** Terminals

# **Panel Mounting** Dimensions (mm)

<u>a</u>	<u>b</u>
21.9	0.8
22.0	1.0
22.1	1.5
22.2	2.0







### **RELATED PRODUCTS:**



(see p.17)



**LED Auto Fuse** (see p.17)



**Auto Breaker** (see p.49)



Secondary **Terminal** Lock



Terminal Options

1/4" QC Crimp (Contact us) (Contact us)

Fuse Holder with Bladed Breaker



# **AUTO FUSE IN-LINE HOLDERS WITH COVER**



Part Number Description

FHAC001 20A with cover, 1.3mm<sup>2</sup> (#16AWG) Black

FHAC002 30A with cover, 3.3mm<sup>2</sup> (#12AWG) Orange



Voltage: 32V-58V

Wire: 125°C rated, GXL wires, Tinned

stranded copper

Body: Black thermoplastic Ignition Proof: UL94

Ignition Protection: V-2 / V-0

Ingress Rating: IP67

Feature: Cover dustproof & waterproof.

Pack Size: 1, 10, 100, 1000

Approvals: RoHS





**RELATED PRODUCTS:** 



**Auto Fuse** (see p. 17)



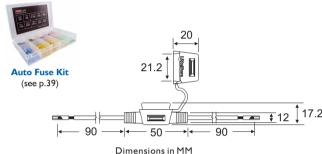
Connectors (see p.188)

**Auto Fuse 58V** (see p. 16)



Female Insulated **Disconnects** (see p.188)

FHAC002



# **AUTO FUSE IN-LINE HOLDERS CLEAR**

FHAC00xCLR is a transparent inline fuse holder with protective cap that when used with a LED indicating auto blade fuse lights up when a fuse is blown.

Part Number Description

FHAC001CLR 20A with clear cover, I.3mm<sup>2</sup> (#I6AWG) FHAC002CLR 30A with clear cover, 3.3mm<sup>2</sup> (#12AWG)

Voltage: 32V

Body: Transparent thermoplastic Wire Length: 2 x 130mm lengths of wire

Feature: Cover is splash proof Pack Size: 1, 10, 100, 1000

Approvals: RoHS



**Normal State Fuse** 

**Blown Fuse Lights Up** 

# **RELATED PRODUCTS:**



**LED Auto Fuse** (see p. 17)



**LED Auto Fuse Pack** (see p.36)



**LED Auto Fuse Kit** (see p.39)



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# **AUTO FUSE IN-LINE HOLDERS WATERPROOF**

# 

### Features:

- The lid features a tight snap lock feature and a mounting hole.
- The base features weatherproof seals for both the top and bottom.
- Ingress Protection rating of IP67.
- 2 x Pre-terminated and sealed lengths of wire included.

Part Number Description

HHR 30A with 130mm (5") long wire HHRI 30A with 305mm (12") long wire NEW

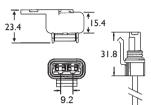
Voltage: 32V

Cover: Snap locking cover includes mounting hole.

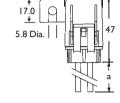
Body Seals: Silicone gasket and cable seal.

Pack Size: 1, 10, 100 Wire: 3.0mm<sup>2</sup> (#12AWG). Notes: Fuse is not included.

Approvals: RoHS



Dimensions in MM



46.3

**←** 28

a = 130mm # HHR

a = 305mm # HHRL

**IP67** 

# **RELATED PRODUCTS:**





**Auto Fuse** (see p.17)

**LED Auto Fuse** (see p.17)

# **FUSE / BREAKER IN-LINE HOLDER WATERPROOF**

# 

### Features:

- Clear cover is allows visual identification of circuit protection device.
- Clear cover alerts a problem to the user when an LED indicating fuses is blown.
- The fuse holder suits multiple blade fuse types.
- The fuse holder extended cap also suits various bladed circuit breaker types.
- The lid features a tight snap lock feature and a mounting hole.
- The base features weatherproof seals for both the top and bottom IP67.
- Extra long 2 x 305mm / 12" lengths of wire included.

Part Number Description FHU002L 30A with Extended Cover

Voltage: 32V

Body: Black waterproof inline fuse holder.

Body Seal: Silicone gasket.

Cover: Clear cover with lock and mounting hole.

Suits: Mini, LED Mini, Auto and LED Auto Blade Fuses,

Mini and Auto Bladed Circuit Breakers.

Wire: 3.0mm2 (#12AWG).

Wire Length: 2 x 305mm / 12" lengths of wire.

Pack Size: 1, 10, 100, 500

Notes: Fuse & breakers are not included.

Approvals: RoHS

### **RELATED PRODUCTS:**





(see p. 15)



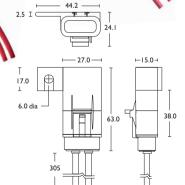
Mini Breaker (see p.48)



Auto Fuse & **LED Auto Fuse** (see p. 17)



**Auto Breaker** (see p.49)

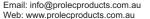


305mm

(12") Cables

Dimensions in MM





# **AUTO FUSE IN-LINE HOLDERS**

Part Number	Fuse Holder Kits Include;	Pack Size	
00400K1	00400, 00415, 00430 & 2 x 07920BK	1	NEW
00400K2	00400, 00415, 00430 & 2 x 07930BK	1	NEW
00400K3	00400, 00415, 00430 & 2 x 07940BK	1	NEW

Part Number	Individual Component Ordering	Pack Size
00400	Fuse holder body black PA 66	1, 10, 100
00415	Fuse holder cover black PA 66	1, 25, 100
07900BK	Terminal 0.5 to 1.5mm <sup>2</sup> 14A (RL*)	10, 20, 100
07912RL	Terminal 2 to 3mm <sup>2</sup> 20A (RL)	10,9000
07901BK	Terminal 4 to 6mm <sup>2</sup> 37A (RL*)	10, 20, 100
07920BK	Terminal 0.5 to 1.5mm <sup>2</sup> + Clip 14A (RL*)	10, 20, 100
07930BK	Terminal 2 to 3mm <sup>2</sup> + Clip 20A (RL*)	10, 20, 100
07940BK	Terminal 4 to 6mm <sup>2</sup> + Clip 37A (RL*)	10, 20, 100
00392	Fixing plate snap mount	1, 10, 100
00430	Fixing plate single screw, M5	1, 10, 100
00440	Fixing plate dual screw, M5	1, 10, 100

Terminal Options: BK = Bulk pack, RL = \*Reel Pack MOQ applies.

Accessories: Snap lock fixing plate and bracket accessories.

Features: Gangable. Lateral fixing. Approvals: RoHS

# Fuse Holder Cover Fuse Holder Body Closing Tabs Terminal Types

Scan this QR Code for more information

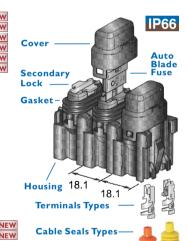


QR Code: 7001

# **AUTO FUSE IN-LINE HOLDERS SPLASH PROOF**

Part Number         Fuse Holder Kits Include;           50153K         02330, 00392 & 2 x 07920BK.           50153K1         02330, 00392, 2 x 07920BK & 2 x 4507770.           50153K2         02330, 00392, 2 x 07930BK & 2 x 4507771.           02330K1         02330, 00430, 2 x 07930BK & 2 x 4507771.           02330K2         02330, 00430, 2 x 07930BK & 2 x 4507771.           02330K3         02330, 00430, 2 x 07940BK & 2 x 4507771.	I NEV	N N
---	-------	--------

Part Number	Individual Component Ordering	Pack Size
02330	Housing w/secondary lock, gasket & cover	1, 10, 100
07900BK	Terminal 0.5 to 1.5mm <sup>2</sup> 14A (RL*)	10, 20, 100
07912RL	Terminal 2 to 3mm <sup>2</sup> 20A (RL)	10,9000
07901BK	Terminal 4 to 6mm <sup>2</sup> 37A (RL*)	10, 20, 100
07920BK	Terminal 0.5 to 1.5mm <sup>2</sup> + Clip 14A (RL*)	10, 20, 100
07930BK	Terminal 2 to 3mm <sup>2</sup> + Clip 20A (RL*)	10, 20, 100
07940BK	Terminal 4 to 6mm <sup>2</sup> + Clip 37A (RL*)	10, 20, 100
4507770	Cable seal for 0.5 - 1.5 mm <sup>2</sup> wire, orange	10, 100
4507771	Cable seal for 2.0 - 3.0 mm <sup>2</sup> wire, yellow	10, 100
00392	Fixing plate snap mount	1, 10, 100
00430	Fixing plate single screw, M5	1, 10, 100
00440	Fixing plate dual screw, M5	1, 10, 100
00697	Mounting bracket slide lock male	1, 10, 100
00698	Mounting bracket slide lock female	1, 10, 100
	-	



**Body:** Black PA 66 **Terminal Options:** BK = Bulk pack, RL = \*Reel Pack MOQ applies. **Cable Seal:** Self lubricating silicone rubber.

Ingress Protection Rating: IP66 (Valid when properly installed with components). Features: Gangable. Lateral fixing. Accessories: Snap lock fixing plate & bracket accessories.

Notes: Secondary lock available in various colours to match fuse colour identification.

Approvals: RoHS

### **RELATED PRODUCTS:**







Fixing Plate (Single)



Fixing Plate (Dual)



Fixing Plate (Snap Mount)



Mounting Brackets (M/F)

Scan this QR Code for more information



QR Code: 7004



# **MAXI FUSE IN-LINE HOLDERS**

Part Number	Fuse Holder Kits Include;	Pack Size	
01001K	00390, 00391, 00430 & 2 x 07650BK	1	NEW
01001K2	00390, 00391, 00430 & 2 x 07660BK	I	NEW
01001K3	00390, 00391, 00430 & 2 x 07670BK	1	NEW

Part Number	Individual Component Ordering	Pack Size
00390	Fuse holder body black PA66 w/lock	1, 10, 100
00391	Clear fuse cover	1, 10, 100
07650BK	Terminal 1.5 to 2.5mm <sup>2</sup> 20A (RL*)	10, 20, 100
07660BK	Terminal 4 to 6mm <sup>2</sup> 36A (RL*)	10, 20, 100
07670BK	Terminal 8 to 10mm <sup>2</sup> 50A (RL*)	10, 20, 100
07671BK	Terminal 16mm <sup>2</sup> 75A (RL)	10, 20, 100
00392	Fixing plate snap mount	1, 10, 100
00430	Fixing plate single screw, M5	1, 10, 100
00440	Fixing plate dual screw, M5	1, 10, 100

Terminals Options: BK = Bulk Pack, RL = Reel Pack Accessories: Optional I.D inserts - colour coded with rating embossed. Features: Gangable, lateral fixing & snap lock fixing plate accessories.

Note: Fuse is not included with this holder.

Approvals: RoHS

# Clear Cover **Amperage** I.D Insert (Optional) **Fuse Holder** Body Secondary **Terminal** Lock Terminals

Scan this **OR Code** for more information



QR Code: 7005

# MAXI FUSE IN-LINE HOLDERS SPLASH PROOF

Part Number	Fuse Holder Kits Include:	Pack Size	2
01005K	21210, 21000, 21200 & 2 x 07660BK	1	
01005K2	21210, 21000, 21200, 00430 & 2 x 07660BK	I	NEW
01005K3	21210, 21000, 21200, 00430 & 2 x 07670BK	1	NEW

Part Number Individual Component Ordering Pack Size 21210 Cover with gasket inserted 1, 10, 100 21000 Fuse holder body black PA66 w/lock 1, 10, 100 21200 Bottom cover black PA 66 1, 10, 100 07650BK Terminal 1.5 to 2.5mm<sup>2</sup> 20A (RL\*) 10.20.100 07660BK Terminal 4 to 6mm<sup>2</sup> 36A (RL\*) 10.20.100 07670BK Terminal 8 to 10mm<sup>2</sup> 50Å (RL\*) 10, 20, 100 07671BK Terminal I6mm<sup>2</sup> 75A (RL\*) 10, 20, 100 00392 Pressure fixing dual pin 1, 10, 100 00430 Fixing plate single screw, M5 1, 10, 100 00440 Fixing plate dual screw, M5 1, 10, 100 00697 Mounting bracket slide lock male 1, 10, 100 00698 Mounting bracket slide lock female 1, 10, 100

Terminal Options: BK = Bulk Pack, RL = \*Reel Pack MOQ applies. Accessories: Optional I.D inserts - colour coded with rating embossed. Features: Gangable, lateral fixing & snap lock fixing plate accessories. Cable Note: Max. cable size is 6mm<sup>2</sup> when using bottom cover.

Max. cable size is 16mm<sup>2</sup> when not using bottom cover.

Note: Fuse is not included with this holder.

Approvals: RoHS

### **RELATED PRODUCTS**



**Maxi Fuses** (see p. 18)



**Fixing Plate** (Single)



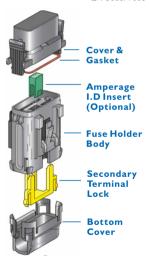
**Fixing Plate** (Dual)



⊕ 19mm ⊕ **Fixing Plate** (Snap Mount)



Mounting Brackets (M/F)







**Terminals** 

QR Code: 7000



# **MAXI FUSE IN-LINE HOLDERS**



Part Number Fuse Holder Kits Include;

152001KIT1 Fuse holder kit, includes fuse holder body, cover.

2 x screws, 4 x washers & 2 x terminals (2.5 - 6mm<sup>2</sup>). Fuse holder kit, includes fuse holder body, cover,

152001KIT2 2 x screws, 4 x washers & 2 x terminals (5 - 10mm<sup>2</sup>).

Part Number	Individual Component Ordering
152001	Maxi fuse holder body black
152900	Fuse holder clear cover
913-550	M5 x 8 Screw, split washer and flat washer
913-653	Ring tongue terminal, 2.5 - 6mm <sup>2</sup> (#12-10AWG)*
913-654	Ring tongue terminal, 5 - 10mm <sup>2</sup> (#10 - 8AWG)*



### Rating: 60A Voltage: 32VDC

Terminals: Copper alloy Cover: Translucent thermoplastic **Body:** Black thermoplastic (UL 94HB)

Feature: Only 2 fuse blocks may be ganged together with a maximum fuse rating of 50A per block.

Notes: This product will only accept original Littelfuse Maxi blade fuses (299 / 999 series). Fuse is not included.

\*It is recommended that cross linked polyethelene (GLX) insulated wire be used. Contact sales for more information.

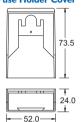
# **RELATED PRODUCTS:**

Maxi fuse see page 18 LED Maxi fuse see page 18





# **Fuse Holder Cover**





6.7 Dia. Mounting Hole

# **Fuse Holder Body** Mounting

Hole 67.3 38 4

Littelfuse

Dimensions in MM

# MAXI FUSE IN-LINE HOLDER SPLASH PROOF

Part Number Description MAHC0001 Fuse holder with black cover

Rating: 60A Voltage: 32VDC

Wire: 2 x 127mm leads of 13mm<sup>2</sup> #6AWG black.

Ignition Protection: V-2 Ignition Proof: UL-94 Pack Size: 1. 10. 100

Feature: Protective cover permits use in harsh under hood environments. Mounting hole also permits easy bulkhead installation. Permits 2 or more holders to be mounted together.

Approvals: RoHS

# IGNITION IP67 85.1 34.8 60.2

# MAXI FUSE IN-LINE HOLDERS SPLASH PROOF

Part Number Description MFHC

Fuse holder with black cover MFHCLR6 Fuse holder with clear cover NEW

Rating: 60A Voltage: 32VDC

Wire: 2 x 150mm leads of 13mm<sup>2</sup> #6AWG red.

**Body Material: PVC** Pack Size: 1, 10, 100

Notes: Protective cover permits use in harsh under hood environments. The clear cover allows LED Maxi fuses to be clearly seen.

# **RELATED PRODUCTS:**

Maxi fuse see page 18 LED Maxi fuse see page 18





127mm









# **JCASE FUSE IN-LINE HOLDER SPLASHPROOF**



**IP67** 

• Suit either Low Profile |CASE™ fuses (LJC) or original standard JCASE fuses (JTF).

They offer size and weight savings compared to MAXI<sup>™</sup> fuse holders.

Include a protective cover for splash resistance.

• Fuse links are compact and incorporate a design advantage over blade fuses. Over time the spring clips that hold blade fuses will weaken. In cartridge fuses, the weaker female part is designed into the disposable fuse so that the grip and electrical connection will never weaken.

Part Number Description

FHIC1002 Fuse holder with cover

Rating: 60A Voltage: 58VDC

Wire Thickness: #8AWG Cable Insulation: GXL, 125°C

Operating Temperature Range: -40°C to + I25°C

Max Fuse Insertion Force: 49 Nm Pack Size: 1, 10, 50, 100, 250

Approvals: RoHS

RELATED PRODUCTS:

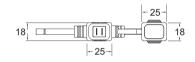


Low Profile Jcase (see page 20)



(see page 21)





Dimensions in MM

# MIDI FUSE IN-LINE HOLDER WITH COVER

**№ Littelfuse**® The inline Midi fuse holder is designed for use with bolt-down Midi

fuses. It may be installed directly inline with the cables with no mounting required. The Inline Midi fuse holder can be used with heat shrink tubing for applications requiring more splash resistance. The curved design of the cover aids in prevention of tube-splitting during application.

Part Number Description

04980921GXM5 Fuse holder includes cover and hardware.

Voltage: 32V Rating: 200A

Operating Temperature Range: -40°C to +125°C

Max. Wire Size: 20mm M5 Torque Rating: 5Nm

Base/Cover Material: UL 94V-0 glass-filled nylon

Bolts: Zinc plated steel M5 x 0.8

Hardware: Zinc-plated steel nuts with nylock inserts (included).

Pack Size: 1. 10. 100

Notes: Midi fuse is not included.

Approvals: RoHS



Side View



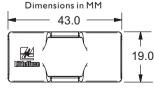
Assembled Holder

# **RELATED** PRODUCTS:



Midi Fuses (see page 24)





**Top View** 



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

FUSE HOLDERS

# **MIDI FUSE BLOCK**

MTA

Part Number Description

MIDERR Midi Fuse Block with Hinged Cover

Voltage: 32VDC Rating: 125A Body & Cover: Black PA66.

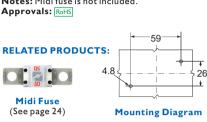
Accessories: Includes cover & flanged nuts. Studs: M5 threaded studs. Steel / Zinc plated.

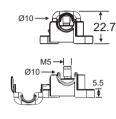
Torque Rating: 4.5 Nm

Features: Inline or surface mounting options.

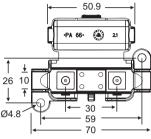
Pack Size: 1, 10, 100

Notes: Midi fuse is not included.





Dimensions in MM



# **MEGA FUSE IN-LINE HOLDERS**

Part Number Fuse Holder Kits Include; 00380KI I x Set fuse holder bodies 2 x Bolts (Steel M8 x I4) & 2 x nuts 2 x Terminals, 10 - 20mm<sup>2</sup>, 90A

00380K2 I x Set fuse holder bodies

2 x Bolts (Steel M8 x 14) & 2 x nuts 2 x Terminals, 25 - 35mm<sup>2</sup>, 100A

Voltage: 32V

Body: PA66-GF30 HB

Terminals: Tin plated copper Torque Rating: II Nm

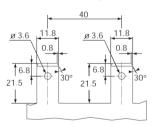
Fuse Holder Kit Pack Size: 1, 10, 100

Fixing Plate Pack Size: 1000

Note: Mega fuse & fixing plates not included.

# Body -Flanged Nuts **Terminal** Cable **Fuse Bolts**

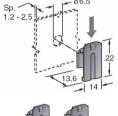
### **Lateral Fixing Plate**



# **RELATED PRODUCTS:**

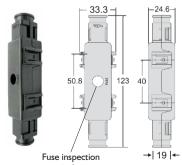
**Mega Fuses** (see page 25)

### **Snap Mount Fixing Plate** Slide locks to holder. Snaps into to panel hole.





Fixing Plates # 00395 (2pcs required per holder, indent item)



window



Dimensions in MM

# **BLADE FUSE ADD-A-CIRCUIT HOLDERS & KITS**

PROLEG

Create a new fuse protected circuit by tapping into an existing fuse circuit. Perfect for adding accessories. Simply plug the add a circuit holder into an existing energized fuse-block slot and insert the original fuse into slot (A) to continue protecting the original circuit. Finally insert a new fuse into slot (B) to protect the new accessory circuit powered by the included lead.

NEW

Tap Only	Tap & Fuse Kit	
Bulk Pack	Retail Clam Shell	
Part Number	Part Number	Suits Blade Fuse Type
FHC200	FHC200K	Micro2 / ATR
FHL200	FHL200K	Low Pro Mini / LP ATM
FHM200	FHM200K	Mini / ATM
FHA200	FHA200K	Auto / ATC
FHD200	FHD200K	Micro3 / ATL





FHC200 (Micro2 Blade)

Rating: 10A max installation rating. Voltage: 32V

Wire: Imm<sup>2</sup> #16AWG red wire.

Terminal: Hardened brass crimp-type coupler.

Tap Only Bulk Pack: Includes Fuse Tap Only. No Fuses.

Tap & Fuse Kit Packaging: Includes Add-a-circuit & 3 spare fuses.

Ratings included are 5A, 7.5A & 10A.

Important Note: Please ensure the gauge of the cable powering the

original fuse is suitable for the additional current draw of the new circuit.

Pack Size: 1, 10, 100, 500, 1000

Approvals: RoHS





FHL200 (Low Pro Mini Blade)

Add-a-Circuit: 2 Terminal Blade Fuse Type. Blade Terminals **Butt Splice Connector** Original Fuse (Slot A) Accessory Fuse (Slot B) Accessory Lead Heat Shrink Tubing (except FHA200) Circuit Diagram Holder Terminals # FHC200, FHL200, FHM200, FHA200 Original Fuse Accessory Accessory Fuse Lead





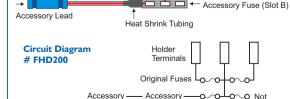
FHM200 (Mini Blade)





FHA200 (Auto Blade)





Lead



Tap & Fuse
Kits



FHD200 (Micro3 Blade)

Scan this QR Code for more information



QR Code: 7014



Fuse

Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

Used



Taps into existing blade fuse by fitting over the leg for additional non-fused circuit.

Part Number Kit Includes Instruction Sheet Plus;

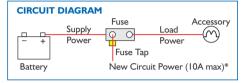
MIN-TAPSP 5x Mini blade fuse taps, 5x insulated female terminals. 5x Auto blade fuse taps, 5x insulated female terminals. ATOF-TAPSP

Rating: 10A Max.

Notes: Always install an inline fuse holder to protect

the accessory. Fuses not included.

Pack Size: 1, 10, 100





**PACKAGING** 'SP' Spare Pack Retail Clamshell



Mini Tap Terminals: 2.8mm (1.87")

Auto Tap Terminals: 5.8mm (1/4")

# **3 CIRCUIT BATTERY POWER FEED / GROUND TAPS**



**Bussmann** 

A quick, easy and reliable method of attaching additional electrical cables to a battery terminal or to ground. They can be stacked to provide multiple taps at one location. Battery Application: Once mounted on the battery terminal, the tap provides three 6.35 mm (1/4") quick connect terminals that can be used to power accessory products. Grounding Application: Once mounted onto the frame, the tap provides three 6.35mm (I/4") quick connect terminals that can be used to ground accessory products. Terminals: 3 x 6.35mm (1/4" QC)

Note: Always install an inline fuse holder to protect the accessory.

Suits Battery Terminals

Screw Type

Post Clamp

Pack Size: 1, 10, 100

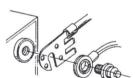
Part Number

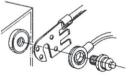
**BAT-TAP-POST** 

**BAT-TAP** 

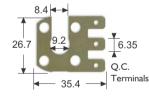


Stacked **Battery Taps** 

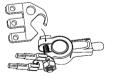








### Frame Ground Mounting



**Battery Screw Mounting** 







**BAT-TAP** 

Frame Grounding Mounting

**BAT-TAP-POST** 

### **RELATED PRODUCTS:**

**Battery Post Mounting** 



**Blade Fuses** (see p13 - 17)



(see p.72 - 77)



**Disconnect Terminals** (see p.188)



(see p.188)



# **FUSE SOCKET CONNECTORS**



### **Fuse Socket Uses:**

- Check current draws.
- Check short / open circuits.
- Check voltage.
- Tap power to energize.

Part Number Socket Terminal Type

FSC-MINI Mini Blade Terminals 2.8mm **FSC-AUTO** Auto Blade Terminals 6.35mm

Pack Size: 1.10.100 Notes: 30A Max.





**FSC-MINI** 



# **FUSED SOCKET CURRENT LOOP KIT - 2mcs**



The Fuse Socket Current Loop provides end user easy testing access when using a current probe to determine the amperage draw through a fused circuit. Maximum testing range is up to 30 Amp. The Perfect tool for installer who needs to monitor circuit amperage limits.



Part Number Kit Contains Both Units

Ipc Mini Blade Socket 2.8mm + Mini Inline Fuse Holder FSCL-KIT

Ipc Auto Blade Socket 6.35mm + Auto Inline Fuse Holder

Pack Size: 1, 10, 100 Notes: Fuse not included.





# **FUSE SOCKET SHORT CIRCUIT DIAGNOSTIC KIT - 17pcs**



This circuit diagnostic kit enables professional mechanics to troubleshoot short circuits in a vehicle without the need to constantly replace fuses. Simply plug the correct socket connector into the fuse slot and fit the appropriate circuit breaker, then start troubleshooting. Mechanics will be able to use the manual reset button on the circuit breaker during the troubleshooting process to reset the breaker instead of replacing a new fuse. Each socket connector has an extension cable to save the user having to reach down into difficult locations where the fuse box is located every time a reset is required. Once the short circuit has been fixed, simply remove the connector and reinstall the correct fuse.



# FSCLA-KIT

### Part Number Kit Contains

I x Mini blade socket connector and mini blade breaker housing.

- I x Auto blade socket connector and auto blade breaker housing. (Each unit is 280mm long with I 2AWG red cable).
- 7 x Mini blade type III manual reset circuit breakers. Ratings include: 5A, 7.5A, 10A, 15A, 20A, 25A, 30A
- 7 x Auto blade type III manual reset circuit breakers. Ratings include: 5A, 7.5A, IOA, I5A, 20A, 25A, 30A
- I x Fuse puller. Extracts mini and auto blade fuses.





Puller

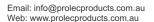
Mini Blade



Auto Blade Circuit Breakers Circuit Breakers

Mini and Auto Blade Sockets With Cable





# MICRO2 FUSE BLOCKS LATERAL CONNECTION

ETON Bussmann



Voltage: 32V

Circuit Rating: 15A max per circuit Cover: Clear with o-ring seal **Block:** Moisture resistant back plate IP Rating: IPx4 (Splash proof)

Terminals: Lateral I/4" QC (6.25mm). Mounting: Surface mount, M5 screw.

Pack Size: |

Options: Also available in 8 & 10 way.

Notes: Fuses not included.

### RELATED PRODUCTS:

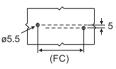


Micro2 Fuses (see p. 13)

### FB4-ATR

83 (L) x 45 (W) x 39 (H) Fixing Centre (FC): 65mm

### **Mounting Diagram**



### FB6-ATR

103 (L) x 45 (W) x 39 (H) Fixing Centre (FC): 85mm





I/4" Quick Connects



# MINI FUSE BLOCK AXIAL CONNECTION

### Features:

• Up to 7 x Mini fuse protected circuits & space to store 3 x spare fuses.

• Compact design for mounting in tight spaces using cable ties.

• Kit includes plenty of terminals in 3 different sizes to suit a wide range of cable sizes.

• Hinged cover protects fuses from the elements. Inside legend identifies the circuits.

Part Number Kit Description

01435K Mini Fuse Block Kit Includes:

I x 01430 (7 way frame) 7 x 01420 (Mini fuse modules)

16 x 08330BK (Bulk terminals 0.35 - 0.75mm<sup>2</sup> 9A)

16 x 0833 IBK (Bulk terminals I - 2 mm<sup>2</sup> 16A) 16 x 08332BK (Bulk terminals 2.5 to 4mm<sup>2</sup> 28A)

Voltage: 32V

Body: Black rubber (PA 66 GF30) Terminals: Tin plated copper

Terminal Options: BK = Bulk Pack.

Pack Size: 1, 400

Notes: Cable ties not supplied. Fuses not included.

Approvals: RoHS

### **Fuse Housing**

**RELATED** 

**PRODUCTS:** 





### **Fuse Frame**



Dimensions in MM

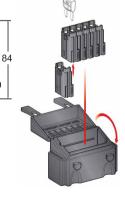
# **Female Terminal**







Storage for 3 spare fuses.



30



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

35 55.6

# **EAT•N** Bussmann

This panel is designed for use with Auto fuses &/or Auto Bladed Circuit Breakers. It can be ordered with a minimum of 4 positions up to a maximum of 20 positions (in multiples of 2). You can also order the panel with a Ground Terminal Pad (GTP) fitted. The GTP features I 2 x I/4" (6.35mm) Q.C. terminals with a common wiring stud.

Short Base	Long Base	
GTP not Fitted	GTP is Fitted	Number of
Part Number	Part Number	<u>Positions</u>
15600-04-20	15600-04-21	4
15600-06-20	15600-06-21	6
15600-08-20	15600-08-21	8
15600-10-20	15600-10-21	10
15600-12-20	15600-12-21	12
15600-14-20	15600-14-21	14
15600-16-20	15600-16-21	16
15600-18-20	15600-18-21	18
15600-20-20	15600-20-21	20



Voltage: 32V

Input Terminal Rating: 100A max total. Output Terminal Rating: 30A max. per circuit

Positions: 4 to 20 circuits available Materials: Black thermoplastic Input Stud: #10-32 threaded stud.

Hardware: Nut and lockwasher supplied on input terminal. Output Terminals: 6.35mm x 0.8mm Q.C. terminals. Wire Size: #4-6 AWG (Input), #12-16 AWG (Output).

Feature: Recessed area in centre of block for identification label.

Pack Size: Stock lines 1 pc. Indentitems 35 pcs.

Notes: \*When ordering with a GTP fitted, please add 33mm to dimension 'L' for actual overall length.) Plug-in components such as fuses and breakers not included.

Dual Supply Option: RTA fuse panels can also be ordered with 2 power input studs (dual power feed). Choose from 4-16 fuse/breaker positions for each input stud (20 positions total per panel). Please contact sales for further information.



12 x 1/4" Quick Connects W/Common #10-32 Wiring Stud

Retail Pack Option # 15600-06-20SP

### Total Nbr Dimensions in MM Positions C 46.8 4 15.8 62.8 6 8 31.8 78.5 10 47.5 95.3 110.3 12 63.6 79.3 126.3 14 16 95 6 142 1 18 HI.I 158.1 20 127.1 173.9

### **RELATED PRODUCTS:**



**Auto Fuses** (see p.17)

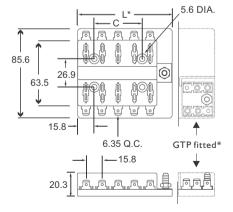


**LED Auto Fuses** (see p.17)



**Auto Bladed Breakers** (see p.49 - 51)

# Single Stud, Single Supply Circuit





# **AUTO FUSE BLOCKS LATERAL CONNECTION**

- Clear plastic cover for fast visual confirmation of fuse amp rating.
- Easy identification of blown fuses when LED indicating Auto fuses are installed.
- Gasket included with cover.

Part Number	No. Poles	Max Amps Per Block
00610K	4 Pole	80A
00600K	6 Pole	100A
00590K	8 Pole	135A

Voltage: 32V

Input Terminal Rating: 20A max. per circuit.

Body: Black PA66 GF30

Cover: Transparent cover with gasket. Material PA12.

Terminals: Lateral connections, 6.35mm (1/4") QC terminals. Kit Contents: Fuse cover, base & QC terminals.

Mounting: M5 screw

Pack Size: 1, 10, 100, 500

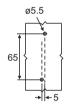
Notes: Each fuse branch is independently powered.

Fuses are not included. Approvals: RoHS

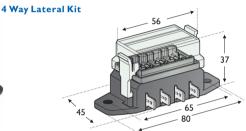


**Lateral Connection** I/4" Quick Connects

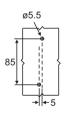
### Mounting Diagram - 00610K



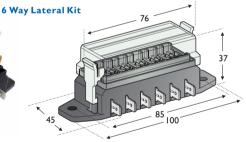




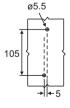
### Mounting Diagram - 00600K







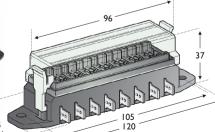
### Mounting Diagram - 00590K





RELATED PRODUCTS: Auto & LED Auto Fuses (see p. 17)

# 8 Way Lateral Kit



Dimensions in MM



# **AUTO FUSE BLOCKS AXIAL CONNECTION**

- Clear plastic cover for fast visual confirmation of fuse amp rating.
- Easy identification which amperage Auto fuses are installed.
- Easy identification of blown fuses when LED indicating Auto fuses are installed.

Voltage: 32V

Input Terminal Rating: 20A max. per circuit.

Body: Black PA66 GF30

Cover: Transparent cover. \*00580K cover features a gasket.

Terminals: 6.35mm (1/4") Quick Connect terminals. # 07501BK.

Kit Contents: Fuse cover, base & QC terminals.

Mounting: M5 screw (00540K & 00560K), M5 threaded insert (00580K).

Pack Size: 1, 10, 100, 500

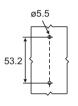
**Options:** Blocks and terminals can be ordered separately, minimums apply. **Notes:** Each fuse branch is independently powered. Fuses are not included.

Approvals: RoHS

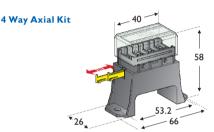


**Axial Connection** 1/4"Quick Connects Included & Installed.

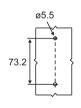
### Mounting Diagram - 00540K



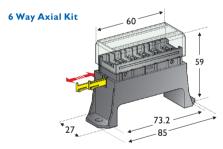




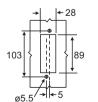
### Mounting Diagram - 00560K







### Mounting Diagram - 00580K With Panel Cut Out



Gasket **Threaded** Insert (M5)



43 34 88

**RELATED** PRODUCTS:

Auto & LED Auto Fuses (see p.17)

Dimensions in MM



8 Way Axial Kit

# **AUTO FUSE 6 & 12 WAY PANELS LED INDICATING**



### Features

- 2 combined preassembled models available.
- Features blown fuse LED indication.
- 2 slots to store spare auto fuses.
- Includes a 65 piece sticker set to identify each circuit.
- All fuse and ground terminal panels include a clear cover.

Part Number Description

MFP6SCGTP

MFP12SCGTP

MFP12SCGTP

4 Way auto fuse panel with cover & GTP.

12 Way auto fuse panel with cover & GTP.

Voltage: 32V

Maximum Total Block Rating: 100A
Maximum Terminal Rating: 30A
Input Stud & Ground Stud: M5 (3/16")
Output Screw Terminals: M4 (5/32")
Ground Screw Terminals: M4 (5/32")
Base Colour: Black Cover: Clear
Operating Temperature: -20°C to +60°C
Screws & Lock Washers: Included.







6 Way Fuse Panel With GTP and Clear Fuse / GTP Covers

Height with cover 42mm



Height with cover 42mm



6 Way Fuse Panel With GTP



12 Way Fuse Panel with GTP





Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# **AUTO FUSE 6 & 12 WAY PANELS**

# Littelfuse €

12 Way

### Features:

- Suits auto fuse or auto bladed circuit breakers.
- Dual power studded inputs & single ground stud.
- Multiple earth returns.
- Lockable transparent cover with label recesses.
- Storage for two spare fuses.
- 84pc sticker label set included.

Part Number Description

880027 6 Way Fuse / Breaker Block 880028 12 Way Fuse / Breaker Block

Voltage: 32VDC

Continuous Rating: 100A Total Max. Rating Per Circuit: 30A Max.

Power Input Studs: Dual Input Studs. Negative Input Stud: Single #10-32. Ground Terminals: #10-32 Screws. Output Terminals: #10-32 Screws.

Mounting: Bolt-Down; 4 x M5 included. Base: Black Polycarbonate. Cover: Clear PBT.

Notes: Fuses are not included







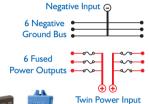
164

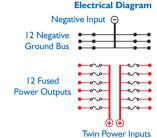
95 Dimensions in MM

# **Electrical Diagram**

2 x Spare -

Fuse Positions





### **RELATED PRODUCTS:**



(see p. 17)







**Bladed Circuit Breakers** (see p.49 - 50)

# **AUTO FUSE 12 WAY PANEL**

### Features:

- · Suits auto fuses.
- Single power studded input & single ground stud.
- Transparent cover stores two spare fuses.
- 84pc sticker label set included.

Part Number Description

880066 12 Way Auto Fuse Block

Voltage: 32VDC

Cumulative Rating: 100A total.

Rating per Circuit: 30A.

Single Input & Ground Studs: #10-32.

12 x Output & 12 x Ground Terminals: #8-32 screws.

Internal Buss & Fuse Clips: Tin plated copper.

Base: Black reinforced polycarbonate.

Cover: Clear polycarbonate.

Hardware: Stainless steel nuts, screws & captive star lock washers.

Notes: Fuses are not included.

Approvals: Cover satisfies ABYC/USCG insulation requirements.

# **Littelfuse**

# Negative Input (-) **Push Button Latch** 1 · 165mm



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

W: 85mm

H: 39mm

Positive Input (+)

# **AUTO FUSE / BREAKER REAR TERMINAL BLOCKS**



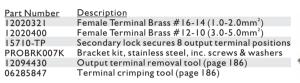
Capacity of 8 to 32 output circuits (for auto fuses or auto bladed circuit breakers).

• 1, 2, 3 or 4 bussed power input studs. Each powering 4 or more fuse circuits.

• Splash resistant cover included. Shallow for fuses. Tall auto bladed circuit breakers.

• Fuse / Circuit breaker block is also available in custom configurations.

Inc Fuse Cover Part Number	Inc Breaker Cover Part Number	Number of Poles	Buss Type	Set Up
15711-12-21A	15711-12-22A	12 Pole	Single Bus	12
15712-08-04-21A	15712-08-04-22A	I 2 Pole	Dual Bus	8 + 4
15712-10-06-21A	15712-10-06-22A	I 6 Pole	Dual Bus	10 + 6
15712-14-06-21A	15712-14-06-22A	20 Pole	<b>Dual Bus</b>	14 + 6
15712-12-08-21A	15712-12-08-22A	20 Pole	Dual Bus	12 + 8
15712-12-12-21A	15712-12-12-22A	24 Pole	<b>Dual Bus</b>	12 + 12
15713-16-08-11A	15713-16-08-22A	I 6 Pole	Triple Bus	8 + 4 + 4
15713-20-12-21A	15713-20-12-22A	20 Pole	Triple Bus	12 + 4 + 4
15714-20-06-21A	15714-20-06-22A	20 Pole	Quad Bus	6+4+4+6





**Bracket Kit** 

12.1

Terminals

Voltage: 32V Input Rating: 200A max total input for unit.

Fuse / Circuit Breaker Capacity: 8, 12, 16, 20, 24, 28 & 32 positions.

Panel Mounting: Threaded inserts #10-32 (4 places).

Panel Mounting SS Hardware: Screw #MT103212PPHS. Washer # SW316S. Surface Mounting: Bracket kit required. Base Materials: Black thermoplastic.

Input Supply Options: Single, dual and triple bus options.

Input Wire Sizes: #6 - 4 AWG / 13 - 19mm<sup>2</sup>

Input Terminals: 1/4"-20 stud for top & bottom bus. 4x 1/4" Q/C terminals supply power to middle bus (which always powers only 4 positions). 30A max for each Q/C terminal.

Output Terminals: Delphi Pack-Con Series 3 female unsealed tang terminals.

30A max load per circuit. Output terminals not included.

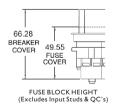
Output Wire Sizes: #16 - 10 AWG / 1.0 - 5.0 mm<sup>2</sup>

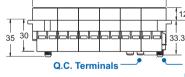
Secondary locks: Secure output terminals. Each lock secures 8 positions.

(Please order multiple locks to cover length of selected terminal block).

Pack Size: Stock lines Ipc. Customised indent items 24pcs.

Notes: Fuses & breakers not included. Terminals must be ordered separately as above.





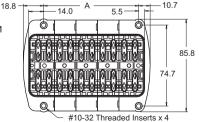
B

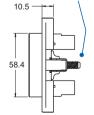
**Rear Panel Mounted** 20 Way Auto Fuse Block Without Lid

Secondary Lock TPA

I/4"-20 Stud Input Feeds Bussed Terminals

Number	Dimensio	ns in MM
Poles	A	<u>B</u>
8	28.0	47.5
12	48.0	67.0
16	67.8	87.0
20	87.5	107.0
24	107.0	126.5
28	127.0	146.5
32	147.0	166.5





Scan the OR Code for more information

NEW



QR Code: 7015



# **AUTO FUSE BLOCK SEALED - 10 WAY**



The Littelfuse HWA20 is a non-bussed, sealed IP67, fuse block constructed from durable polyamide. All input and output connections are electrically isolated, enabling the user to customize the circuitry. Capable of installing 10 x Auto fuses with a maximum combined amperage of up to 210A. Dovetail slots on the sides of the block enable multiple units to be connected side by side to each other or with other Littelfuse fuse blocks and power distribution units.





Part Number	Kit Contents;
PDMKIT611	Base, Cover, Seal, Terminal Secondary Lock (TPA)
	20 x Terminals (927835-1), 20 x Seals (963245-1)
	4 x Cavity Plugs (100132-1)

Part Number	Individual Component Ordering
PDM61001ZXM	Module with Cover & Terminal Secondary Locks
927836-I	Terminal Female (#20 - #16 AWG), 0.5 - 1.0mm <sup>2</sup>
927835-I	Terminal Female (#15 - #13 AWG), 1.5 - 2.5mm <sup>2</sup>
928966-I	Terminal Female (#12 - #11 AWG), 3.0 - 4.0mm <sup>2</sup>
1241962-1	Terminal Female (#12 - #10 AWG), 3.0 - 5.0mm <sup>2</sup>
963243-I	Cable Seal Silicone Blue, 1.4 - 2.1 mm Cable Dia.
963244-I	Cable Seal Silicone White, 2.2 - 3.0mm Cable Dia.
963245-I	Cable Seal Silicone Yellow, 3.4 - 3.7mm Cable Dia.
967011-1	Cable Seal Silicone Green, 3.6 - 4.3mm Cable Dia.
100132-1	Cavity Plug Silicone Black, 8.1 mm Cavity inside Dia



هما هما هما هما هما LARD LARD LARD LARD LARD حدا حدا حدا حدا حدا هما هما هما هما هما مجدا مجدا مجدا مجدا مجدا ----------

PDMKIT611

Voltage: 80VDC

Maximum Total Current: 210A Max Single Fuse Rating: 40A

Temperature Rating: -40°C to +85°C. Body & Cover: Black Thermoplastic 94V-0.

Cover Gasket: Green silicone.

Wire Size: 0.5 to 5mm<sup>2</sup> (#20 to #10 AWG).

Terminals: TE AMP Standard Power Timer, Tin Plated.

Terminal Secondary Locks (TPA's): Included with module. Cable Seals: Please check the overall diameter of your cable before ordering cable

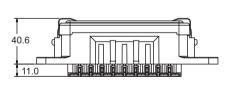
seals. Silicone material. Ingress Protection Rating: IP67 when cover, cable seals & cavity plugs are installed.

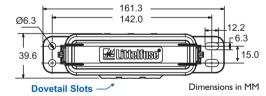
Cavity plugs must be fitted to any of the unused 20 terminal holes.

Mounting: Surface mount using 4 fixing holes (M6). Mounting Torque: 4 to 6 Nm.

Suit Fuse: Auto fuses (IA-40A). Not suitable for circuit breakers. Notes: Fuses, terminals, cable seals or cavity plugs are not included.

Pack Size: |





### **RELATED PRODUCTS:**



32V Auto Fuse 32V LED Auto Fuse 58V Auto Fuse **80V Auto Fuse** (see p16-17)



**FLEX-MIDI** 

(see p.98)



**MEGA-FLEX** (see p.99)



HWB60-AL (see p.123)



**FLEC** (see p.145)



**EPC** (see p.146)



Did you know? The dovetail features allow you to interlock other multiple Littelfuse Low and High Power products together. These include; FLEX-MIDI, MEGA-FLEX, HWB60-AL, FLEC & EPC.



# MIDI FUSE BLOCKS GANGABLE 58V

Part Number Description

04980900 Midi Fuse Block with M3 In-Board Mounting 04980903 Midi Fuse Block with M6 Mounting Tabs NEW

Voltage: 58VDC

Rating Continuous: 150A Rating Max: 200A

Body: Black glass filled thermoplastic.

Cover: Included. Black glass filled thermoplastic. Hardware: Includes hex nuts & lock washers.

Studs: M5 threaded studs. Features: Gangable Pack Size: 1.10.100

Notes: The holders feature a stackable side design to allow multiple holders to be joined together. Fuse is not included.

Approvals: RoHS

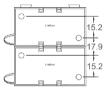
### 04980900





Littelfuse Littelfuse

### **Gang Mount Setup**





04980903

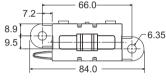


RELATED PRODUCTS:









adler

**NEW** 

### (see p.24) (see p.24) **MIDI FUSE BLOCK GANGABLE 65V**

The BHR series fuse holder is specially designed for use with DC fuse in automotive equipment and road vehicles. It works with both 32V and 58V Midi fuses. The holder is built with special automotive grade materials to withstand high fault currents and temperatures.

Part Number BHR030-15-M5

Voltage: 65VDC Rating: | 25A

Body: Black PA+GF VO Cover: Black PA+GF VO

Operating Temperature: -40 to + 125°C Hardware: Includes hex nuts & lock washers.

Studs: M5 threaded stainless steel.

Features: Gangable. Cover with window feature.

Pack Size: 1. 10. 100

Notes: The holders feature a stackable side design to allow multiple holders to be joined together.

Fuse is not included. Approvals: RoHS

**RELATED PRODUCTS:** 

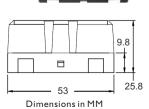






10.5

Side locks



(see p.24)

**Fuse window** 



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Bussmann now offers a heavy duty fuse panel called the LMI "Little Block". The LMI is used for main branch primary fusing and can be configured to fit up to 6 industry standard Midi fuses all bussed to a single input stud. The LMI provides efficient power distribution suitable for many "under the hood" applications such as: Marine. Construction, Agriculture, Heavy Trucking, Bus and Specialty Vehicles.

Part Number	Description
LMII-E-I-0	Midi Fuse Block (2 x 10-32 studs)
LMII-E-I-I	Input Module (1 x 5/16"-18 stud)
B109-7091-2	Busbar 2 holes - (spans 2 modules)
B109-7091-3	Busbar 3 holes - (spans 3 modules)
B109-7091-4	Busbar 4 holes - (spans 4 modules)
B109-7091-5	Busbar 5 holes - (spans 5 modules)
B109-7091-6	Busbar 6 holes - (spans 6 modules)
B109-7091-7	Busbar 7 holes - (spans 7 modules)





Input Module LMII-E-I-I

Midi Fuse Block IMII-F-I-0

Ordering: Maximum of 7 blocks / modules per assembly (6 fuse blocks & I input module). One Midi fuse block is required for each Midi fuse. Input modules and bus bars can be ordered as required. The input module should be located in the center of the assembly for bus bar efficiencies.

Ratings: Midi Fuse Block 200A. Maximum total combined rating is 400A continuous. Based on numerous variations possible between numbers of poles used, fuses selected, input wiring, and output wiring, all applications should be tested by installer to verify the product meets their requirements.

Temperature: -40°C to 85°C.

Housing: HTN black UL-rated 94V0 thermoplastic material. Cover: Red Santoprene cover for protection from accidental shorts.

Studs (Midi Fuse Block): # 10-32 Stainless Steel & Keps Nuts. Stud (Input Module): 5/16"-18 Stainless Steel & Keps Nut.

Accessories: Includes cover & keps nut(s).

Pack Size: 1, 10, 100

**Options:** Pre-assembled with specified Midi fuses for OE requirements.

Notes: The modules feature a stackable side design to allow multiple modules to be joined together. Fuses & bus bars are not included with blocks.

Approvals: RoHS



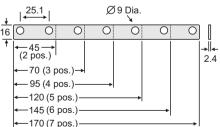
5-16"-18 Stud Input Module

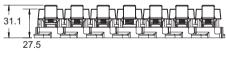
10-32 Studs Fuse Block

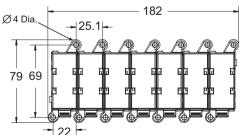
### Sample Configuration:

2 x Midi Fuse Blocks I x Input Module I x Busbar (3 holes)









# **RELATED PRODUCTS:**

Midi fuses see page 24.



Dimensions in MM



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# MIDI & MEGA MULTI-POLE COMBINATION FUSE BLOCKS



Part Number	Description
0101499	Midi Fuse Block M5 Studs with Hinged Cover
0101224	Midi Single Input Stud M5 with Hinged Cover
0101498	Mega Fuse Block M8 Studs with Hinged Cover
0101223	Mega Single Input Stud M8 with Hinged Cover
0301509	Busbar 2 x Midi Fuse Positions
0301508	Busbar 3 x Midi Fuse Positions
0301227	Busbar 5 x Midi Fuse Positions
0301252	Busbar I x Midi Position & I x Mega Position
0301511	Busbar I x Midi Position & 2 x Mega Positions
0301512	Busbar 2 x Midi Positions & 2 x Mega Positions
0301250	Busbar 3 x Midi Positions & I x Mega Position
0301249	Busbar 4 x Midi Positions & I x Mega Position
0301226	Busbar 4 x Midi Positions & 3 x Mega Position

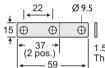
Base: Black PBT-GF20 Cover: Black PP-TD20 HEAT-ST Cu-ST. Hardware Midi Fuse & Midi Input Block: Steel - Zn Ni.(M5). Hardware Mega Fuse & Mega Input Block: Steel - Zn Ni.(M8). Fuse Block / Single Input Block: Includes cover & hex nut(s). Crimp Tool: Suit Tubular terminals refer page 184.

Notes: Rear plastic panel must be cut out if not fitting a busbar. Single stud power input blocks are also gangable to fuse blocks.



### **Features**

- Fuse Block & Single Input Block
- Midi or Mega Fuse Versions
- Hinged Cover
- Gangable Multi & Combination
- Busbar Accessories











Midi Busbar Multiple Positions

Mega & Midi Busbar Multiple Combinations

Removable Wall.

Cable.

Busbar Accessory
No Cut-out Required.





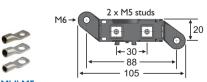


Ganged Fuse Blocks Independent Power.



Ganged Fuse Blocks with Common Busbar Power.



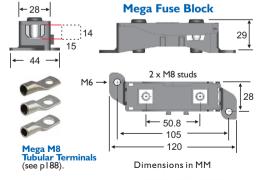


Midi M5 Tubular Terminals (contact sales).

Dimensions in MM







**RELATED PRODUCTS:** Mega fuses see page 25-26.





# **MEGA FUSE BLOCK SEALED & IGNITION PROOF**







IP6K9K IP66

These high amperage fuse blocks feature sealed positive latching technology to form a water resistant and ignition protected assembly. The cover is retained to the base with a built in tether to ensure there are no missing components during servicing. The base features thru-hole provisions to ensure that the unit is mounted securely to the application.

### **Features**

- Provides high amperage, in-line, main or branch circuit protection in harsh or hazardous environments.
- Waterproof / sealed fuse compartment provides protection from fuse corrosion.
- Ignition protected to SAE | 1171 and ISO 8846 for installation in a battery box or on vehicles carrying hazardous loads. • All stainless steel hardware and tin-plated 100% pure copper optimize long-term corrosion protection.
- Allows dielectric spray on cable terminals without compromising fuse connections.
- Cover retention ensured through integrated tether.
- AssureLatch<sup>™</sup> technology for worry-free positive latching.

Part Number Description 880014 Mega Fuse Block & Cover Sealed

Voltage: 60VDC Rating: 500A

Input Studs: M8 stainless steel.

Ignition Protected: SAE | | | 7 | and | SO 8846 Ingress Protection: IP66 / IP6K9K

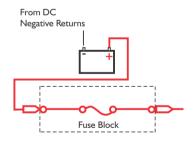
Operating Temperature: -50°C to +85°C

Shock: 50 G's Vibration: 8 G's

Fuse Block: Includes cover, stainless steel

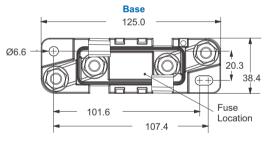
screws & hex nuts. Pack Size: 1.10

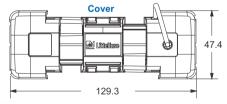
Notes: Fuses not included.











### **RELATED PRODUCTS:**



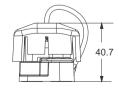
32V Mega Fuse (see p.25)



70V Mega Fuse (see p.25)



Mega Fuse Kit (see p.41)



Dimensions in MM



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# MIDI MULTI-POLE POLE FUSE BLOCK 58V



The MIDI-Flex fuse holder is used with the MIDI style bolt-down fuse, which is available up to 200 A. This holder offers a flexible cover, which allows cable entry from virtually any direction, large wire size, and ring terminal stack up. Slots on the base allow holder to be mounted with tie wraps. Dovetail features allow you to interlock multiple MIDI-Flex fuse holders together for a high power distribution block. Bus bars are available for multiple holder applications.

### **Features**

- Flexible cover allows for cable entry from virtually any direction allowing for easier installation.
- Dovetail features allow you to interlock multiple Flex holders together to create a high power distribution block. Combine with the MEGA-Flex fuse holder for a high and low amperage solution.
- Slots are moulded into the base that allow the holder to be securely mounted with tie-wraps.
- Zinc plated steel hardware and tin-plated 100% pure copper optimize long-term corrosion protection.

Part Number	Description
04981038	Fuse Block with M5 Studs & Cover
882-267-002	Bus Bar (2 holes - spans 2 blocks)
882-267-003	Bus Bar (3 holes - spans 3 blocks)
882-267-004	Bus Bar (4 holes - spans 4 blocks)
882-267-005	Bus Bar (5 holes - spans 5 blocks)

Voltage: 58VDC Rating: 200A

Accessories: Includes cover, hex nuts & lock washers.

Studs: M5 threaded zinc plated steel studs.

Flammability: UL94 V-0 Wire Size: 8mm<sup>2</sup> to 35mm<sup>2</sup>

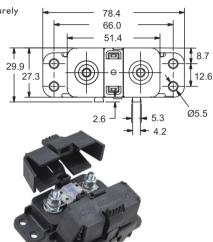
Operating Temperature: -40°C to + 125°C

Pack Size (bag): 1, 10, 100, 500

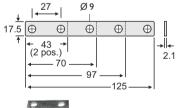
Notes: The holders feature a stackable side design to allow multiple holders to be joined together. Fuses are not included. The busbar needs to be installed first, followed by the Midi fuse, the split washer and finally the hex nut.

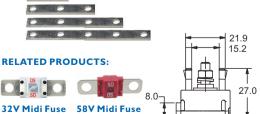
# NEW

Midi-Flex Fuse Block

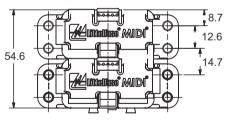


# Bus Bars Accessories



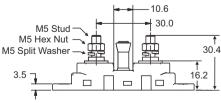


(see p.24)



**Gang Mount Setup** 

Dimensions in MM





(see p.24)

# **MEGA MULTI-POLE POLE FUSE BLOCK 70V**



The MEGA-Flex fuse holder is used with the MEGA bolt-in fuse, available in ratings 40A to 500A. This block features a flexible cover which allows cable entry from virtually any direction, large wire size, and ring terminal stack up. Slots on the base allow holder to be mounted with cable ties or surface mount using standard screw holes. Bus bars are also available for common power feed across multiple holders. Dovetail features allow you to interlock multiple MEGA-Flex holders together for a high power distribution block or it can interlock with other Littelfuse products including FLEC, EPC, HWA20, HWB60 & Midi-Flex.

Part Number	Description
02981028	Fuse block with M8 Studs & Cover
882-839-2	Busbar 2 holes - (spans 2 modules)
882-839-3	Busbar 3 holes - (spans 3 modules)
882-839-4	Busbar 4 holes - (spans 4 modules)
882-839-5	Busbar 5 holes - (spans 5 modules)

Voltage: 70VDC Rating: 500A

Base: Black UL 94V-0 Glass-filled PPA.

**Cover:** Black flexible UL94V-0 Elastomer. Red colour optional. **Studs:** M8 x I.25 Zinc plated steel. Stainless steel optional.

Nuts & Washers: Same material as studs. Bus Bar Material: Tin plated copper. Temperature Rating: -40°C to 125°C

Wire Size: 8mm<sup>2</sup> to 35mm<sup>2</sup>

Accessories: Includes cover, hex nuts & split washers.

Pack Size: 1, 10, 100

Notes: Fuse & busbar are not included.

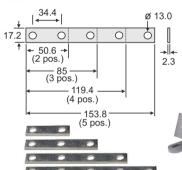
Approvals: RoHS





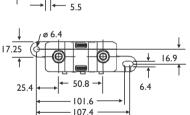
Mega-Flex Fuse Block

44.5





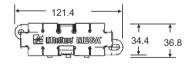
Flexible Cover



**Bus Bar Accessories** 

Multipole Bus Bars





### **RELATED PRODUCTS:**

Midi-Flex & Mega-Flex fuse blocks combined.





16.8 → 16.2 22.8 → 5

Dimensions in MM



# **MEGA FUSE BLOCK HARD COVER 70V**



The Littelfuse MEGA® Bolt-Down Series High Current Fuse Holder is ideal for battery and alternator connections as well as providing ultra-high current protection for other types of heavy gauge cables. Interlocking pins on the sides let you connect additional fuse holders for multi-fuse applications.

Part Number Description

02981001 Fuse Block with Hard Cover

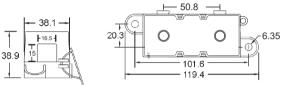
Voltage: 70VDC Rating: 500A

Body & Cover: Black glass filled thermoplastic. Fuse Block: Includes cover, hex nuts & lock washers.

Studs: M8 threaded. Torque Rating: 5 Nm. Features: Gang mount, stackable side design.

Pack Size: 1, 10, 100 Notes: Fuse is not included.

Approvals: RoHS



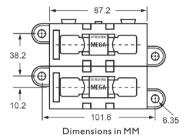
RELATED PRODUCTS:











**Gang Mount Setup** 

Bussmann

62.5

F'T.N

# **MEGA FUSE BLOCKS FLEXIBLE COVER**

### Part Number Description NEW FMG-III Fuse Block With Standard Cover M8 Studs (a) FMG-116 Fuse Block With Extended Cover M8 Studs (b) FMG-211 Fuse Block With Standard Cover 5/16"-18 Studs (a) FMG-216 Fuse Block With Extended Cover 5/16"-18 Studs (b) NEW

Rating: 500A

Body: Black UL rated 94V-0 thermoplastic.

Cover: Black flexible thermoplastic elastomer. Red cover optionable. Fuse Block: Includes cover & sems nuts. Wire Size: #8 AWG / 8mm<sup>2</sup>

Studs: Zinc plated steel studs. Torque Rating: 13.5 Nm.

Features: Cables can be routed to studs from nearly any direction.

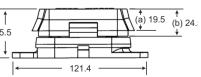
Pack Size: 1, 10, 100 Notes: Both covers features end cut-outs for wiring.



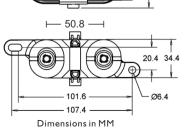


# **PRODUCTS:** 45.5 **Mega Fuses**

**Extended Cover** 







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(see p.25)

adler

NFW

NEW

Bussmann

# **MEGA FUSE BLOCK WITH CLEAR COVER**

Part Number Description

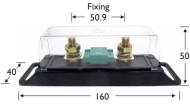
BHR059-25-M8 Fuse Block with Clear Cover

Voltage: 100VDC Rating: 500A

Studs: M8 Studs Max Torque: | 2Nm Operating Temperature: -40 to + | 25°C Hardware: Nuts and washers included.

Pack Size: |

Notes: Fuse not included.



Dimensions in MM

# RELATED PRODUCTS:





# LIFT TRUCK FUSE BLOCK WITH CLEAR COVER

Part Number Description

BHR061-25-M10 Fuse Block with Clear Cover

Voltage: 120VDC Rating: 800A

Studs: M10 Studs Max Torque: 14.3Nm Operating Temperature: -40 to +125°C Hardware: Nuts and washers included.

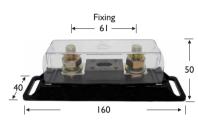
Pack Size: |

Notes: Fuse not included.

# RELATED PRODUCTS:



FBT Fuses 48V-80V (see p.26)



Dimensions in MM

# LIFT TRUCK FUSE BLOCKS

 Part Number
 Description

 FBTB-LN
 Fuse Block with Nylon Insert Locknuts

 4164-FR
 Fuse Block with Free Running Nuts

Rating: 800A

Voltage: 125VAC / 80VDC Base: Thermoplastic Studs: 5/16" - 24 (M8) Torque: 120 In-Lbs. Pack Size: 1, 10, 50, 100

**Notes:** Countersunk mounting holes to suit No. 10 flat head screws. Fuses not included.



FAT.N

# RELATED PRODUCTS:



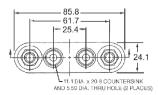
FBT Fuses (see p.26)



ANL Fuses (see p.27)



ANN Fuses (see p.27)





# EV FERRULE & BOLTED TAG FUSE BLOCKS 10.3MM DIA.

Part Number Description BHII4-IC Single Pole Ferrule Cartridge Fuse Block 30A BHII4-IM Single Pole Flush Bolted Tag Fuse Block 50A BHII4-CN Clear Snap On Fuse Cover (Ferrule or Bolted) **NEW** 

Rating Clip Mount: 30A Voltage: | 100VDC Rating Bolt Mount: 50A Voltage: | 100VDC

Suit Fuses: 10.3 x 38.1 mm (Cartridge or Bolted Tag). Wire Size: 14-10 AWG (1.6 - 8.4mm<sup>2</sup>)

Material: Thermoplastic (Base & Cover).

Flammability: UL94VO (Base)

Operating Temperature: -40°C to + 125°C

Terminals: Tin plated, copper alloy.

Mounting: Screws, bolts or DIN rail mounting.

Feature: Slide lock design. Pack Size (box): 1.10.100 Notes: Fuse not included. Approvals: TUV A SU



**Fuse Block Assembled** 



### **RELATED PRODUCTS:**







Clear Cover



76 20.4

**Gangable Slide Lock Feature** 

**EV Flush Bolted Fuse** Terminals fitted on each end.

(see p.32-34)

Dimensions in MM

# **/ EVSE BOLTED FUSE BLOCKS MODULAR**



Bussmann

The C5268 series is a simple design modular fuse block. With this design, the fuse terminal and cable (with termination) are mounted on the same stud, minimizing labor needed for installation.

**NEW** 

Part	Ampere	Stud Diameter	
Number	Rating	and Thread Type	"A" Stud Height
C5268-4	100A	1/4"-20 UNC (6.35mm)	1.00" (25.4mm)
C5268-5	100A	1/4"-20 UNC (6.35mm)	1.75" (44.45mm)
C5268-3	200A	5/16"-18 UNC (7.93mm)	0.75" (19.05mm)
C5268-I	200A	5/16"-18 UNC (7.93mm)	1.00" (25.4mm)
C5268-2	200A	5/16"-18 UNC (7.93mm)	1.75" (44.45mm)

Pack Size (box): I block (order 2 blocks per fuse).

Ambient Temp: 150 °C

Base: Plaslok \$5440 phenolic, UL 94V-0 or 94V-1.

Studs: Steel, Zinc Plated

Accessories: Includes nut & spring washer.

Notes: Fuse not included.

### **RELATED PRODUCTS:**



Class T Fuse 160V (see p.31)



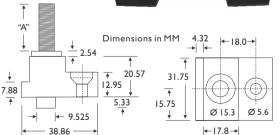
**EV Fuse** 500V - 800V (see p.32-33)



**EV Fuse** 1000V

(see p.34)







Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# **EV / EVSE BOLTED FUSE BLOCKS FIXED**

The BFR series fuse bases are suitable for use in automotive vehicles and automotive supply equipment. The bolt mount assembly system uses a wedge lock system to withstand extreme vibration or dynamic loads. The Adler BFR series EV fuse block uses special materials for use with high fault currents and temperatures specifically for automotive fuses applications.



Rated Voltage: | 1000VAC / | 1000VDC

Rated Current: Adler EV fuses (all current ratings) can be

used with their suitable fuse blocks.

Operating Temperature: -50°C to +180°C

Max Voltage: 13-18 kV

Insulation Board Material: FR4
UL94 Flame Retardant Grade: 94HB
Insulation Resistance: 50,000 M ohm

Studs: Stainless steel.

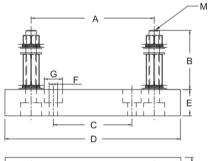
**Hardware:** Two-piece interlocking wedge lock washers. **Hardware Option:** Detend edged washers add suffix -S.

Pack Size: 1, 20, 100 Notes: Fuse not included.











Fuse Block	Suggested	EV Fuse Range				Dime	nsions	s in MM	I		
Part Number	Stud Torque	Adler Series	Α	В	C	D	<u>E</u>	F	G	Н	M
BFR063-38-M6	9 ± 1 Nm	AE5620	63	38	31	84	15	5.5	9	25	M6
BFR071-46-M8	12 ± 1 Nm	AE5625, AE5631	7 I	46	25	96	15	8.5	14	30	M8
BFR094-45-M8	12 ± 1 Nm	AE7i25	94	45	60	134	20	6.5	14	25	M8
BFR099-70-M10	16 ± 1 Nm	AE7i38, AE7i5 I	99	70	60	146	20	6.5	14	42	MI0
BFR106-46-M8	12 ± 1 Nm	AEX731	106	46	60	146	20	6.5	14	35	M8
BFR116-72-M10	16 ± 1 Nm	AEX738. AEX751	116	72	60	146	20	6.5	14	42	MI0

### **RELATED PRODUCTS:**







AE5 500V Fuses (see p.32)

AE7 800V Fus (see p.33)

AEX 1000V Fuses (see p.34)



# CLASS T, EV & EVSE BOLTED FUSE BLOCKS MODULAR

# **¼** Littelfuse®

NEW

### **Features**

- Modular design reduces inventory requirements.
- Supplied with nut and belleville washer.
- 200kA (VAC), 250kA (VDC) short-circuit withstand rating.

Part <u>Number</u>	Ampere Rating	Terminal Stud Size (Metric)	Suggested Stud Torque
LSCR001	400A	1/4"-20 (6.35mm)	6.8 Nm
LSCR002	800A	3/8"-16 (9.52mm)	21.6 Nm

Voltage: 700VAC / 1500VDC

Insulator Material: Molded Phenolic (150°C Max) Terminal Material: Steel, Zinc Plated. Flammability Rating: UL 94-V0

Ordering Information: Sold as a pair of blocks.

Notes: Fuse not included. Approvals: A calus ( ( RoHS









LSCR002

### **RELATED PRODUCTS:**





**AE7 800V** 



Scan this **QR** Code for more information



QR Code: 7017

Littelfuse

### **Fuse Block** Class T Fuse 70A - 200A LSCR001 LSCR002 225A - 800A

**AE5 500V** 50A - 400A

60A - 150A 175A - 600A

175A - 600A

# CLASS T. EV & EVSE BOLTED FUSE BLOCKS MODULAR

### Features

- Modular design reduces inventory requirements.
- Supplied with nut and belleville washer.
- · 200kA short-circuit withstand rating.

Part	Ampere	Terminal	Suggested
Number	Rating	Stud Size (Met	ric) Stud Torque
LSCR101	400A	1/4"-20 (6.35	mm) 7.6-9.3 Nm
LSCR102	800A	3/8"-16 (9.52	mm) 23.4-28.6 Nm
LSCR103	1200A	1/2"-13 (12.7	mm) 30.5-37.3 Nm

Voltage: 700VAC / I500VDC

Insulator Material: Thermoplastic (125°C Max) Terminal Material: Steel, Zinc Plated. Ordering Information: Sold as single blocks

(order 2 blocks per fuse). Notes: Fuse not included. Approvals: c us RoHS











LSCR103 LSCRI02

# **RELATED**

**Fuse Block** 

LSCRIOI

LSCR102

LSCR103









Scan this **OR Code** for more information



QR Code: 7018









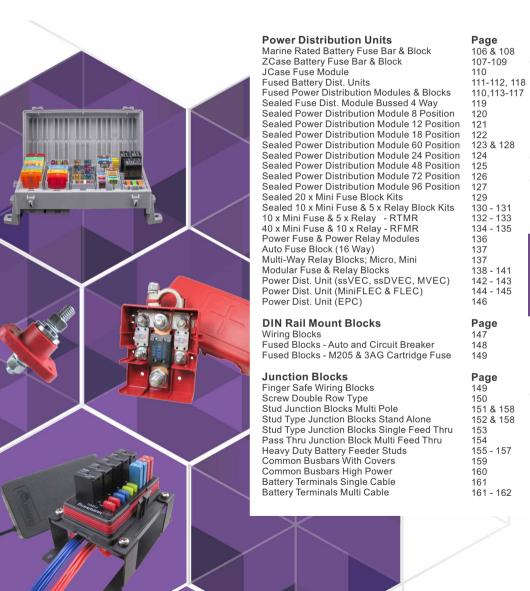






# Power Distribution Units, Blocks & Studs

# **Engineered solutions.**



# FAT-N

# Bussmann

NEW

### Features:

- Suitable for DC Main, inverter, windlass and bow thruster circuit protection.
- Weatherproof, suitable for small locations & other harsh environments.
- Simple, economical and compact circuit protection system. Satisfies ABYC 7.
- Santoprene red or black insulating cap prevents accidental shorts.
- Provides high current protection in tight space constraints.
- Mounts on a battery post, battery switch or busbar.

Part Number	Pole Kit	Mount*	Stud	Cover
CFBARISP-KIT	Single	10.3mm	1/4"-20	Red
CFBARISP-KITB	Single	10.3mm	1/4"-20	Black
CFBAR I M8SPRK	Single	10.3mm	M8	Red
CFBAR I M8SPBK	Single	10.3mm	M8	Black
CFBAR2M8SPRK	Double	10.3mm	M8	Red
CFBAR2M8SPBK	Double	10.3mm	M8	Black
CFBARIM8XBRK	Single	13.5mm	M8	Red
CFBARIM8XBBK	Single	13.5mm	M8	Black



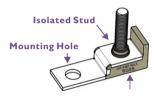




CFBAR2 Double Pole
With Red Cover Kit

Rating: 300A max per CFBAR Voltage: 58VDC
Body: Thermoplastic PPS UL94-V0 Busbar: Nickel plated copper
Fuse Bar Stud: Stainless steel. Two options I/4"-20 or M8.
Kit Contents: Includes S/S nuts, washers and insulating cover.
Mounting Hole\*: Mount on a M10 (3/8") battery post.
Mounting Hole\*: Mount on a M12 (1/2") battery post.

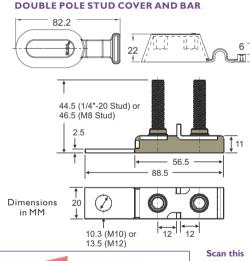
**Notes:** The updated 'SP' version of the battery fuse bar does not require a special isolating nut so regular nuts and washers can be fitted to the stud(s). Fuses not included.



Single Isolated Base with Laser Marking

# SINGLE POLE STUD COVER AND BAR 58.3 22 44.5 (1/4"-20 Stud) or 46.5 (M8 Stud) 2.5 10.3 (M10) or 13.5 (M12) Red Cover Black Cover

BUSS





Scan this QR Code for more information



QR Code: 3000



**MRBF** fuses

See page 28.

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RELATED

PRODUCTS:

# **ZCASE M8 FUSE BATTERY STUD MOUNT BARS 1 POLE**



The Littelfuse ZCASE® SMZ Series Stud Mount Fuse Holder reduces the need for wiring and parts by allowing ZCASE® single high-current fuses to be directly installed on an alternator, battery switch, or electrical relay.



### Features:

- Up to 3 fuse holders can be stacked to protect multiple circuits.
- Space-saving design eliminates the need to wire in a separate fuse holder or power distribution module (PDM).
- Cover offered in 2 styles. Fuse only or fuse and mounting stud.

Part Number	Description - I Pole Fuse Bar
0FHZ0201Z	Fuse Bar, M8 Mount with Fuse-Stud Cover
0FHZ0202Z	Fuse Bar, M8 Mount with Fuse Cover
0FHZ02IIZ	Fuse Bar, MI0 Mount with Fuse-Stud Cover
0FHZ0212Z	Fuse Bar, MI0 Mount with Fuse Cover







Fuse Bar with Fuse Cover

Voltage: 80VDC

Rating: 300A continuous. 400A max. Operating Temp.: -40°C to 105°C. Fuse Terminal: Isolated stud M8. Cover: Red UL 94 V-0 rated

Fuse Busbar: Tin-plated copper busbar.

Torque M8 Nut: 14 Nm

Kit Contents: Includes Fuse Bar, Cover & Nut.

Notes: Zcase fuse not included.



Multiple Mounting Arrangement



Single Pole M8
Isolated Fuse Terminal
Pictured Without Fuse

### **RELATED PRODUCTS:**

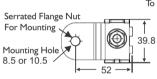


SHAT O

Zcase M8 fuse & Shunt (see page 29)



MRBF M8 fuse (see page 28)





65

M8x1.25 Serrated Flange Nut

# **ZCASE M8 FUSE BATTERY POST MOUNT BARS 2 & 3 POLES**



Part Number Description
0FHZ00854-BX 2 Pole fuse bar kit & cover
0FHZ00853-BX 3 Pole fuse bar kit & cover

Voltage: 32VDC

Rating: 275A max continuous. Fuse Terminal: Isolated studs M8.

Torque: 12 to 16 Nm

Mounting: Top Post Positive 19mm.

Kit Contents: Includes Battery Bar, Fuse Bar,

Cover, S/S Nuts & Washers.

**Operating Temp.:** -40 °C to 125 °C. **Notes:** Zcase fuse not included.

3 Pole M8 Isolated Fuse Terminals



2 Pole M8 Isolated Fuse Terminals

### **RELATED PRODUCTS:**







MRBF M8 fuse (see page 28)



Red cover fitted. (Included in kits)





QR Code: 9030



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# **4 POSITION MARINE RATED BATTERY FUSE BLOCK**



### Features

- All 4 positions are electrically connected via a internal bus bar.
- The block can accommodate up to four CF8 or MRBF Fuses.
- A single input power cable can be connected under one fuse to power all 4 positions or it can be connected to one stud to provide power to the remaining 3 positions.
- Can distribute non-fused power or can be used as a grounding block.
- The studs are electrically isolated so standard hardware can be used.

Part Number Description 0799C001ZXS 4 Way bussed battery fuse block

Block Rating: 500A max total. Output Terminals: 300A fuse max.

Voltage: 58VDC

Mounting Torque: 25 Nm max

Studs: M8

Operating Temp.: -40°C to 125°C.

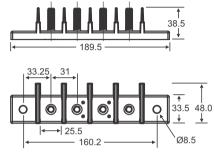
Notes: Fuses not included. Approvals: ISO 8820-5

**RELATED** PRODUCTS:

**MRBF** fuses (See page 28)







Dimensions in MM

M8 Studs

# **& 7 POSITION ZCASE FUSE BLOCK**



NEW

The 5 or 7 position ZCase fuse blocks are designed for primary high current power distribution. One position is used as a power input terminal and usually fitted with a Zcase shunt to provide common power, via the bus bar (included), to the remaining positions fitted with ZCase fuses for protected power outputs. A variety of bus bar configurations are possible. The green dust covers keep dust out of the backside of the fuse box and the cover protects the fuses from debris. Applications include construction equipment, body builders, agricultural equipment and HD/MD Trucks.

Circuit Diagram

Un To 4 Fused or 4 Non Fused Outputs

### Features

- High current distribution with flexible bussing.
- Busbars can also be cut to create split circuits.
- Corrosion resistant coatings and stainless steel nuts.
- ZCase 3298 series fuses (40A to 600A) or Zcase shunts can be used in any location.

Part Number Description

0FHZ0009Z 7 Stud assembly, M8 input, busbar, cover & tether.

0FHZ0005Z 5 Stud assembly, M8 input, busbar, cover & tether.

Voltage: 32VDC

Maximum Continuous Current: 400A.

Fuse Block Contents: Studs, Busbar, Black Silicon

Rubber Tether & Green Silicon Rubber Dust Covers.

Fuse Block Dimensions 5 Way: 217mm x 86mm x 59mm. Fuse Block Dimensions 7 Way: 281 mm x 86mm x 59mm.

Busbar: Solid Copper with Tin Plating. Max wire size: AWG 4/0 (105mm<sup>2</sup>)

Contact Temperature: -40°C to 105°C.

Notes: Zcase fuses / shunts are not included.

RELATED

PRODUCTS: Zcase Fuse (See page 29)



Zcase Shunt (See page 29)



0FHZ0005Z

**Green Covers** 

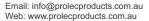
Secure Latch Finger Release



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information QR Code: 9037





### BATTERY MOUNT FUSE HOLDER WITH BUSBAR 2-4 POLE



The Battery Mount ZCASE® Fuse Holder with Busbar (BMZB) series allows you to mount fusing directly to a post-style battery terminal. This series offers a compact solution with an integrated busbar, which consolidates complex wiring around a battery system, eliminating or reducing the need for additional wiring. By creating additional fusing locations outside of the main fuse box, these products help reduce cabling and assembly time and provide localized circuit protection without modifying the existing battery harness. This product is designed to mate with M6 ZCASE® fuses, and is rated to operate with fuse ratings up to 400A. This series mounts directly to the battery post with all necessary hardware coming pre-assembled. Available in 2-, 3-, and 4-position configurations, this series serves as a scalable circuit protection solution.

### NEW

#### **Applications**

- · Battery-mounted circuit protection.
- Secondary circuit protection for applications and motors such as trucks.
- · Best used for hydraulics, electric pumps, or other secondary motors.

#### Features:

- Specifically designed to relocate circuit protection closer to a vehicle battery.
- · Integrated busbar.
- Plastic cover (3 & 4 pole only) & overmolded housing.
- · Battery clamp oriented to provide clearance for wire routing.

art Number	Description -

FHZ210 Negative Post Mount Fuse Holder 2 Position No Cover (-) FHZ310 Positive Post Mount Fuse Holder 3 Position with Cover (+)

FHZ410 Strap Mount Fuse Holder 4 Position with Cover

Voltage: 32VDC

Rating: 400A Max continuous. Operating Temp.: -40°C to 85°C.

Base Material: Black PPA-GF30 UL94 V-0 Cover Material: Black PBT UL94 V-0

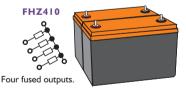
Fuse Busbar:

Torque Battery Post: Tighten the M6 nut to 5.4 Nm to secure

the base to the battery post.

Torque Zcase Fuse: Assemble nut and washer and tighten the nut to 14 Nm to secure the ring terminal to the ZCASE fuse.

Notes: Zcase fuses are not included.



FHZ410 is designed to be used as a battery strap to connect the positive posts of 2 Group 3 I batteries, the 4-position holder also provides 4 individual fused outputs in a convenient linear setup.







**Zcase shunt** See page 29.



**MRBF** fuses See page 28.







Two fused outputs.





### **JCASE FUSE MODULE SEALED - 3 POLE**



The 3 Pole | case fuse module with common feed, suits high amperage circuit protection applications in harsh environments with limited space. This sealed, compact and connectorized fuse module is a cost effective and installation friendly circuit protection solution. Panel mount with included speed nuts or surface mount.





Part Number	Description
JCU-3P-000-P	3 Pole Jcase Fuse Module
12124685	3 Way Female Connector
12045699	Connector TPA Terminal Position Assurance
12052457	Female Terminal 20-18AWG, 0.5 - 0.8 mm <sup>2</sup> wire
12052455	Female Terminal 16-14AWG, 1 - 2 mm <sup>2</sup> wire
12052456	Female Terminal 12-10AWG, 3 - 5 mm <sup>2</sup> wire
15324995	Cable seal, 2.01 - 2.85mm dia. wire, Red
15324994	Cable seal, 2.81 - 3.75mm dia. wire, Grey
15324996	Cable seal, 3.61 - 4.50mm dia. wire, Blue
12059255	Cavity Plug Green

Voltage: 32VDC. Rating: For use with 3 x |case fuses (20A - 60A)

Temperature rating: 120°C (250°F).

Materials: Cover and housing - Nylon 66 Seal: Silicon. Terminals: Tin Brass /Tin plate. Stud - Zinc plated steel. Ingress Protection Rating: IP66. Mounting: Surface or Panel. Output Connector: Delphi MP 630 series female connector. RoHS

Notes: Fuses, connector, TPA, terminals, seals and plug not included.

**RFI ATFD Jease fuses 32V** (See page 21). PRODUCTS:



**Female Terminals** Seals and Plug:







QR Code: 9043

**NEW** 

IGNITION

IP69K

### MIDI FUSE DISTRIBUTION BLOCK 3 POLE



### Features:

Suited for near-the-battery applications and can be mounted in exposed locations. Single input power cable connects to a 3 pole internal busbar to feed 2 or 3 fused output cables. Eliminates splices & multiple fuse holders. 2 spare Midi fuses can be fitted to the inside of the cover.

Water-proof and dust-proof fuse holder. Very high IP rating IP69K.

Developed for high current loads, and harsh conditions.

Fuse Block Description Part Number

04980933 3 Pole Midi Fuse Module Kit

#### 04980933 Module Kit Contents

04980933 I x Base with tethered cover & seal. I x Busbar powers up to 3 fuses from a single input cable. 6 x Nuts to secure up to 3 Midi fuses. 6 x Cable seals of assorted sizes. I x Cavity plug, required if you only install 2 x Midi fuses. 2 x Cable seal caps to secure cable seals into unit. 4 x Screws to secure 2 spare fuses to inside cover. I x Instruction sheet. Module kit does not include ring terminals or fuses.

Voltage: 58VDC max. Rating: Maximum total current 200A. Wire Size: 16 or 25mm<sup>2</sup> (input cable), 6 to 16mm<sup>2</sup> (output cables). Temperature Rating: -40°C to +85°C. Body & Cover: UL 94-V0. Ingress Protection Rating: IP67, IP69K when cover, cable seals & caps are installed. Cables must not exceed the minimum bend radius advised in the included instruction sheet to ensure seal integrity.

Cavity Plug: Included cavity plug must be fitted if using only 2 x Midi fuses. **Mounting:** Surface mount using 3 fixing holes (M6 or 1/4").

**RELATED** PRODUCTS:

Midi fuses 32V



Midi fuses 58V (See page 24).

**Module Kit** 



Scan this

**QR** Code

for more information



QR Code: 9042



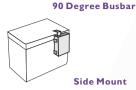
3 fused outputs

### **FUSED BATTERY DISTRIBUTION UNIT 3 WAY SIDE MOUNT**

Clip On Cover

#### Features:

- Suits up to 3 x Midi fuses 32Vdc.
- Includes cover and internal adhesive label.
- Include 90 degree copper tin plated busbar.
- Angled busbar saves valuable bonnet space.
- Cable feeds through slots in the housing.
- Small size with easy access durable clip on lid.
- Includes 6 x M5 self locking nylon flanged nuts.





Part Number Description

3 Way Midi Fuse Housing & 90° Busbar 0300468

Voltage: 32VDC

Rating: 90A Max at 85°C.

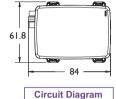
Hardware: Includes M5 flanged nuts. Studs: M5 threaded zinc plated steel studs.

Flammability: UL94

Wire Size: 8mm<sup>2</sup> to 35mm<sup>2</sup>

Operating Temperature: -30°C to + 120°C Pack Size: 1. 10. 100

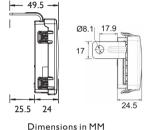
Notes: Fuses are not included.



Internal Busbar

3 Fused

Outputs



**RELATED PRODUCTS:** 



Midi fuse See page 24 3 Way Post Terminal See page 162

# FUSED BATTERY DISTRIBUTION UNIT 3 WAY POST MOUNT

Power

Input

### Features:

- Suits 2 x Midi fuses and 1 x Mega fuse or Powerval fuse.
- Includes durable clip-on cover with distinct red housing.
- Cable feeds through slots in the housing.
- Double ring (19mm) connection to positive top post battery terminal.
- Fully insulated cap prevents accidental short circuits.
- Saves money by using one product that does the same as a battery terminal, terminated cable and a fuse box.

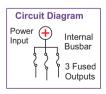
Note: Fused BDU includes 4 x M5 nuts with nylon insert, 2 x M8 nuts, I x M8 washer, busbar & housing. Fuses are not included.



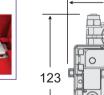
3 Way Battery Dist. Unit & (+) Red Cover Only. No fuses. 11000 00011FDUK Kit Inc. - BDÚ + Cover, I x PÓWCAL2, 2 x MID030 Fuses.

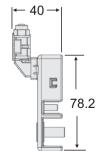


Base shown with fuses fitted











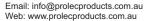










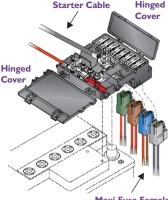


### **FUSED BATTERY DISTRIBUTION UNIT 10 WAY**

#### Features

- Suits 8 x Maxi fuses & 2 x Midi fuses (not included).
- 2 Hinged covers for easy access to either Maxi fuses or Midi fuses.
- Simple double ring (19mm) connection to positive battery terminal.
- Includes battery charging terminal & one fuse puller.
- Opening for the starter cable to pass into unit.
- A large assortment of terminals & power connectors (not included).
- 4 colour-coded sockets for polarized power connectors to Maxi fuses.
- Common feed powers all fuse positions.

Part	
Number	Description
00710	10 Way Fused Battery Power Distribution Unit (Pack 1)
40300	Maxi Fuse Connector F Black - Non polarized (Pack I)
40310	Maxi Fuse Connector F Blue - Polarized (Pack I)
40340	Maxi Fuse Connector F Grey - Polarized (Pack I)
40325	Maxi Fuse Connector F Green -Polarized (Pack 1200)
40335	Maxi Fuse Connector F Brown -Polarized (Pack 1200)
07650	Maxi Fuse Connector F Terminal 1.5 to 2.5 mm <sup>2</sup> 20A (BK/RL)
07660	Maxi Fuse Connector F Terminal 4 to 6mm <sup>2</sup> 36A (BK/RL)
07670	Maxi Fuse Connector F Terminal 8 to 10mm <sup>2</sup> 50A (BK/RL)
07671	Maxi Fuse Connector F Terminal 16mm <sup>2</sup> 75A (BK/RL)
08240RL	Midi Fuse Terminal 2.5 to 4mm <sup>2</sup> 28A, M5 (RL) (Pack 3000)
08245RL	Midi Fuse Terminal 6.0 to 8mm <sup>2</sup> 48A, M5 (RL) (Pack 2400)
08250RL	Midi Fuse Terminal 10 to 16mm <sup>2</sup> 75A, M5 (RL) (Pack 2400)



**Maxi Fuse Female** Connectors\*

Maxi Fuse Compartment

#### Fuse Puller (included) Midi Fuse Terminal 25 to 35mm<sup>2</sup> 125A, M5 (RL) (Pack 800)

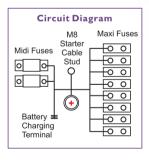
### **Ordering Notes:**

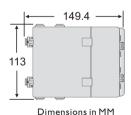
05925RL

- 1. Distribution unit does not include fuses, terminals or connectors.
- 2. Only I x Midi terminal is required for each Midi fuse.
- 3.\*Each connector plugs into 2 x Maxi fuses and requires 2 terminals. Non-polarized (black) connector plugs into any of the 4 sockets. Polarized connectors only plug into their colour-coded socket eg. blue connector into blue socket. Each connector plugs into 2 x Maxi fuses.



**Midi Fuse Compartment** 





249 100° 45.5 41 31 → 79.4 -

**RELATED PRODUCTS:** 



(see p. 18)



Midi Fuse (see p.24)



Maxi Fuse Connector & Female Terminals









(2.5 - 4mm<sup>2</sup>) (6.0 - 8mm²)

(25-35mm<sup>2</sup>) Polarity B

Midi fuse M5 Terminals (Indent Items)



### **MEGA FUSE HIGH POWER DISTRIBUTION MODULE 2 POLE**

The 2 Pole High Power Distribution Module (HPDM) provides two high current Mega fuse protected circuit outputs as well as an un-fused output that can optionally be used to parallel multiple modules or deliver power to circuits which do not require circuit protection or to daisy chain multiple devices.

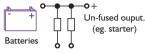
Description Part Number 880195400 2 Pole with cover

Voltage: 48VDC (limited by fuses). Max Input Current: 600A

Max Fuse Rating Per Circuit: 300A IP Rating: IP67, IP69K

Dimensions: 129 x 125 x 45mm Notes: Mega fuses not included.

Either side can be input or un-fused output.



Two fused outputs.



**OR Code** for more information

**¼** Littelfuse®

**IP67** 

IP69K

QR Code: 9022

#### RELATED PRODUCTS:

Mega Fuse 32V (See page 25)



## MEGA FUSE DISTRIBUTION BLOCKS 2-5 POLES

MI0

Russmann

Heavy duty power distribution module for main branch primary fusing. The common bus bar requires just one input connection to power all the fuses.

Part Number	Description
LMG2-1-001	2 Pole with stud input and cover
LMG3-1-001	3 Pole with stud input and cover
LMG5-1-001	5 Pole with stud input and cover

Rating: Maximum total combined rating is 300A continuous.\*

Body: Black UL-Rated 94 V0 thermoplastic. Studs: 5/16"-18 plated steel (E), optional M8 metric studs(M).

Hardware: Includes busbar, nuts & lock washers.

Temperature: -40°C to 85°C.

Cover: Red EPDM (protection from accidental shorts).

Notes: \*Maximum ampere rating based on numerous variations possible between numbers of poles used, fuses selected, input and output wiring. Mega fuses are not included.

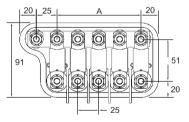


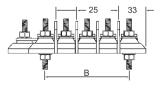


LMG2-1-001

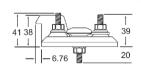


LMG3-1-001





**RELATED PRODUCTS:** Mega fuses see page 25.



Dimensions in MM



Number	Dimensions in MM	
of poles	Α	<u>B</u>
2 .	25	25
3	50	50
5	100	50 or 100*

\*5 pole block has 3 input stud holes to provide 50 or 100mm spacing between the 2 studs.



### 4 X MEGA & 2 X MIDI DISTRIBUTION BLOCK



The Littelfuse LTX Power Distribution Module is a high current sealed primary fuse box that can be placed in or near the battery box to fuse major feeder cables. The unit features a single bussed power input to all 4 MEGA® and 2 MIDI® fuses.

# IP66 NEW

### **Features**

- Common power input reduces the number of large gage cables that need to attach to battery.
- Put all the high current fusing in one sealed location (IP 66)\*.
- Gore-Tex breather prevents temperature changes from pulling
- Broad range of values for MEGA® and MIDI® fuses allow for use in a variety of applications.

Voltage: 32VDC.

Max Total Current: 240A.

Terminal Stud Size: M5 (Midi fuse) / M8 (Mega fuse).

Flammability Rating: UL94-V0 Input Wire Size: 50mm<sup>2</sup>.

Output Wire Sizes: 16-35mm<sup>2</sup> (Mega), 10-16mm<sup>2</sup> (Midi)

Hardware: S/S nuts & spring washers included.

Seals & Plugs: Not included, please order separately.

Ingress Protection Rating: IP66.

Seals / plugs must be installed to achieve IP66 rating. Please ensure seal flange is completely pressed through the hole to ensure a good seal on the inside of the block as shown in the image.

Temperature Rating: -40 °C to + 120 °C

Notes: A cavity plug is required for each opening that is not fitted with a cable & cable seal. Fuses are not included.

Part Number Fuse Block Description

079810027XS 6 Pole Fuse Block with Cover, Busbar, Nuts & Washers.



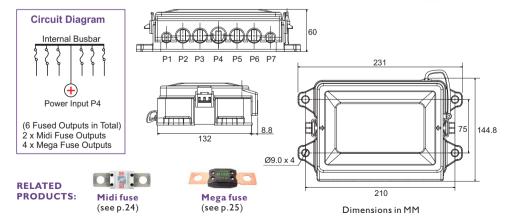






Seals must be fully pressed into block as shown in this image.







### 2 X MEGA & 3 X MIDI DISTRIBUTION BLOCK 70V



The MDB5 is a sealed high current primary fuse box that can be placed in the battery box or under hood as the first line of circuit protection and power distribution for a vehicle. It can fit 2 x MEGA and 3 x MIDI fuses. Input power can be connected using one or two input cables depending on continuous current requirement. When fitted with included seals it is IP67/69K rated providing high protection in harsh environments. Yellow tool-less latches secure the cover which acts as secondary lock to hold in cable seals even when wires are arranged for routing.



#### Features

• Sealed primary fusing that can be placed close to the battery in a harsh environment.

Capability to handle fuse ratings from 23-500A and voltages up to 70V.

• Full range of fuses for applications from 12V-48V+.

User choice of either unsealed or IP67/69K rating when fitted with included seals.

· Poke-Yoke mounting pattern for easier assembly.

Fuse Block Description Part Number

07985003ZXS 5 Pole Fuse Block with Cover & Seal, Busbar, Nuts.

Washers and Cable Seal Kit (as detailed below).

Voltage: 70VDC.

Continuous Current: 400A with two inputs or 200A with one input.

Terminal Stud Size: 3 x M5 (Midi fuse) / 2 x M8 (Mega fuse).

Input Stud Size: 2 x M8 Input Wire Size: 50mm<sup>2</sup>.

Output Wire Sizes Mega: 2 positions: 16mm<sup>2</sup>, 25mm<sup>2</sup>, 35mm<sup>2</sup>

Output Wire Sizes Midi: 3 positions: 6-10mm<sup>2</sup>, 10-16mm<sup>2</sup>

Hardware: S/S nuts & spring washers included.

Fuse Terminal Torque Mega: 32V 15 ± 3Nm, 70V 20 ± 1Nm Fuse Terminal Torque Midi: 32V6±1Nm, 70V9±1Nm

Flammability Rating: UL94-V0

Cable Seals & Cavity Plugs Assortment: Included. Ingress Protection Rating: IP69K with seals installed.

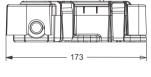
Seals / plugs must be installed to achieve IP66 rating. Please ensure seal flange is completely pressed through the hole to ensure a good

seal on the inside of the block as shown in the image. Temperature Rating: -40 °C to +105 °C

Notes: A cavity plug is required for each opening that is not fitted with a cable & cable seal. Cable seals and cavity plugs must be fully pressed into block. Fuses are not included.

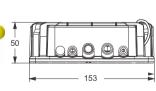


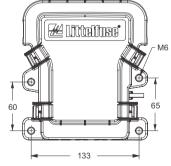






- 2 x Input Cable Seal 50mm<sup>2</sup> I x Input Cavity Plug
- 2 x Output Seal Mega 35mm<sup>2</sup>
- I x Cavity Plug Mega
- 3 x Output Seal Midi 10-16mm<sup>2</sup>
- I x Cavity Plug Midi



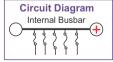




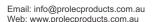




70V Mega Fuse (see p.25)







### 4 X AUTO FUSE & 3 X MIDI FUSE PDM

TERRA



Protect high and low-amp circuits with this PDM. Holds 3 x MIDI fuses and 4 x Auto fuses. The Auto fuse output circuits are wired to an integrated sealed 4-way connector (P/N: XTCK4). A common power input stud provides power for the 7 fuses via a tin-plated copper busbar. Stainless steel studs & hardware provide superior corrosion resistance.

Part Number Description

880073 Power Dist Module 350A XTCK4 4 Way Connector Plug Kit

Voltage: 32VDC (limited by fuses).
Maximum Continuous Current: 350A.
Max Fuse Rating Per Circuit (Midi): 170A.
Max Fuse Rating Per Circuit (Auto): 30A.
Module Contents: Includes cover with gasket.
IP Rating: IP59K Dimensions: 152 x 102 x 45mm

**Notes:** Auto fuses & Midi fuses not included.

4 Way Connector Plug Kit (P/N: XTCK4)



Scan this QR Code for more information



QR Code: 9017

# RELATED PRODUCTS:

Auto fuse 32V & 58V (see page 16-17)

Midi fuse 32V & 58V

(See page 24)

### 4 X AUTO FUSE & 3 X MIDI FUSE PDM

TERRA
POWER SYSTEMS

**Littelfuse** 

The 880076 SL series integrated fuse block is designed to power to 3 x switched high-amp circuits using either a remote switch or the manual switch on the block. This block also includes 4 x low-amp always- on circuits to power loads like clock, alarms etc. All 7 x output circuits are fuse protected. Power is output via 3 studs (high-amp circuits) or a single 4 wire connector (low-amp circuits).

Part

Number Description
880076 Power Dist Module with Remote & Manual On/Off Switch
880092 Illuminated Remote Control Switch SPDT (On)Off(On)
MX I 50FK6 6 Way Remote Switch Connector Kit. Terminals included.
XTCK4 4 Way Plug Connector Kit. Terminals included.

Voltage: 32VDC (limited by fuses).

Switch Continuous Ampere Rating: 300A at 85°C, 240A at 105°C

Switch Cranking Rating: 10 sec. 1000A

Max Operating Ampere Per Block: 240A (Midi fuse), 50A (Auto fuse)
Max Operating Ampere Per Circuit: 170A (Midi fuse), 20A (Auto fuse)
Fuse Ampere Ratings: 30A-200A (Midi fuse), 1A-20A (Auto fuse)

Studs: Tin-plated copper, M8 x 1.25 Midi Fuse Screws: M5 x .8 x 10 Hardware: Stainless steel

Operating Temperature: -50°C to 105°C

Module Contents: Includes cover with gasket.

**Mounting:** Mount as close as possible to the battery, but not above vented lead acid batteries. Mount in a dry protected location. Where possible mount in a vertical orientation. Do not mount upside down. **IP Rating:** IP59K / IP66

Ignition Protected: SAE JI 171, ISO 8846 Dimensions (LxWxH): 146 x 122 x 73 mm

Notes: Auto fuses, Midi fuses and connectors are not included.

RELATED PRODUCTS:







Midi fuse 32V & 58V (See page 24)



Power Distribution Module (P/N: 880076)

Remote Control Switch (P/N: 880092)



6 Way Remote Switch Connector Kit (P/N: MX150FK6)



4 Way Plug Connector Kit (P/N: XTCK4)



Scan this QR Code for more information



QR Code: 9036



### 6 X AUTO FUSE & 4 X MIDI FUSE PDM



Protect high and low-amp circuits via single power input stud with a collection point for ground returns, Ignition protected fuse block with screw termination.

IP59K

IGNITION

#### Features:

- 600A Continuous Current Rating. 10 Fuse Output Circuits.
- One common power input stud feeds power to all fuses.
- Protects up to 4 high-amp and 6 low-amp circuits. (30A-200A MIDI® fuses and IA-40A ATO® fuses).
- Negative bus provides common location for ground returns.
- Eliminates battery-box clutter, saves space & reduces cost.

Part Number Description

880089 Power Dist Module 600A

Voltage: 60VDC (limited by fuses). Max Total Continuous Current: 600A.

Max Cont. Current Per Circuit: 170A (Midi) / 30A (Auto). Module Contents: Includes fuse puller, cover & gasket.

IP Rating: IP59K

Dimensions: 165 x 127 x 51mm.

Notes: Auto fuses & Midi fuses not included.

**Power Input Stud** 5/16" (M8)



**Negative Return Busbar** Studs 5/16" (M8)

RELATED PRODUCTS:





(See page 24)





QR Code: 9021

**NEW** 

IP59K

IGNITION

# 6 X AUTO FUSE & 4 X MIDI FUSE PDM



0000000



Outputs

Protect high and low-amp circuits via a Midi Fuse with a collection point for ground returns. Ignition protected fuse block with screw termination.

#### Features:

- 170A Continuous Current Rating. 9 Fuse Output Circuits.
- Common power input fed via a MIDI Fuse to power to all fuses.
- Protects up to 3 high-amp and 6 low-amp circuits. (30A-200A MIDI® fuses and IA-40A ATO® fuses).
- Negative bus provides common location for ground returns.
- Eliminates battery-box clutter, saves space & reduces cost.

Part Number Description

880094 Power Dist Module 170A

Voltage: 60VDC (limited by fuses). Max Total Continuous Current: 170A (200A MIDI fuse fitted). Max Cont. Current Per Circuit: 170A (Midi) / 30A (Auto). Module Contents: Includes fuse puller, cover & gasket. IP Rating: IP59K

Dimensions: 165 x 127 x 51mm. Notes: Auto fuses & Midi fuses not included.







RELATED PRODUCTS:





Midi fuse 32V & 58V (See page 24)

Scan this **OR Code** for more information



Screws

QR Code: 9044



### **FUSED BATTERY DISTRIBUTION UNIT 3 WAY**

#### Features:

- Suits 2 x Midi fuses and 1 x Mega fuse or Powerval fuse.
- Includes durable hinged cover with common bus.
- Cable feeds through slots in the housing.
- Double ring (19mm) connection to positive top post battery terminal.
- Saves money by using one product that does the same as a battery

terminal, terminated cable and a fuse box.

Part Number Description

0300839 I x Mega Fuse + 2 x Midi Fuses

Voltage: 32V Rating: Contact sales.

Pack Size: 1, 10, 20
Notes: Fuses are not included.

# Circuit Diagram Power Input Output Internal Busbar

NEW IP22



### **FUSED BATTERY DISTRIBUTION UNIT 4 WAY**

#### Features:

- Suits 4 x Midi fuses with common bus.
- Includes clip on cover.
- Cable feeds through slots in the housing.

Part Number Description 0300552 4 x Midi Fuses

Voltage: 32V Rating: 120A Pack Size: 1, 10, 20

**Notes:** Fuses are not included.



Circuit Diagram
Internal Busbar

or Outpu





### **FUSED BATTERY DISTRIBUTION UNIT 6 WAY PLUS**

#### Features:

- Includes durable splash proof clip-on cover.
- · Cable feeds through slots in the housing.
- Suits 2 x Mega and 4 Midi fuse positions with common bus.
- Can house I x MTA modular fuse / relay module accessory.
   Can house 5 x MTA Mini fuse housing accessories.

Part Number Description

0301873 4 x Midi Fuses + 2 x Mega Fuses

Voltage: 32V Rating: 150A Pack Size: 1, 10, 20

Note: BDU includes 4 x M5 nuts with nylon insert, 2 x M8

nuts, I x M8 washer, busbar & housing.

Mini Fuses, Modules and Mini Fuse housings are not included.

Circuit Diagram

RELATED Internal





Midi fuse (See p.24)







Fuse / Relay Modules (See p. 138)







Mini Fuse Housing & F280 Terminals (See p.86)



### **FUSED POWER DIST. MODULE SEALED - 4 WAY**

# Littelfuse 4

#### Features

- Accommodates low to medium current fuses. Amperage range 2 A to 60A.
- Accommodates 2 x Mini fuses (fast acting) and 2 x Icase fuses (slow acting).
- Internal bussing. One input connection to power four fuse circuits.
- Secondary locks are included to secure each wire terminal in the holder.
- The holder is a sealed module enabling it to be used in heavy duty environments.



Temperature Rating:  $-40^{\circ}$ C to  $+85^{\circ}$ C. Voltage: 32VDC

Rating: 100A at 23°C, 70A at 85°C.

Fuses not to exceed 70% of rated current continuously.

Body & Cover: Black thermoplastic UL 94V-0.

Mounting: Screw mount M6 (torque: 6-8Nm).

Cover Gasket: Green silicone. Ingress Protection Rating: IP67

When cover, cable seals & cavity plugs are installed. Input Stud: M6 zinc plated steel (torque: 6-8Nm) Terminal Ratings: 30A max per terminal (Mini fuse). 60A max per terminal (Icase fuse).

Cable Seals: Please check the overall diameter of your cable before ordering cable seals.

Cavity Plugs: Required to fill unused output cavities for ingress protection.

Terminal Tools: Terminal crimping & removal tools p. 185-186.

Secondary Locks: PA66 (TPA's included).

Notes: Terminals, cable seals, cavity seals & fuses are not included. Mini bladed circuit breakers are not suitable for use in this product.

Approvals: RoHS



**PDM Module & Terminal Kit** PDMKIT101

Module & Terminal Kit Contents; Part Number

PDMKIT101 Base, Cover, Seal, Bracket, 3 x TPA's, Terminals (2 x 12129493, 2 x 15344631),

Cable Seals (2 x 15324980, 2 x 15324994), Plugs (1 x 12010300, 1 x 12059255).

Part Number Module Contents:

BPDMA104HXF1 PDM Module includes: Base, Cover, Seal, Bracket and 3 x TPA's only.



### ACCESSORIES TO SUIT MINI FUSES: Delphi Metri-Pack 280

### TERMINALS: TANGED

Female Sealed - Tin Brass / Tin Plated

Part Number Wire (AWG) Wire (mm<sup>2</sup>) #22 - #20 0.35 - 0.5 12084201 12077411 #18-#16 0.80 - 1.012129493 #14-#12 2.0 - 3.0 12077413 #10 5.0

### CABLE SEALS:

Part Number

15324983

15324982

15324980

15324981

Silicone



**CAVITY PLUG:** 



Part Number 12010300

#### ACCESSORIES TO SUIT ITF FUSIBLE LINKS: Delphi Ducon 6.3

#### TERMINALS:

Male Sealed - Tin Brass / Tin Plated

Part Number	Wire (AWG)	Wire (mm²)
15344632	#16 - #14	1.5 - 2.5
15344631	#12-#10	4.0 - 6.0

### CABLE SEALS:

Silicone



4 30 - 3 45





Blue





Part Number	Cable Dia. (mm)	Colour
15324997	2.40 - 1.60	Tan
15324995	2.90 - 2.00	Dark Red
15324994	3.80 - 2.80	Grey
15324996	4.50 - 3.60	Blue



(see p. 15)



Jcase Fuse (see p.21)



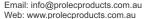
**Terminal Removal Tool** (see p. 186)





QR Code: 9003





### **POWER DIST. MODULE SEALED - 8 POSITION**

This module can be fitted with a mixture of 280 style components such as Mini fuses, mini circuit breakers, mini diodes, mini resistors and ISO 280 relays. It's compact size means it can be installed anywhere thereby eliminating excessive wiring in harnesses.

Voltage: 32V Temperature: -40°C to + 125°C

Rating: 120A max\* (100A when following SAE guidelines)

Combined maximum current of positions I & 2 is 60A for fuses / 30A

for circuit breakers. The same applies for positions 3 & 4.

Module is rated 50A max when fitted with an ISO 280 micro relay.

\*Please contact sales for max amperage guidelines

Module Contents: Module includes cover, base with seal & bracket.

**Terminal Capacity:** 8 terminals on a layout matrix of (2 x 4). Terminals: Delphi Metri-Pack 280 Female Sealed TANGED.

Cover: 94V0 Clear Polycarbonate. Short or tall cover options. Base: 94V0 Thermoplastic black. Other colour also available.

Bracket Option: Side B028-7013, End B028-7015, Pin B028-7016. Ingress Protection Rating: IP66 (Valid when properly installed with cover, cable seals and cavity plugs).

Cavity Plugs: Required to fill unused output cavities for ingress protection. Silicone material UL94-V0.

Cable Seals: Please check the overall diameter of your cable before ordering cable seals. Silicone material UL94-V0.

Terminal Tools: Terminal crimping & removal tools page 185-186.

Pack Size: 1, 10, 100

Part Number

PDMKITALSI

PDMKITASSI

Notes: Fuses, circuit breakers and relays are optional extras.

Kit Contents;





PDMKITALS I, Tall Cover PDM Kit





**Mini Fuses** Installed

Ultra Micro Relay, Mini Fuse & Breaker

Part Number	Description
CFH-ALS	Tall Clear Cover*, Base and Side Bracket
CFH-ALE	Tall Clear Cover*, Base and End Bracket NEW
CFH-ASS	Short Clear Cover, Base and Side Bracket
CFH-ASE	Short Clear Cover, Base and End Bracket NEW
12084201	Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal Dark Red, 1.70 - 1.29mm Cable Dia.
15324982	Cable Seal Green, 2.85 - 2.03mm Cable Dia.

15324980 Cable Seal Grey, 3.49 - 2.81 mm Cable Dia. 15324981 Cable Seal Blue, 4.30 - 3.45mm Cable Dia. 12010300 Cavity Plug Green, 6.7mm Cavity inside Dia. 32006-TP2 Secondary Lock (TPA). Secures Terminals.

### **Component Loading Options:**

- 4 x Mini fuses or Mini Blade circuit breakers or combination.
- 2 x Ultra Micro 280 Relays (4 pin only).
- I x Micro 280 Relay (4 or 5 pin).
- 2 x Mini fuses or Mini Blade circuit breakers or combination & I x Ultra Micro 280 Relay (4 pin only).

**Note:** \*Tall cover is required when fitting relays & breakers.

### Short Cover Side Bracket

Tall Cover\*, Base, Side Bracket, 8 x 3.0mm<sup>2</sup>Terminals, 8 x Seals, 4 x Plugs & TPA

Short Cover, Base, Side Bracket, 8 x 3.0mm<sup>2</sup> Terminals, 8 x Seals, 4 x Plugs & TPA







Short Cover End Bracket





Tall Cover **End Bracket** 



Scan this **OR Code** for more information



QR Code: 9010



Mini Fuses. Mini Resistors. Mini Diodes, Mini Shunts & Mini Blade Circuit Breakers.



ISO 280 Relays, Ultra Micro & Micro, 12VDC or 24VDC.



Tanged Cables, Tanged Jumpers, Splice Connectors.



### **POWER DIST. MODULE SEALED - 12 POSITION**



The HWB 12 series is a 12 position power distribution module providing a compact, durable and sealed power distribution solution for the transportation market. This unit is designed for 280 style components such as Mini blade fuses. Mini circuit breakers, 280 Relays, Mini diodes etc. with 2.8mm blades on 8.1mm centerline spacing.

IP69K IP67

Module Contents: Module includes clear cover, base, cover seal, straight mounting bracket and 3 secondary terminal locks (TPA's).

Accessory Components: Terminals, cable seals & cavity plugs, mini fuses, mini blade circuit breakers, ISO 280 ultra micro and ISO 280 micro relays. Terminal Capacity: 12 terminals on a layout matrix of (2 x 6).

Voltage Rating: 58VDC

Maximum Continuous Current: 130A Maximum Fuse Rating: 30A per circuit. Temperature Rating: -40°C to +105°C. Housing: PA66 GF30, Black, UL 94 V-0

Cover: Clear UL94 V-2 Cover Seal: Silicone, green.

Cover must be oriented correctly in order to secure yellow tabs.

Mounting Bracket: Plated steel - straight (standard).

Wire Size: #22 - #13 AWG (0.35 to 2.5mm<sup>2</sup>).

Ingress Protection Rating: IP67 / IP69K when cover,

cable seals & cavity plugs are installed.

Cable Seals: Please check the overall diameter of your cable before ordering cable seals.

Terminals: Tyco AMP MCP 2.8, Female Copper Nickel / Tin Plated. Terminal Tools: Terminal crimping & removal tools refer p. 185-186. Options: 30 deg. angled mounting bracket, black cover, cover tether and foam relay retention inserts.

Note: It is recommended that one foam insert be ordered for each relay & installed onto the inside of the cover as a retention device.



**PDM Module & Terminal Kit** PDMKIT331

<u>Part Number</u>	Kit Contents;	
PDMKIT331	Module Base, Clear Cover, Straight Bracket, 3 x TPA's,	NEW
	12 x 2.5mm <sup>2</sup> Terminals, 12 x Cable Seals & 4 x Cavity Plugs.	

Part Number Description PDM33003ZXM PDM Module, Clear Cover, Straight Bracket, 3 x TPA's. I-968875-I Terminal Female (#20 - #16AWG), 0.5 - 1.0mm Terminal Female (#16 - #14AWG), 1.5 - 2.5mm<sup>2</sup> 1-968876-1 828904-I Cable Seal Blue Silicone, 1.2 - 2.1mm Cable Dia. Cable Seal White Silicone, 2.2 - 3.0mm Cable Dia. 828905-I 828922-1 Cavity Plug Clear Silicone, 5.6mm Cavity inside Dia. Foam Relay Retention Insert (optional). 901-327 868-068 Angled Bracket 30 Degree (optional). 890009470 Cover Tether (optional).

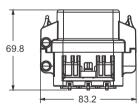












Dimensions in MM

**RELATED PRODUCTS:** 



Mini Fuses, Mini Resistors, Mini Diodes, Mini Shunts & Mini Blade Circuit Breakers.





Ultra Micro 280 Relays 4 Pin. Micro Relays 280 4 & 5 Pin. 12VDC or 24VDC.

Scan this **QR** Code for more information



QR Code: 9025



### **POWER DIST. MODULE SEALED - 18 POSITION**



IP69K IP67

The HWB18 series is an 18 position power distribution module providing a compact, durable and sealed power distribution solution. This unit is designed for 280 style components such as mini blade fuses, circuit breakers, relays, diodes etc. with 2.8mm blades on 8.1mm centerline spacing.

PDM Module Kit Contents: Module kit includes cover, cover seal, base, mounting bracket 30° angled and 3 secondary terminal locks (TPA's).

Accessory Components: Terminals, cable seals & cavity plugs, mini fuses, mini blade circuit breakers, Ultra micro 280 & Micro 280 relays.

**Terminal Capacity:** 18 terminals on a layout matrix of  $(3 \times 6)$ .

Terminal Rating: 30A max per terminal. Maximum Fuse Rating: 30A Maximum Total Continuous Current: 100A @ 23°C, 70A @ 85°C

Voltage Rating: 58VDC Max. Temperature Rating: -40°C to +105°C. Body & Cover: Black UL 94V-0 glass filled thermoplastic.

Body Seal: Silicone.

Mounting Bracket: Plated steel - 30° angled (standard).

**Ingress Protection Rating:** IP67 / IP69K when cover, cable seals and cavity plugs are installed.

Wire Size: #22 - #10 AWG (0.35 to 5mm<sup>2</sup>).

Cavity Plug: Required to fill unused output cavities for ingress protection.

Cable Seals: Please check the overall diameter of your cable before ordering

 $\textbf{Terminals:} \ \mathsf{Delphi} \ \mathsf{Metri-Pack} \ \mathsf{280} \ \mathsf{Female} \ \mathsf{Sealed} \ \mathsf{TANGED}.$ 

Terminal Tools: Terminal crimping & removal tools see page 185-186.



PDM31001ZXM Module



PDMKIT3 I I - PDM Terminal Kit

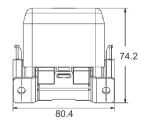
Part Number	KIT Description
PDMKIT311	Kit - Module Base, Cover, 30° Bracket, 3.0mm <sup>2</sup> Terminals, Cable Seals, Cavity Plugs & TPAs.
PDMKIT312	$Kit-Module\ Base,\ Cover,\ 30^{\circ}\ Bracket,\ 2.0mm\ Pre-terminated\ Cables,\ 2.0mm\ Jumpers\ \&\ TPA's.$

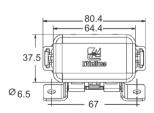
Part Number	Description
PDM31001ZXM	PDM Module Base, Cover, 30° Angled Bracket.
12084201	Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal Dark Red, 1.70 - 1.29mm Cable Dia.
15324982	Cable Seal Green, 2.85 - 2.03mm Cable Dia.
15324980	Cable Seal Grey, 3.49 - 2.81 mm Cable Dia.
15324981	Cable Seal Blue, 4.30 - 3.45mm Cable Dia.
12010300	Cavity Plug Green, 6.7mm Cavity inside Dia.
868-068	30° Angled Bracket (Spare Part).



PDMKIT312 - PDM & Cable Kit







Dimensions in MM



Mini Fuses, Mini Resistors, Mini Diodes, Mini Shunts & Mini Blade Circuit Breakers.



Ultra Micro 280 Relays, Micro 280 Relays. 12VDC or 24VDC.

Scan this QR Code for more information



QR Code: 9015



### PDM SEALED MODULE - 60 POSITION



The Littelfuse HWB60-AL (Assured Latch) features 60 open positions with no internal bussing. It is designed for use with 280 style components i.e. Mini fuses, Mini Circuit Breakers, Mini Diodes / Resistors, Ultra Micro 280 Relays, Micro 280 Relays, Mini 280 Relays, 280 Flashers,

IP69K IP6

**Terminal Capacity:** 60 terminals on a layout matrix of (5 x 12).

Terminal Rating: 30A max per terminal.

Maximum Fuse Rating: 30A

Maximum Total Continuous Current: 250A

Voltage Rating: 58VDC Max.

Wire Size: #22 - #10 AWG (0.35 to 5mm<sup>2</sup>).

Temperature Rating:  $-40^{\circ}$ C to  $+125^{\circ}$ C.

Base & Cover: PA66 30% GF. Cover Gasket: Silicone. Mounting: 4 holes for M6 bolts (4 - 6Nm max torque).

Terminals: Delphi Metri-Pack 280 Female Sealed TANGED. Cavity Plugs: Fill unused output cavities for ingress protection.

Cable Seals: Check the overall diameter of your cable before ordering cable seals.

Ingress Protection Rating: IP67 / IP69K when cover, cable seals and cavity plugs are installed.

Options: Cover tether. Accessory to hold a fuse puller & spare fuses. Internal cover grid to aid relay retention.

Feature: Gang mount feature interconnects multiple modules side-by-side.

Interlocks with Littelfuse Auto fuse block, Midi-Flex fuse block, Mega-Flex fuse block and FLEC.

Base Features: Internal storage for 8 spare fuses. Terminal position numbering on underside of base.

Terminal Tools: Terminal crimping & removal tools see page 185-186. Notes: Fuses and relays are not included.

PDM Kit Description; Part Number

PDMKIT711 Module, Terminals (60 x 12129493), Cable Seals (60 x 15324980) and Plugs (10 x 12010300). PDMKIT712 Module, Pre-terminated Cables 2.0 x 300mm (30pcs x Red & 30pcs x Blue), Pre-terminated

Jumpers Red (5pcs), Butt Connectors (60pcs) & Cavity Plugs (10pcs).

Part Number	Description
PDM71003ZXM	PDM Module Base, Cover and 6 x TPA's. No accessories.
12084201	Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal Dark Red Silicone, 1.70 - 1.29mm Cable Dia.
15324982	Cable Seal Green Silicone, 2.85 - 2.03mm Cable Dia.
15324980	Cable Seal Grey Silicone, 3.49 - 2.81 mm Cable Dia.
15324981	Cable Seal Blue Silicone, 4.30 - 3.45mm Cable Dia.
12010300	Cavity Plug Green Silicone, 6.7mm Cavity inside Dia.

Scan this OR Code for more information



QR Code: 9028



PDMKIT711 - PDM Terminal Kit

97.8

78.6 <sup>65.2</sup>

22.6



Finger Release 138 5.8 Ø6.4 R3.2 65.8 60 36 R10.0 Dimensions in MM



6

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### **POWER DIST. MODULE SEALED - 24 POSITION**



The FRH-A24 series module is a 24 position power distribution module providing a compact, durable and sealed power distribution solution for the transportation market. This module can be fitted with a mix of 280 style components such as Mini fuses, mini circuit breakers, mini diodes. diode keys, mini resistors, ISO 280 Ultra Micro and ISO 280 Micro relays.

Voltage Rating: 32VDC

**Terminal Capacity:** 24 terminals on a layout matrix of (4 x 6).

Terminal Rating: 20A continuous, 30A intermittent.

Terminals: Delphi Metri-Pack 280 Female Sealed TANGED.

Temperature Rating: -40°C to + 125°C.

Housing: Black thermoplastic. Seal: Silicone, red.

 $\textbf{Mounting Bracket:} \ Stainless \ steel, \ straight \ with \ anti-rotation \ tab.$ 

**Cable Seals:** Please check the overall diameter of your cable before ordering cable seals. Silicone material UL94-V0.

Cavity Plugs: Required to fill unused output cavities for ingress

protection. Silicone material.

Ingress Protection Rating: IP66.

Terminal Tools: Terminal crimping & removal tools available.

Module Accessories: Optional 90 degree mounting bracket.

Components: Mini fuses, mini circuit breakers and ISO 280 relays

are not included with the kit. **Approvals:** RoHS

Part Number Kit Contents;

PDMKIT424 Base, Cover, Seal, Bracket, 2 x TPA's, 1 x CPA,

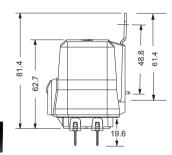
Terminals ( $26 \times 12129493$ ), Seals ( $26 \times 15324980$ ),

Cavity Plugs (6 x 12010300).

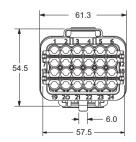
Part Number	Description
FRH-A24	PDM Housing Black and Seal Red. 24 Position.
FRH-A24-C	PDM Cover Black
FRH-A-CPA	PDM CPA Blue Cover Position Assurance.
FRH-A12-MB-A2	Flat Bracket Anti-Rotation Tabs Stainless Steel.
FRH-A12-T	TPA Terminal Position Assurance, 2pcs Required
12084201	Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal Dark Red, 1.70 - 1.29mm Cable Dia.
15324982	Cable Seal Green, 2.85 - 2.03mm Cable Dia.
15324980	Cable Seal Grey, 3.49 - 2.81 mm Cable Dia.
15324981	Cable Seal Blue, 4.30 - 3.45mm Cable Dia.
12010300	Cavity Plug Green, 6.7mm Cavity inside Dia.
PDM-TK	Diode Key Red.



PDMKIT424 - PDM & Terminal Kit



Dimensions are in MM







Mini Fuses and Circuit Breakers, Mini Resistors and Shunts, Mini Diodes and Diode Keys.



Tanged Pre-Terminated Cables Tanged Pre-Terminated Jumpers Butt Splice Connectors. (see p. 186)













QR Code: 9038



### **POWER DIST. MODULE SEALED - 48 POSITION**



This 48 position power distribution module provides compact, durable and sealed main power or auxiliary power for the transportation market. PDM's interlock to allow for growth. This high density module can be fitted with a mix of 280 style components such as Mini fuses, mini circuit breakers, mini diodes, diode keys, mini resistors, ISO 280 Ultra Micro and ISO 280 Micro relays.



Voltage Rating: 32VDC

**Terminal Capacity:** 48 terminals on a layout matrix of  $(4 \times 12)$ .

Terminal Rating: 30A per terminal.

Terminals: Delphi Metri-Pack 280 Female Sealed TANGED.

Temperature Rating: -40°C to + 125°C.

Housing: Black thermoplastic. Seal: Silicone, blue.

Mounting: Top mount with insert. Side mount also available. Cable Seals: Please check the overall diameter of your cable before ordering cable seals. Silicone material UL94-V0.

Cavity Plugs: Required to fill unused output cavities for ingress

protection. Silicone material.

Ingress Protection Rating: IP66.

Terminal Tools: Terminal crimping & removal tools available. Components: Mini fuses, breakers and relays are not included.

Approvals: RoHS

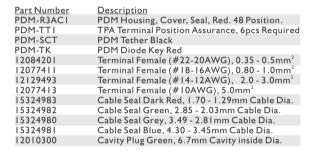


48 Way PDM: PDM-R3ACI



TPA: PDM-TTI Secures 8 Positions







**TERMINALS: TANGED** Female Sealed, Tin Brass / Tin Plated **CABLE SEALS: Silicone** CAVITY PLUG: Silicone





Diode key drops into PDM base slot as pictured.



Mini Fuses. Mini Resistors. Mini Transorbs and Mini Blade Circuit Breakers.



Tanged Pre-Terminated Cables Tanged Pre-Terminated Jumpers **Butt Splice Connectors.** (See page 186)





Terminal & Seal Assortment Kits. TERMKIT002 (See page 187)



Crimping Tool & Terminal Removal Tool (see page 185 - 186)

Scan this **OR Code** for more



QR Code: 9041



### **POWER DIST. MODULE SEALED - 72 POSITION**



**IP66** 

This sealed, compact and rugged module is an excellent power distribution solution for marine, construction, agriculture, heavy trucking, and specialty vehicle industries. It accommodates 72 terminal positions to provide component flexibility for the increasing demands of modern electrical systems.

Voltage Rating: 32VDC

Output Rating: 30A max per terminal.

Terminal Capacity: 72 terminals on a layout matrix of (6 x 12) suited to

2.8mm blades on 8.1mm centerline spacing.

Components: Accepts Mini fuses. Mini bladed circuit breakers.

ISO 280 Micro relays and ISO 280 Flashers.

Mounting: Top mount: 2 x M6 threaded insert clips.

Side mount: 2 x 10.5mm holes.

Block & Cover: Thermoplastic, black PBT Polyester. Cover Seal: Silicone.

Ingress Protection Rating: IP66

(Valid when properly installed with cover, cable seals and cavity plugs).

Wire Size: #22 - #10 AWG / 0.35mm<sup>2</sup> - 5mm<sup>2</sup>

Cavity Plugs: Required to fill unused output cavities for ingress protection. Cable Seals: Please check the overall diameter of your cable before

ordering cable seals.

Terminal Tools: Terminal crimping & removal tools available.

Temperature Rating: -40°C to +125°C (Module only)

Ordering: Block is supplied with cover only.

Not Included: Terminals, cable seals, cavity plugs or mounting screws. Module does not include any plug-in components such as fuses, circuit breakers, relays etc.

Feature: Gang mount feature. Interconnect multiple modules side-by-side.

Options: Custom labels and kits.

Approvals: RoHS

Part Number	Description
PDM-S3ACI	PDM Top Mount with Threaded Inserts, Seal & Plain Cover
PDM-SCT	Tether Black Flexible.
PDM-STI	TPA Terminal Position Assurance. 6pcs Required Per Unit
12084201	Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal Dark Red, 1.70 - 1.29mm Cable Diameter
15324982	Cable Seal Green, 2.85 - 2.03mm Cable Diameter
15324980	Cable Seal Grey, 3.49 - 2.81 mm Cable Diameter
15324981	Cable Seal Blue, 4.30 - 3.45mm Cable Diameter
12010300	Cavity Plug Green, 6.7mm Cavity inside Diameter
PDM-TK	Diode Key Red







Rear View



TPA: PDM-STI Secures 12 Positions



TETHER: PDM-SCT Links Cover with Base

**ACCESSORIES: Delphi Metri-Pack 280** 

**TERMINALS: TANGED** 

Female Sealed, Tin Brass / Tin Plated



CABLE SEALS: Silicone **CAVITY PLUG: Silicone** 







QR Code: 9034





RELATED PRODUCTS:

Mini Fuses. Breakers. Mini Transorbs, Mini Diodes, Mini Shunts & Diode Keys.



ISO 280 Relays Ultra Micro. Micro & Mini. 12VDC or 24VDC.



Terminal & Seal Assortment Kits. TERMKIT003 (See page 187)



Tanged Cables, Jumpers, Splice Connectors, (see page 186)



**Crimping Tool &** Terminal Removal Tool (see page 185 - 186)



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### **POWER DIST. SEALED MODULE - 96 POSITION**



Increased power distribution requirements in today's vehicles creates the need for additional component capacity to support electrical system integrity. To meet these increasing power challenges, GEP has released a 96 terminal position module. This new sealed, compact, and rugged module offers more configuration options for transportation and off-road applications.





Output Rating: 30A max per terminal.

Terminal Capacity: 96 terminals on a layout matrix of (8 x 12).

Suited to 2.8mm blades on 8.1mm centerline spacing.

Components: Accepts Mini fuses, Mini bladed circuit breakers,

ISO 280 Micro relays and ISO 280 Flashers.

Mounting: Top mount, 10mm threaded inserts.

Other mounting holes and orientations available, contact sales.

Block & Cover: Thermoplastic, black PBT Polyester.

Cover Seal: Silicone.

Ingress Protection Rating: IP66.

(Valid when properly installed with cover, cable seals and cavity plugs).

Wire Size: #22 - #10 AWG / 0.35mm<sup>2</sup> - 5mm<sup>2</sup>

Cavity Plugs: Required to fill unused output cavities for ingress protection.

Cable Seals: Please check the overall diameter of your cable before ordering cable seals.

Terminal Tools: Terminal crimping & removal tools available. Temperature Rating: -40°C to +125°C (Module only)

Tether Black Flexible.

Ordering: Block is supplied with cover only.

Description

Diode Key Red

**ACCESSORIES: Delphi Metri-Pack 280** 

Not Included: Terminals, cable seals, cavity plugs or mounting screws. Module does not include any plug-in components such as fuses, circuit breakers, relays etc.

PDM Top Mount with Threaded Inserts, Seal & Plain Cover.

TPA Terminal Position Assurance. 6pcs Required Per Unit.

Terminal Female (#22-20AWG), 0.35 - 0.5mm<sup>2</sup> Terminal Female (#18-16AWG), 0.80 - 1.0mm<sup>2</sup>

Terminal Female (#14-12AWG), 2.0 - 3.0mm

Cable Seal Dark Red. 1.70 - 1.29mm Cable Diameter

Cable Seal Green, 2.85 - 2.03mm Cable Diameter Cable Seal Grey, 3.49 - 2.81 mm Cable Diameter

Cable Seal Blue, 4.30 - 3.45mm Cable Diameter

Cavity Plug Green, 6.7mm Cavity inside Diameter

Terminal Female (#10AWG), 5.0mm

Options: Custom labels and kits.

Approvals: RoHS

Part Number

PDM-U3ACI

PDM-SCT

PDM-UTI

12084201

12077411

12129493

12077413 15324983

15324982

15324980

15324981

12010300

Female Sealed

PDM-TK







**Rear View** 

TPA:

Secures 16 Positions

TETHER:

Links Cover with Base



Scan this **OR Code** for more information





**TERMINALS: TANGED** 

Tin Brass / Tin Plated



Mini Fuses, Breakers, Mini Transorbs, Mini Diodes, Mini Shunts & Diode Keys.



ISO 280 Relays Ultra Micro. Micro & Mini. 12VDC or 24VDC.



**CABLE SEALS:** 

**CAVITY PLUG:** 

Silicone

Silicone

Terminal & Seal Assortment Kits. TERMKIT003 (See page 187)



Tanged Cables, Jumpers, Splice Connectors, (see page 186)

**Crimping Tool &** 

Terminal Removal Tool (see page 185 - 186)



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### **POWER DIST. MODULE SEALED - 60 POSITION**

ET•N Bussmann

**IP66** 

This unit features 60 open positions with no internal bussing. It is designed for use with 280 style components (i.e. Mini fuses, 280 Relays, diodes, resistors, etc.) and provides efficient power distribution in a rugged compact form with applications in marine, construction, agriculture, heavy trucking, and specialty vehicle industries.

Output Rating: 30A max per terminal.

Terminal Capacity: 60 terminals on a layout matrix of (6 x 10) suited to 2.8mm blades on 8.1mm centerline spacing.

Mounting: Includes threaded inserts #10-32 as standard (M5 optional). Base: Features letter/number grid front & rear for easy reference of each terminal position. Black thermoplastic with red rubber gasket.

Cover: Black thermoplastic. Improved latch design & tether strap.

Cover Options: Replacement covers also available.

Shallow cover includes Gore vent (Mini fuses only) # B151-7168-1-1. Deep cover (Mini fuses / ISO 280 relays / Mini breakers) # B151-7168-2-1.

Temperature Rating: -40°C to + 125°C (PDM only).

Wire Size: #20 - #12 AWG / 0.5mm2 - 2.5mm2

Ingress Protection Rating: IP66 -IEC 529 (valid only when cover, cable seals and cavity plugs are properly fitted).

Cavity Plugs: Required to fill unused output cavities for ingress protection. Cable Seals: Please check the overall diameter of your cable before ordering

Terminal Tools: Terminal crimping tools (p. 185).

Not Included: Terminals, cable seals, cavity plugs, mounting brackets or mounting screws. Module does not include any plug-in components.

#### 60 WAY MODULE & COVER (No Bussing):

Part Number	Block Description	Cover Inc.	Nbr Cavities
15310-1-1	30 x Mini Fuses Only	Shallow - Fuse	60
15310-1-2	Mix of 280 Components	Deep - Relay	60

### ACCESSORIES:

Part Number	Description
TERMKIT004	170pc Terminal, Cable Seal & Cavity Plug Assortment Kit.
I-968875-I	Terminal Female MCP 2.8 #20 - #16AWG 0.5 - 1.0mm <sup>2</sup>
1-968876-1	Terminal Female MCP 2.8 #14 - #12AWG 1.5 - 2.5mm <sup>2</sup>
828904-I	Cable Seal Silicone Blue 1.2 - 2.1 mm Diameter.
828905-I	Cable Seal Silicone White 2.2 - 3.0mm Diameter.
828922-I	Cavity Plug Silicone Clear
PROBRK008K	Mounting Brackets Stainless Steel Natural (a)
PROBRK001	Mounting Bracket Powder Coated Black (b)

#### SURFACE MOUNT BRACKET OPTIONS:



(a) PROBRK008K 2pc Bracket Kit Includes Hardware.



(b) PROBRKOOI Ì pc Bracket Kit Includes Hardware.

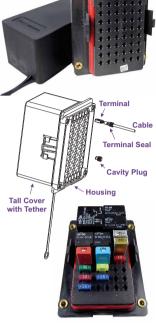




Mini Fuses, Mini Resistors, Mini Diodes, Mini Shunts & Mini Blade Circuit Breakers.



Ultra Micro 280 Relays, Micro 280 Relays, Mini 280 Relays, 280 Flashers



**ACCESSORIES: AMP MCP 2.8** 

Terminals: Female With Locking Barbs Copper Nickel / Tin plated

Cable Seals: Silicone



Cavity Plug: Silicone



NEW



**TERMKIT004** (see p. 187)

Scan this OR Code for more information



QR Code: 9001



### MINI FUSE SEALED MODULE - 20 WAY



NEW IP66

This weatherproof 20 x Mini fuse module designed to provide fuse protected power for up to 20 circuits. The unit is powered by 2 separate power input studs, each stud powers 10 Mini fuse positions. The module can be ordered with a shallow cover to suit Mini Fuses, or with a deep cover if you want to fit Mini Blade Circuit Breakers which are taller.

Suits applications in marine, construction, agriculture, heavy trucking, specialty vehicles and 4x4 wheel drives.

This new 15305 series RTMR has new refinements but remains backward compatible and interchangeable with the original 15303 series RTMR.







20 x Mini Fuses or Mini Circuit Breakers

### **MODULE KITS**

Part Number Description PDMKIT-163T 20 x Mini fuse module kit with shallow cover PDMKIT-164T 20 x Mini fuse / circuit breaker kit & deep cover

#### KIT CONTENTS

Both kits include the following:

- I x Module with either shallow or deep cover
- I x Medium profile bracket
- 4 x Bolts & washers for mounting module to bracket
- 5 x Terminals 0.8 1.0mm<sup>2</sup> (#18-16 AWG)
- 20 x Terminals 1.0 2.0mm<sup>2</sup> (#16-14 AWG)
- 5 x Terminals 2.0 3.0mm<sup>2</sup> (#14-12 AWG)
- 5 x Cable seals 2.03 2.85mm diameter cable
- 20 x Cable seals 2.81 3.49mm diameter cable
- 5 x Cable seals 3.45 4.30mm diameter cable
- 10 x Cavity plugs
- I x Instruction book (download via QR code)
- Lx Fuse circuit identification label

Note: Fuses and circuit breakers are not included.

Please refer for page 133 for dimensions.



Scan this OR Code for more information on module kits.



QR Code: 11005

### **MODULES ONLY**

MODULES	ONLI		Included	Nbr of	Max Nbr of
Part Number	Block Layout	Bussing	Cover	Cavities	<b>Terminals</b>
15305-1-6-3	20 x Mini Fuse Module	Dual Fuse Buss	Shallow	20	20
15305-1-6-4	20 x Mini Fuse / Circuit Breaker Module	<b>Dual Fuse Buss</b>	Deep	20	20

Notes: Module includes cover and input stud caps only. Fuses, circuit breakers, terminals, seals, cavity plugs and bracket are not included. Please refer for page 133 for dimensions and accessory parts.



Front View



**Rear View** 



Assembled with Deep Cover



Shallow Cover (Fuses only)



Deep Cover (Fuses & Breakers)

Scan this OR Code for more information on modules only.



QR Code: 9040



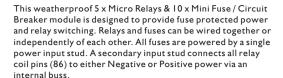
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### MINI FUSE, MINI / MICRO RELAY SEALED MODULE









Suits applications in marine, construction, agriculture, heavy trucking, specialty vehicles and 4x4 wheel drives.

This new 15305 series RTMR has new refinements but remains backward compatible and interchangeable with the original 15303 series RTMR.



5 x Micro 280 Relays 10 x Fuses / Breakers

### **MODULE KIT**

Part Number Description Internal Bussing PDMKIT-264T 5 x Relays & 10 fuses / breakers Fuse & relay buss\*

#### KIT CONTENTS

Both kits include the following:

- I x Module with deep cover
- I x Medium profile bracket
- 4 x Bolts & washers for mounting module to bracket
- 10 x Terminals 0.8 1.0mm<sup>2</sup> (#18-16 AWG)
- 35 x Terminals 1.0 2.0mm<sup>2</sup> (#16-14 AWG)
- 10 x Terminals 2.0 3.0mm<sup>2</sup> (#14-12 AWG)
- 10 x Cable seals 2.03 2.85mm diameter cable 35 x Cable seals 2.81 - 3.49mm diameter cable
- 10 x Cable seals 3.45 4.30mm diameter cable
- 20 x Cavity plugs

- I x Instruction book (download via QR code)
- I x Fuse / relay circuit identification label

Note: Fuses, circuit breakers & relays are not included.

Please refer for page 133 for dimensions.



Scan this QR Code for more information on module kit.



QR Code: 11005

### **MODULE ONLY**

Included Nhr of Max Nbr of Part Number **Block Layout** Cover Bussing Cavities **Terminals** 5 x Micro 280 Relays and 15305-2-6-4 Fuse & Relay Buss\* Deep 10 x Mini Fuses / Circuit Breakers \*Input stud bussed to pin 86 on relay.

Relays: Micro ISO 280 Relays with 4 or 5 terminals (SPST / SPDT)

Notes: Module includes cover and input stud caps only. Fuses, circuit breakers, relays, terminals, seals, cavity plugs and bracket are not included. Please refer for page 133 for dimensions and accessory parts.



Front View



Rear View



Assembled (Deep Cover)

Scan this OR Code for more information on module only.



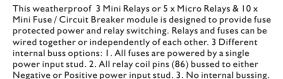
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### MINI FUSE, MINI / MICRO RELAY SEALED MODULE - CONTINUED

## Bussmann

NEW IP66



Suits applications in marine, construction, agriculture, heavy trucking, specialty vehicles and 4x4 wheel drives.

This new 15305 series RTMR has new refinements but remains backward compatible and interchangeable with the original 15303 series RTMR.



5 x Micro 280 Relays 10 x Fuses / Breakers



3 x Mini 280 Relays 10 x Fuses / Breakers

### **MODULE KITS**

Part Number	Description	Internal Bussing
PDMKIT-404T	3-5 x Relays & 10 fuses /breakers	No Buss
PDMKIT-564T	3-5 x Relays & 10 fuses /breakers	Fuse Buss Only
PDMKIT-664T	3-5 x Relays & 10 fuses /breakers	Relay Buss Only*
PDMKIT-664T	3-5 x Relays & 10 fuses /breakers	Relay Buss Only*

### **KIT CONTENTS**

Both kits include the following:

- I x Module with deep cover
- I x Medium profile bracket
- 4 x Bolts & washers for mounting module to bracket
- 55 x Terminal assortment for different wire gauges
- 55 x Cable seal assortment for different cable diameters
- 20 x Cavity plugs
- I x Instruction book (download via QR code)
- I x Fuse / relay circuit identification label

**Note:** Fuses, circuit breakers & relays are not included.

Please refer for page 133 for dimensions.



Scan this QR Code for more information on module kits.

Included Nbrof



QR Code: 11005

Max Nhr of

### **MODULES ONLY**

			IIICIGGCG	1401 01	
Part Number	Block Layout	Bussing	Cover	Cavities	Terminals
15305-4-0-4	3-5 x Relays & 10 Fuses / Breakers	No Buss	Deep	50	45
15305-5-6-4	3-5 x Relays & 10 Fuses / Breakers	Fuse Buss Only	Deep	40	35
15305-6-6-4	3-5 x Relays & 10 Fuses / Breakers	Relay Buss Only*	Deep	45	40

<sup>\*</sup>Input stud bussed to pin 86 on relay.

Relays: Micro ISO 280 Relays or Mini ISO 280 Relays with 4 or 5 terminals (SPST / SPDT)

**Notes:** Module includes cover and input stud caps only. Fuses, circuit breakers, relays, terminals, seals, cavity plugs and bracket are not included. Please refer for page 133 for dimensions and accessory parts.



Front View



Rear View



15305-5-6-4

Rear View



Rear View



(Deep Cover)

Scan this QR Code for more information on modules only.



QR Code: 9040



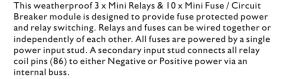
Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

### MINI FUSE, MINI / MICRO RELAY SEALED MODULE - CONTINUED



NEW IP66





Suits applications in marine, construction, agriculture, heavy trucking, specialty vehicles and 4x4 wheel drives.

This new 15305 series RTMR has new refinements but remains backward compatible and interchangeable with the original 15303 series RTMR.



3 x Mini 280 Relays 10 x Fuses / Breakers

### **MODULE KIT**

Part Number Description PDMKIT-364T 3 x Relays & 10 Fuses / Breakers

Internal Bussing Fuse & Relay Buss\*



### KIT CONTENTS

Both kits include the following:

- I x Module with deep cover
- I x Medium profile bracket
- 4 x Bolts & washers for mounting module to bracket
- 10 x Terminals 0.8 1.0mm<sup>2</sup> (#18-16 AWG)
- 35 x Terminals 1.0 2.0mm<sup>2</sup> (#16-14 AWG)
- 10 x Terminals 2.0 3.0mm<sup>2</sup> (#14-12 AWG)
- 10 x Cable seals 2.03 2.85mm diameter cable 35 x Cable seals 2.81 - 3.49mm diameter cable
- 10 x Cable seals 3.45 4.30mm diameter cable
- 20 x Cavity plugs

- I x Instruction book (download via QR code)
- I x Fuse / relay circuit identification label

Note: Fuses, circuit breakers & relays are not included.

Please refer for page 133 for dimensions.

Scan the OR Code for more information



QR Code: 11005

### **MODULE ONLY**

			Included	Nbr of	Max Nbr of
Part Number	Block Layout	Bussing	Cover	Cavities	Terminals
15305-3-6-4	3 x Mini 280 Relays and	Fuse & Relay Buss*	Deep	35	22
	10 x Mini Fuses / Circuit Breakers	*Input stud bussed t	to pin 86 on	relay.	

Relays: Mini ISO 280 Relays with 4 or 5 terminals (SPST / SPDT)

Notes: Module includes cover and input stud caps only. Fuses, circuit breakers, relays, terminals, seals, cavity plugs and bracket are not included. Please refer for page 133 for dimensions and accessory parts.



Front View



**Rear View** 



Assembled (Deep Cover)

Scan this **OR Code** for more information



QR Code: 9040



### MINI FUSE, MINI / MICRO RELAY SEALED MODULE - CONTINUED

### Bussmann

Components: Accepts Mini fuses, Mini bladed circuit breakers, Mini 280 relays & Micro 280 relays and 280 Flashers.

Input Stud Rating: 80A max.

Output Terminal Rating: 30A max per terminal. Block: Black thermoplastic with silicone seal.

**Cover:** Black thermoplastic with tether.

Internal Buss: Tin-plated copper (bussed versions). Input Studs: M6 stud nickel plated brass (bussed

versions only).

Wire Size: #22 - #12 AWG / 0.35mm² - 3mm². Ingress Protection Rating: IP66-IEC 60529. Valid when properly installed with cover, cable seals and cavity plugs (to fill all unused output cavities). Mounting: Threaded inserts #10-32 as standard Mounting S/S Hardware (optional):

Screw: #MT1032PPHS. Washer: #SW316S.

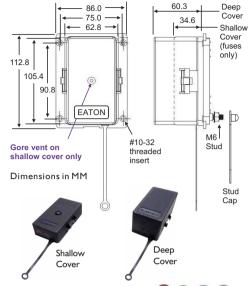
Temperature Rating: -40°C to +125°C (PDM only)

Cover Options: Replacement covers also available.

Shallow cover with Gore vent (Mini fuses only) #B151-7168-1-1. Deep cover (Mini fuses / breakers / 280

relays) # B151-7168-2-J

**Notes:** Module includes cover. Stud caps included for bussed versions. Kits include terminals, seals and a bracket. All other parts to be ordered separately.







Part Number	Cable Dia.(mm)	Colour
15324983	1.29 - 1.70	Dark Red
15324982	2.03 - 2.85	Green
15324980	2.81 - 3.49	Grey
15324981	3.45 - 4.30	Blue
12010300	N/A Plug	Green

#### **APTIV DELPHI METRI-PACK 280**

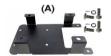
TERMINALS: TANGLESS

Female Sealed, Tin Brass / Tin plated

Wire (AWG)	Wire (mm²
#22 - \#20 \(	0.35 - 0.50
#18-#16	0.80 - 1.0
#16-#14	1.0 - 2.0
#14-#12	2.0 - 3.0
#12-#10	3.0 - 5.0
	#22 - #20 #18 - #16 #16 - #14 #14 - #12

### **OTHER ACCESSORIES**

Part Number	Picture	<u>Description</u>
PROBRK002	(A)	Low Profile Bracket, Zinc Anneal Powder Coated (Ipc)
PROBRK001	(B)	Medium Profile Bracket, Zinc Anneal Powder Coated (Ipc)
PROBRK008K	(C)	Tall Profile Brackets, Stainless Steel Natural 1.5mm (2pcs)
CAB2.0X85TS1	(D)	Red Jumper Cable 1.84mm <sup>2</sup> x 90mm. Tangless (1pc)



Height 31mm



Height 45mm



Height 56mm



Terminated & Sealed Jumper (see p.186)



Terminal Tools Crimper & Removal (see p. 185 - 186)



Mini Fuses, LED Mini Fuses, Mini Blade Breakers, Mini Resistors & Transorbs.



Micro 280 Relays, Mini 280 Relays, 12VDC or 24VDC.

Scan this QR Code for more information



QR Code: 9040



FAT-N

40 x Mini Fuses or Mini Breakers

and 10 x ISO 280 Micro Relays.

Bussmann

Designed to provide efficient power distribution in a rugged compact form with applications in marine, construction, agriculture, heavy trucking, and specialty vehicle industries. It accommodates a combination of up to 40 x Mini fuse or Mini bladed breakers and 10 x ISO 280 Micro relays. Also features a slot to hold a fuse puller and 4 slots for spare fuses. Optional common bussing for fuses.

**IP66** 

Voltage Rating: 32VDC
Ampere Rating: 200A max.

Components: Accepts Mini fuses, Mini bladed circuit breakers and ISO 280 Micro relays.

All components must have 2.8mm blades on 8.1mm centerline spacing. **Mounting:** Threaded inserts #10-32 as standard (M5 optional). Intended for horizontal to vertical mounting orientations.

Block & Cover: Black UL-Rated 94V0 thermoplastic. Silicone rubber gasket. Deep cover with internal tether. Cover included with base.

Cover: Replacement deep cover available. # B151-7182-1.

 $Suits\ Minifuses,\ ISO\ 280\ Micro\ relays\ and\ Mini\ bladed\ circuit\ breakers.$ 

Internal Buss: Plated copper (optional, feeds fuses only) Input Studs: M8 x 1.25 stud (on bussed versions).

Input Stud Rating: 100A max per bus bar

Output Terminal Rating: 30A max per terminal.

Ingress Protection Rating: IP66 (Valid when properly installed with

cover, cable seals and cavity plugs).

Wire Size: #22 - #12 AWG / 0.35mm<sup>2</sup> - 3mm<sup>2</sup>

Temperature Rating: -40°C to +85°C (Module only)
Terminals: Delphi Metri-Pack 280 Female Sealed (Tanged)

Cavity Plugs: Required to fill unused output cavities for ingress protection.

Cable Seals: Please check the overall diameter of your cable before ordering cable seals.

Terminal Tools: Terminal crimping & removal tools see pages 185-186.

Ordering: Block is supplied with cover & one nut for each input stud.

Pack Size: Ipc, 20pcs, 100pcs.

**Not Included:** Terminals, cable seals, cavity plugs, mounting brackets or mounting screws.

Module does not include any plug-in components such as fuses, circuit breakers, relays or the fuse puller.

#### **MODULES & COVER OPTIONS:**

Part I	Mini Fuse	Fuse	Left	Right	Relay	Nbr of	Max Nbr of
<u>Number</u>	Positions*	Bussing	Fuse Side	Fuse Side	Contents	<b>Cavities</b>	<u>Terminals</u>
15401-1-2-1-0A	40x Mini Fuses	Dual	Bussed	Bussed	10x ISO 280 Micro	130	90
15402-I-2-I-0A	40x Mini Fuses	Single	Bussed	Unbussed	10x ISO 280 Micro	130	110
15404-I-0-I-0A	40x Mini Fuses	No Bus	Unbussed	Unbussed	10x ISO 280 Micro	130	130

Notes: \* Mini circuit breakers can be fitted in mini fuse positions. Relays are un-bussed.

#### **ACCESSORIES:**

Part Number	Description
12084201	Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal Dark Red, 1.70 - 1.29mm Cable Diameter.
15324982	Cable Seal Green, 2.85 - 2.03mm Cable Diameter.
15324980	Cable Seal Grey, 3.49 - 2.81 mm Cable Diameter.
15324981	Cable Seal Blue, 4.30 - 3.45mm Cable Diameter.
12010300	Cavity Plug Green, 6.7mm Cavity inside Diameter.
PROBRK003	Bracket Stainless Steel, Black Powder Coated, 90° Angle.
TERMKIT003	Terminal MP280 Tanged, Seal & Plug Assortment Kit 310pcs
CAB2.0X85TS1TJ	Red Jumper Cable 1.84mm <sup>2</sup> x 90mm. Tanged (1pc).
B151-7182-1	Replacement Cover. Black Thermoplastic.
32013BS	Mini Fuse & Mini Circuit Breaker Puller.



Tanged Female Sealed Terminals



Cable Seals & Cavity Plug



Terminal Tools (see p. 185 - 186)



Fuse & Breaker Puller (see p.44)



Mounting Bracket # PROBRK003

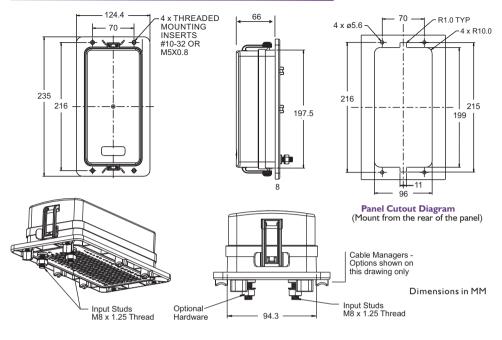


Terminal Kit TERMKIT003 (see p. 187)

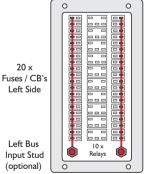


### MINI FUSE & MICRO RELAY SEALED MODULE - CONTINUED

# **EATON** Bussmann







20 x Fuses / CB's Right Side

Right Bus Input Stud (optional)

(a) = Input Stud (Optional) **Powers Fuses / Breakers** 

Rear View - Inputs / Outputs



**Dual Bus Version Pictured Above** 

Front View - Component Loading



Unloaded RFMR **Pictured Above** 



Mini Fuses, Mini Resistors, Mini Transorbs & Mini Blade Circuit Breakers.



ISO 280 Micro Relays 4 or 5 Pin. 12V or 24V (see p. 164)



Tanged Pre-Terminated Cables. Jumpers & Butt Splice Connectors. (see p. 186)



## FAT.N

### Russmann

These distribution modules are designed for high current applications and suitable for placement in extreme moisture and high vibration environments. A silicone seal and included removable fuse cover offer a weather-tight enclosure for the fuse positions. Both modules feature rugged M8 power input studs. Multiple units may be connected together using a buss bar. They can also be bussed to any of Bussmann's PDMs (i.e. RTMR - p. 129-133, VEC / DVEC - p. 142 etc.)





#### Power Fuse Module (PFM)

- Housing for 2 fuse positions.
- Each fuse is a separate circuit.
- Fuse cover included.





Fuse Cover

Power Fused Relay Module (PRM)

- Includes a molded-in High Power Mini relay.
- Housing for 2 fuse positions. One fuse protects the relay and the other is a single-circuit inline fuse.
- Fuse cover included.



Input (

Fuse

Output C

First

Stud

Stud



Fuse

Second

Output

Stud

Rating (PFM): Each inline fuse; up to 60A.

Relay Rating (PRM): 70A (12VDC) or 25A (24VDC) steady-state relay. Relay Protection Fuse: Up to 60A. Non-switched inline fuse; up to 60A.

Temperature Rating: -40°C to +85°C.

**Body:** UL-Rated 94V-0 thermoplastic with silicone seal.

**Terminals:** Tin-plated copper terminals. Studs: Plated steel. Includes keps nuts. Input Termination: M8 threaded stud.

Output Termination: Two M6 threaded studs.

Relay Signal Connector Kit: Only for use with PRM's. (1.0 to 1.5mm<sup>2</sup>) Ingress Protection Rating: IP66 (excluding stud connections).

Mounting: Counter Rotation Feature (CRF) included to prevent the module rotating on single bolt installations. 6.5x35.4 Mount Hole Bussing: Use 377 I BUS busbars to join multiple PRMs/PFMs.

Stud insulator caps included with busbars.

Contact sales for options to bus PRMs / PFMs to other Bussmann PDM's.

Accessories: Relay signal connector, bus bars, separators and fuses.

Suitable Fuses: |TFxxx (20A - 60A), not included.

Notes: Each Power Relay Module requires I x PRM Relay Signal Connector Kit (50126K) to control the relay. Fusible links are not included.

Compliances: SAE 31171 (Ignition protected).

Part Number	Description
37701-1NN0025	32V Power Fuse Module (PFM)
37702-1AN0025	12V Power Relay Module (PRM)
37703-1AN0025	24V Power Relay Module (PRM)
50126K	PRM Relay Signal Connector Kit
3771BUS-2	Twin Bus Bar With Stud Covers
3771BUS-3	Triple Bus Bar With Stud Covers
3771BUS-4	Quad Bus Bar With Stud Covers
B162-7003/	Short Joiners / Output Stud Barriers
B162-7002/j	Long Joiners / Output Stud Barriers

Scan this OR Code for more



(PRM) Circuit Diagram Input ( Stud Fuse Fuse 30 Power Relay ΦZ Signal 86 Output Output Stud Stud Signal

Power Fused Relay Module

Power Fuse Module

(PFM) Circuit Diagram

information

QR Code: 9002



**Fusible Links ITF (20A-80A)** (See page 21)



**PRM Relay Signal** Connector Kit Inc terminals 0.1-1.5mm<sup>2</sup> & cable seals 0.5-1.0mm<sup>2</sup>



Joiners / Output Stud Barriers



Bus Bar With Covers 2, 3 & 4 Way. Multiple modules can be joined together with these optional Bus Bars.



### **AUTO FUSE MODULAR BLOCK KIT - 16 WAY**



Part Number 00655K

Fuse Block Kit Contents:

I x 00670 (Clear Cover with Gasket)

1 x 00650 (16 Way Housing with 5 Secondary Locks)

I x 00680 (Bottom Cover)

35 x 07900 (Terminals 0.5 to 1.5 mm<sup>2</sup> 14A, F 6.3 mm)

2 x 00690 (Mounting Bracket Male) 2 x 0069 I (Mounting Bracket Female)

Fuse block can accommodate one fuse puller 00358.

**RELATED** PRODUCTS:







(see p.44)

Fuse Puller

**Busbar Terminals F 6.3** 07912RL (2 - 3mm2) 20A 079 I I RL (4 - 6mm<sup>2</sup>) 37A



<u>Micro relay modular block kit</u> - 7 way (4 or 5 pin)

Part Number 00705K

Micro Relay Kit Contents;

(see p. 17)

I x 00670 (Clear Cover With Gasket)

I x 00700 (Micro Relay Housing with 7 Secondary Locks)

I x 00680 (Bottom Cover)

25 x 01940 (Terminals 0.5 - 1.5mm<sup>2</sup> F 4.8mm) 15 x 01655 (Terminals I - 2.5mm<sup>2</sup> 20A, F 6.3mm)

2 x 00690 (Mounting Bracket Male) 2 x 0069 I (Mounting Bracket Female)

RELATED PRODUCTS: ISO Micro Relays. 12VDC or 24VDC. (See page 166)

**Optional Terminals F 6.3** 01651RL (2.5 - 6mm²)



### MINI RELAY MODULAR BLOCK KIT - 4 WAY (4 OR 5 PIN)

Part Number 00665K

Mini Relay Kit Contents;

I x 00670 (Clear Cover With Gasket)

I x 00660 (Mini Relay Housing with 4 Secondary Locks)

I x 00680 (Bottom Cover)

20 x 01650 (Terminals I - 2.5mm<sup>2</sup> 20A, F 6.3mm)

2 x 00690 (Mounting Bracket Male) 2 x 00691 (Mounting Bracket Female)

RELATED PRODUCTS:

ISO Mini Relays. 12VDC or 24VDC.

(See page 166)



**Optional Terminals F 6.3** 01651RL (2.5 - 6mm<sup>2</sup>)

#### Features:

- All 3 blocks can be ganged to create a power distribution centre.
- Side wall locks can attach MTA Auto fuse holders. (p78)
- Side wall locks can attach MTA Mini & Maxi relay holders. (p171)

Voltage: 32V

Maximum Continuous Current Ratings: 225A (00655K), 150A (00705K), 120A (00665K) Body: Black, Cover: Transparent, includes gasket. Terminals: Axial connections. Other terminal options include various terminal sizes, reeled and busbar types. Contact sales for further information.

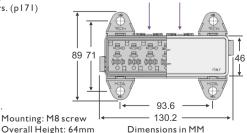
Notes: Fuses, fuse extractor and relays are not included.

Pack Size: |

Approval: RoHS









Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

### **MODULAR FUSE AND RELAY MODULES**

DAN L MILLO



To simplify ordering, we now offer Module Kits which include suitable terminals for the components. If you wish to order a module without terminals, simply remove the 'K' suffix from the part number. Once you have selected the module(s), select a mounting bracket or frame and a cover to suit your installation.

Note: Plug-in components such as fuses, relays, pullers etc. are not included with the modules or module kits.

#### **FUSE MODULE KITS - INCLUDES MODULE & TERMINALS**

Part Nu	mber Module Capacity	lerminals included in the Kit
01460K	I 20 x Mini Fuses.	40 x 08332 (Mini Fuse).
01470K	6 x Maxi Fuses. (Includes Busbar	c). 6 x 07660 (Maxi Fuse). Busbar Included. Rated to 120A.
01600K	I 6 x Auto Fuses & 3 x Maxi Fuses.	12 x 07930 (Auto Fuse), 6 x 07660 (Maxi Fuse).
01690K	NEW 4 x Mini Fuses & 6 x Jcase Fuses*	*. 5 x 08331, 5 x 08332 (Mini Fuse), 10 x 07992, 4 x 07993 (Jcase)
01698K	NEW 20 x Mini Fuse / Diodes	10 x 08331, 40 x 08332 (All products with 2.8mm blades)

Notes: 01690 module will accept both standard Jcase (JTF) & low profile Jcase (LJC) fuses.

#### **RELAY MODULE KITS - INCLUDES MODULE & TERMINALS**

Part Number	Module Capacity	Terminals Included in the Kit			
01484K	6 x ISO Micro Relays.	18 x 08401 (4.8mm), 12 x 08503 (6.3mm).			
01494K	I x ISO Mini & I x ISO Maxi Relay.	7 x 08503 (6.3mm), 2 x 07741 (9.5mm).			
01660KI	2 x ISO Maxi Relays.	4 x 08502 (6.3mm), 4 x 07741 (9.5mm).			
01698K NEW	10 x ISO280 Ultra Micro relays or	10 x 0833 l, 40 x 08332 (All products with 2.8mm blades)			
6 x ISO280 Micro Relays or a mixture of both.					

Relay Compatibility: Micro & Mini relays with 4 or 5 terminals.

Ultra Micro and Maxi relays with 4 terminals.

### **FUSE & RELAY MODULE KITS - INCLUDES MODULE & TERMINALS**

Fart Number	Produle Capacity	rerminals included in the Kit
01510KI	10 x Mini Fuses & 1 x ISO Maxi Relay.	20 x 08332 (Mini Fuse), 2 x 02050 (6.3mm), 2 x 07741 (9.5mm).
01564K	8 x Mini Fuses & 4 x ISO Micro Relays.	.16 x 08332 (Mini Fuse), 12 x 08401 (4.8mm), 8 x 08503 (6.3mm)
01504K	4 x Mini Fuses & 2 x ISO Mini Relays.	8 x 08332 (Mini Fuse), 10 x 08503 (6.3mm).
01698K <b>NEW</b>	Mix of Mini Fuse / Diodes / Breakers,	10 x 0833 I, 40 x 08332 (All products with 2.8mm blades)
	ISO280 Relays (Ultra Micro or Micro)	).

Tanasinala lu alcoda din sha Kis

**Relay Compatibility:** Micro & Mini relays with 4 or 5 terminals.

Ultra Micro and Maxi relays with 4 terminals.

### KITTED TERMINAL SPECIFICATIONS

Dant Number Madula Canasitu

Part	Suits	Terminal	Wire	Ampere	Product
Number	Components	Size	Size	Rating	<u>Description</u>
08331	Mini Fuses, Breakers, 280 Relays	2.8mm	I to 2mm <sup>2</sup>	I6A	Box F2.8mm - Standard
08332	Mini Fuses, Breakers, 280 Relays	2.8mm	2.5 to 4mm <sup>2</sup>	28A	Box F2.8mm - Standard
07930	Auto Fuses	5.2mm	2 to 3 mm <sup>2</sup>	20A	Open F6.3mm - Spring clip
07660	Maxi Fuses	8mm	4 to 6mm <sup>2</sup>	36A	Box F8mm - Spring clip
08401	ISO Micro Relays	4.8mm	1.5 to 2.5 mm <sup>2</sup>		Box F4.8mm - Standard
08503	ISO Mini Relays	6.3mm	4 to 6mm <sup>2</sup>	37A	Box F6.3mm - Standard
02050	ISO Micro, Mini, Maxi Relays	6.3mm	2.5 to 4mm <sup>2</sup>	28A	Open F6.3mm - Spring clip
08502	ISO Maxi Relays	6.3mm	2 to 2.5mm <sup>2</sup>	20A	Box F6.3mm - Standard
07741	ISO Maxi Relays	9.5mm	6 to 8mm <sup>2</sup>	48A	Box F9.5mm - Spring clip
07992	Jcase Fuses	6.3mm	6 to 8mm <sup>2</sup>	48A	Open M6.3mm - Standard
07993	Icase Fuses	6.3mm	I 0 mm <sup>2</sup>	53A	Open M6.3mm - Standard

**Notes:** Not all terminals are compatible with all modules. Terminals are available in other wire sizes and configurations to suit the MTA modules. Please refer to our QR datasheet.

#### **MODULE FRAMES, COVERS & BRACKETS**

All modules require brackets or a frame for mounting in your vehicle. Please refer to page 140 for options.

Scan this QR Code for more information



QR Code: 9000



### **MODULAR FUSE AND RELAY MODULES - CONTINUED**

20 x MINI FUSES Part Number: 01460K1

Note: Includes room for 6 spare Mini fuses.



Mini Fuse not included.



Secondary locks included.



ISO Micro Relay not included.

Part Number: 01484K



Secondary lock included.

Maxi Relay

Mini Relay

10 x MINI FUSES I x MAXI RELAY (4 PIN) Part Number: 01510K

Note: Includes room for 3 spare Mini fuses





Secondary locks included.







Secondary lock included.

8 x MINI FUSES

4 x MICRO RELAYS (5 PIN) Part Number: 01564K







Fuse Puller Storage

4 x MINI FUSES 2 x MINI RELAYS (5 PIN) Part Number: 01504K





Mini Fuse & ISO Mini Relay not inc. Secondary lock included.

Mini Fuse & ISO Micro Relay not inc. Secondary lock included.

6 x MAXI FUSES (SINGLE FEED)

Part Number: 01470K Note: Includes room for fuse puller 00358 (optional).



123456 Maxi Fuse not inc

M8 Input Busbar Terminals M8 Power Input Feed Secondary lock included.

2 x Maxi Relays (4 PIN) Part Number: 01660K





ISO Maxi Relays not included.



Secondary lock included.

4 x MINI FUSES 6 x JCASE FUSE LINKS\* (\*Standard or Low Profile) Part Number: 01690K



Low Profile Jcase Fuse Fuses not included.





**6 x AUTO FUSES** 3 x MAXI FUSES Part Number: 01600K1



Maxi Fuse and Auto Fuse not included.



Secondary locks 4x 01601, 1x 01602 (optional).

### MODULAR OPEN PLAN MODULE 2.8MM TERMINAL

20 x MINI FUSES, DIODES, CIRCUIT BREAKERS 10 x ULTRA MICRO ISO 280 RELAYS

6 x MICRO ISO 280 RELAYS

Part Number: 01698K Terminal Capacity: 40 Layout Matrix:  $4 \times 10$ . Note: May use combination of any of these components.



Mini

Fuse



Mini

Diode

LED Mini

Fuse





Breaker

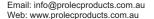


Ultra Micro & Micro

**NEW** 

Secondary lock included.





ISO 280 Relays

### **MODULAR FUSE AND RELAY MODULES - CONTINUED**



### **MOUNTING BRACKETS, MOUNTING FRAMES & COVERS**

Part Number	Description
01580	Single Module Mounting Bracket (2pcs required)
01590	Single Module Cover
00699	Dual Module Mounting Bracket Low (2pcs req'd)
01180 NEW	Dual Module Mounting Bracket High (2pcs req'd)
01550	Dual Module Cover
01520	Four Module Frame Low Profile Mount
01530	Four Module Cover
01706 <b>NEW</b>	Five Module Frame High Profile Mount
01707 <b>NEW</b>	Five Module Cover





Dual Module Cover (01550)



Single Module Bracket (01580)



Dual Module Bracket Low (00699)



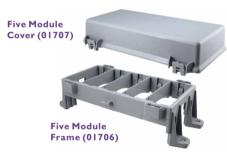
Dual Module Bracket High (01180)



Four Module Cover (01530)



Four Module Frame (01520)



#### **ADAPTOR. RETAINERS & FUSE PULLER**

Part Nu	mber	Description	Pack Size
01620	NEW	Single Module Adaptor	250
01630	NEW	Relay Retainer	350
01376	NEW	Relay Retainer	TBC
01237	NEW	Mini Circuit Breaker Retainer	TBC
00358		Fuse Puller Yellow	1

Mini Breaker Retainer (01237)



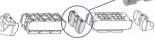
Relay Retainer (01630)





Single Module Adaptor (01620)

Cannot use with cover



### **TERMINAL SECONDARY LOCKS (Optional)**





#### Notes:

All terminals lock into the module body. A secondary lock ensures the terminal can't dislodge under force or vibration.

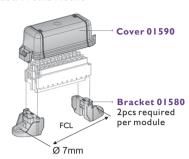


UPDATED

### **MODULAR FUSE AND RELAY MODULES - CONTINUED**



### SINGLE MODULE BRACKET & COVER Low Profile Mount



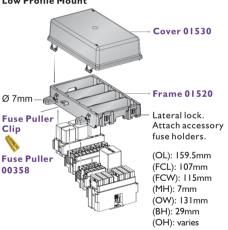
Overall Length (OL): 150mm Fixing Centre Length (FCL): 132mm Mounting Hole (MH): 7mm Overall Width (OW): 39mm Bracket Height (BH): 25mm

Overall Height With Cover (OH): Varies by module

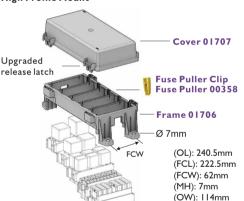
#### **DUAL MODULE BRACKETS & COVER** Low Profile Mount Fuse Puller 00358 (optional) Cover 01550 (OL): 131mm (FCL): 115mm Fuse Puller Storage (MH): 7mm (OW): 77.5mm (BH): 25mm (OH): varies 2pcs required per module Bracket 00699 Ø 7mm



#### **FOUR MODULE FRAME & COVER** Low Profile Mount



### **FIVE MODULE FRAME & COVER High Profile Mount**



#### **TERMINALS**

Female 2.8mm 08331,08332

Female 4.8mm 08401







Female 6.3mm 07930

Male 6.3mm 07992.07993



Female 8.0mm 07660



Female 9.5mm





(BH): 58.7mm

(OH): 96.4mm



QR Code: 9000



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

### **POWER DISTRIBUTION UNITS - LOADED**



ssVEC

# Bussmann UPDATED IP66

These ssVEC and ssDVEC provide efficient, compact power distribution. The rugged design means they are capable of operating in severe environments with high vibration and moisture. Typically power is supplied via the input studs and output through connectors, but the Dual + / Quad + units feature mini fuses and relays that are standalone circuits (not connected to power input studs). Please refer to our QR datasheet for the internal circuit diagram of each unit & other specifications. The unit includes mini fuses, ISO 280 relays and a fuse puller. Connectors, terminals, cable seals and cavity plugs are not included, order separately. Each connector is keyed and will only fit the matching colour socket on the unit. Custom circuit design with preloaded specific components and labelled to suit OEM requirements also available.

#### General Specifications (for both ssVEC and ssDVEC)

Connector Terminals: Delphi Metri-Pack 280 Female Séaled (Tanged), 30A max each. See page 134 for details.

Connectors: 100A max each, colour coded. Quantity varies depending on the model. Cable Seals & Cavity Plug: Delphi Metri-Pack 280 series.

Input Studs M8: 100A Max each. Unit Rating Max: 200A (ssVEC), 400A (ssDVEC)
Operating Temperature: -40 °C to +105 °C.

Notes: The unit must be installed and oriented in accordance with factory guidelines (available on request).

**Includes Components:** Mini fuses, ISO 280 relays & fuse puller.

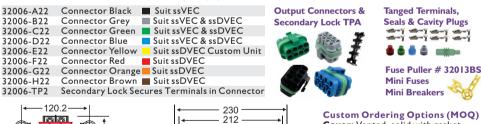
Does Not Include: Connectors, terminals, terminal seals and cavity plugs.

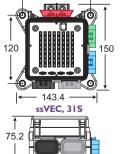


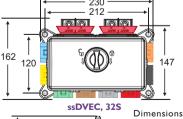
Part	PDU	Input M8	Mini	ISO 280 I 2V	ISO 280 Ultra	Fuse	Output Connectors
Number	Model	<u>Bus Bar</u>	<u>Fuses</u>	Micro Relay	Micro Relay	Puller	Quantity & Colours
31S-000-0	ssVEC	Dual	8pcs	8pcs x I 2V SPDT	-	lpc	4 🔳 🔳 🖠
31S-001-0	ssVEC	Dual	16pcs	4pcs x I 2V SPDT	2pcs x I 2V SPST	lpc	4 🔳 🔳 🔳
31S-002-0	ssVEC	Single	16pcs	- ·	8pcs x I 2V SPST	lpc	3 🔳 🔳
31S-003-0	ssVEC	Dual	29pcs	-	-	lpc	4
31S-004-0	ssVEC	Dual+*	8pcs	8pcs x I2V SPDT ^	-	lpc	4
32S-300-0	ssDVEC	Quad	16pcs	16pcs x 12V SPDT ^	-	lpc	6
32S-301-0	ssDVEC	Quad	58pcs	- 1	-	lpc	8
32S-302-0	ssDVEC	Quad+*	24pcs	12pcs x 12V SPDT ^	2pcs x I 2V SPST	lpc	8

<sup>\*+</sup> Version includes relay & fuse circuits powered via plug-in connectors instead of bus bar studs, please refer to circuit diagrams in QR datasheet.  $^{\circ}$  SPDT Relay Pin 87a not available for use in some circuits.

#### Connectors, Terminals, Seals and Cavity Plugs purchased separately. Please refer to QR datasheet.







SSDVEC, 32S

Dimensions in MM

94 83

Cover: Vented, solid with gasket.
Cover Label: Inside, outside or both.
Power Input: Studs or
8mm blade terminals

Mounting:Ext. feet or Interior holes.

Busbar: Twin #B109-7081

Quad #B109-7031
Voltage: 24V versions also available.

Scan this QR Code for more information



QR Code: 9026



### POWER DISTRIBUTION UNITS LOADED MULTIPLEXED





IP66 NEW

The multiplexed Vehicle Electrical Center (mVEC) is a power distribution node on a [1939 network, controlling relays based on information from the central vehicle controller. The mVEC will also return power distribution status information like relay state, failed relay, missing component or blown fuse. High Power: 200A Rated. Individual outputs rated up to 30A (max of 32 outputs). I2V and 24V versions. Flexible: The mVEC is offered in various standard and customized versions. Custom versions are configured to OEM wiring requirements. The mVEC accepts fuses, relays, circuit breakers. resistors, diodes, etc.- based on industry standard 2.8mm footprint.

Cost Effective: An alternative to high current, solid-state power distribution modules and features serviceable components. The mVEC is designed as a slave module, it is controlled by master modules. Standard units below come pre-loaded with relays, fuses and a fuse puller. Custom Ordering Options: Cover marking: laser etching inside, outside or both. Compression limiters on mounting feet. Stuffed (with/without) components ie. fuses, relays, diodes, breakers, fuse puller, Customised circuit layouts, standard and custom CAN messages.

Part Number 31M-327-0	24V mVEC Part Number	Input M8 Bus Bar Single	Mini Fuses	ISO 280 Ultra Micro Relay 4pcs x SPST	Fuse Puller Ipc	Output Connectors	
31M-327-0 31M-000-2 31M-300-0	31M-328-0 31M-329-0 31M-330-0	Single Single		8pcs x SPST 12pcs x SPST	lpc lpc	2	

Output Connector Black Colour, 8 Position Keyed

Output Connector Grey Colour, 8 Position Keyed

Output Connector Green Colour, 8 Position Keyed

Output Connector Secondary Terminal Lock 8 Pos.

I x Connector, I2 x Terminals, I2 x Seals, I x TPA.



MVFC 31M Series

Fuse / Breaker Puller # 32013BS

CAN Connector Kit # MVFCCCK

CAN Connector Kit includes;

Accessory Description

Voltage: 12VDC or 24VDC Options. Rating: 200A max. Input Studs: 2 x M8, 100A max each. Fuses: 10A Mini fuses (pre-installed).

Relays: 4 pin ISO 280 Ultra Micro (SPST). I 2VDC 20A or 24VDC 10A (pre-installed).

CAN Connector: AMP SSC 12-position sealed connector.

Output Connectors: up to 4, 100A max each, colour coded & sealed.

Output Connector Terminals: Delphi Metri-Pack 280 Female Sealed (Tanged). See QR Code or page 134 for further details on terminals, seals and cavity plugs.

Output Connector Terminal Rating: 30A max each.

Output Connector Cable Seals & Cavity Plug: Delphi Metri-Pack 280 series. Operating Temp.: -40 °C to +85 °C. Fuse Puller: 32013BS (pre-installed). Notes: Customers must follow the factory guidelines and adhere to installation instructions which include restrictions on mounting orientation. Each connector is

keyed and only fits into the same colour connector on the unit.

Documentation is available on request.

Part Number

32006-A22 32006-B22

32006-C22

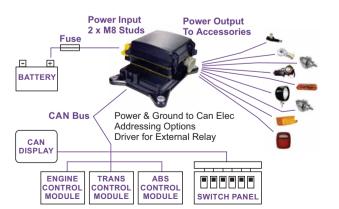
32006-TP2

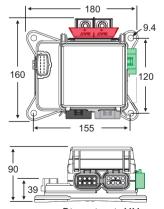
**MVECCCK** 





QR Code: 9027





Dimensions in MM



### **POWER DISTRIBUTION UNIT (MiniFLEC™)**



#### Mini Flexible Electrical Center (MiniFlec)

The MiniFlec is a compact, front access, internally bussed, connectorized, sealed IP67/69K rated power distribution module. It is suitable for mounting in rugged commercial vehicle applications, has a dense concentration of high power circuits and accepts plug-in devices like automotive fuses, diodes and relays to protect and control complex electrical systems. An internally mounted Printed Circuit Board (PCB) feeds power from a single M8 input stud to 9 x fuse protected relay controlled power output circuits and 6 x fuse only power output circuits. Relay switching and power output wires are connected to the module using Tyco HDSCS connectors located at the base of the unit. All plug-in components ie. fuses, relays and Tyco connectors are not included with the module and must be ordered separately. Contact sales for further information on Littelfuse custom designed units.



Cover fitted

- Module includes cover. A fuse puller is also fitted in the cover.
- 6 locations for spare fuses (4 x Mini fuses).
- Cover is tethered to the module to prevent misplacement.
- Yellow Assure Latch system for secure locking of cover to the module.
- Module is rated to 150A max load.
- All relays share a common ground circuit for relay coil.
- Vent plug located at the base of the unit.





Part Number: LFMX0007Z-01 Description

Standard Unpopulated PDM & Cover for:

Up to I2 x Mini Fuses (2A-30A)

Up to 2 x MCase + Slotted Fuses (15A-60A)

Up to I x ISO Mini Relay 5 pin

Up to 3 x ISO 280 Micro Relays 4 Pin Up to 3 x ISO280 Ultra Micro Relays

Voltage: 9 to 16VDC (with 12V relays fitted) 18 to 32VDC (with 24V relays fitted)

Rating: Max Load 150A.

Power Input Stud: I x M8 stud.

Fuse Ratings: Max fuse ratings shown in circuit diagram. Connectors (x4): Tyco HDSCS series with MCP terminals.

Housing: 94V-0 glass reinforced nylon.

Cover: Fuse puller also included. Tether: Included.

Features slots for 2 x spare Mini fuses & 2 x spare MCASE + fuses.

Base: Includes vent for pressure equalization.

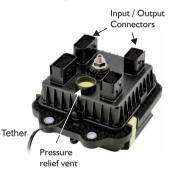
Ingress Protection Rating: IEC 529, IP67, IP69K

Cover Gasket: Internal, silicone.

Mounting: Panel Mount (Rear fed connectors)...

Custom Options: Please contact sales. Temperature Rating: -40 °C to +85 °C.

Notes: Connectors, fuses & relays are not included.



Scan this **OR Code** for more information

x Fuse puller included

1 x ISO Mini relay



QR Code: 9032



RELATED



Mini Fuses. Mini LED Fuses & Mini Blade Circuit Breakers.



Ultra Micro ISO280 Relays, Micro ISO280 Relays. 12VDC or 24VDC.





2 x Mcase+ Slotted fuses

12 x Mini fuses

3 Assure Latches for cover retention



#### POWER DISTRIBUTION UNIT (FLEC & CAN-BUS FLEC)





#### Flexible Electrical Center (FLEC™)

The FLEC™ is a configurable power distribution module. It accommodates circuit protection components in a sealed IP67 rated housing with a compact footprint & high component density. Littelfuse offers both standard versions (loaded or unloaded) as well as custom designs. Contact sales for further information on custom made products. The module is also equipped with terminals for plug-in components such as fuses and relays. Power is supplied to the module using three M8 power input studs (100A each). Power is output from the module using standard Delphi GT series sealed connectors that provide up to 76 output circuits for powered accessories.



Scan this QR Code for more information

Twist-on cover with internal silicone gasket. Internal storage for 4 spare fuses & fuse puller. Tether included. Optional custom lid label.

Stud caps to protect from shorts.

M8 studs for power input & ground

Part Number FLEC3000Z-0U Description

Unpopulated PDM I 2VDC / 32VDC Up to 28 x Mini Fuses / Mini Breakers

Up to 18 x Micro ISO 280 Relays 5 Pin

FLEC3000Z-0

Populated PDM I2VDC includes;

28 x Mini Fuses. (6ps x 15A & 22pcs x 30A) 18 x Micro ISO 280 12VDC Relays 5 Pin.

CFLEC001Z-01

Populated Can-Bus PDM 12VDC includes; 29 x Mini Fuses. (8ps x 20A & 21 pcs x 30A) 12 x Ultra Micro ISO 280 12VDC Relays 4 Pin. 3 x Micro ISO 280 12VDC Relays 5 Pin.

Voltage: See above for corresponding unit.
Rating: Max Load 300A. Max Fuse Rating 30A
Power Input Studs: 3 x 100A rated M8 studs. Plated
copper and stainless steel. Red or black covers included.
Power Output Terminals: 38 x 1.5mm blades (15A) &
38 x 2.8mm blades (25A) suit Delphi GT 150 & 280 series
sealed plug-in connectors.

**Internal PCB:** FR4 board with multi-layer high current 6oz copper. Conformal coating available.

Materials: UL94V0 thermoplastic.

**Cover:** Twist-on design with easy single-handed removal / installation. No latches to break and low over-head clearance requirements. Inside cover features slots for 4 x spare Mini fuses and includes a fuse puller.

Base: Includes vent for pressure equalization.

Ingress Protection Rating: IP67

**Cover Gasket:** Internal, high temperature silicone. **Mounting:** Surface Mount.

Custom Layout Component Options: Mini fuses, JTF fuses, MJC fuses, Relays & PCB mount components. Can be designed to accept other components (development/tooling may be required). Internal PCB allows for custom circuit configurations, including designs requiring electronics such as those used in CAN J1939

and LIN systems **Temperature Rating:** -40 °C to +85 °C.

Options: Additional MegaFlex holders can be interlocked to dovetails on the base for high current protection. A Mega fuse can be installed across the M8 input studs to pre-fuse multiple circuits in the FLEC. Custom component label or inside cover label.

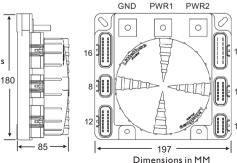
Test Specifications: SAE, USCAR & ISO.

rin.

Standard 1.5 & 2.8mm terminals for use with standard Delphi GT series sealed connectors.



Includes vent for pressure equalization.





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#### POWER DISTRIBUTION UNIT (EPC)



This sealed power distribution module is an internally bussed and connectorized unit, suitable for mounting in rugged commercial vehicle applications. This unit has dense concentration of high power circuits and accepts plug devices like automotive fuses, diodes and relays to protect and control complex electrical systems. An internal Printed Circuit Board (PCB) provides bussed connections to a large number of devices. You decide which fuses and which wires.

NEW

**IP67** 

IP69K

#### Features

• 2 Individual power input circuits power fuses and relays using internal buses.

- Stand-alone relays & fuses for seperate power sources.
- Cover is tethered to the module to prevent misplacement.
- Custom configurations available.
- Module is rated to 200A max load.
- Vent plug located at the base of the unit.

 Sealed rugged enclosure (IP67/69K) protects internal circuitry from harsh environments such as high shock, vibration, as well as moisture and contaminants



Part Number: Description

LFLX0006Z-01 Standard Unpopulated PDM & Cover for:

Up to 27 x Mini Fuses

Up to 9 x ISO280 Micro Relays 4 or 5 Pin\* Note:\*Pin 87a is not used on some relays.

Voltage: I2VDC (with I2V relays fitted) 24VDC (with 24V relays fitted)

Rating: Max Load 200A.

Power Input: Multiple sources via connector terminals.

Wire Sizes: 0.5mm<sup>2</sup> to 2.5mm<sup>2</sup>

Fuse Ratings: Max fuse ratings shown in circuit diagram.
Connectors (x4): Tyco HDSCS with AMP MCP terminals.

Base: Includes vent for pressure equalization. Ingress Protection Rating: IP67/69K

Body Gasket: Silicone.

Body & Cover Material: Pet glass filled (UL94-V0)

Mounting: Surface Mount.

Custom Options: Please contact sales. Temperature Rating: -40 °C to +85 °C. Bolt Mounting Torque: 6 - 8 Nm

Notes: Connectors, fuses & relays are not included.



#### **Internal Circuit Summary**

#### Power input I supplies:

- 2 x SPST relays supply fuse protected power\*.
- I x Fuse protected output (relay by-pass).
- 15 Mini fuses.

#### Power input 2 supplies:

- 3 x SPST relays supply fuse protected power\*.
- 2 x Fuse protected outputs (relay by-pass).
- 5 Mini fuses.

#### Stand-alone circuits (independent power):

- I x SPST ISO280 Micro relay\*.
- 2 x SPDT ISO280 Micro relays\*.
- I x SPDT ISO280 Micro relay.
- 2 Mini fuses.

RELATED PRODUCTS:





QR Code: 9033





Mini Fuses, Mini Resistors, Mini Diodes, Mini Shunts & Mini Blade Circuit Breakers.



Micro ISO280 Relays, I2VDC or 24VDC.



<sup>\*</sup>Relay coil is connected to the common ground stud.

#### TERMINAL BLOCKS DIN RAIL MOUNT

Part			Pack	
Number	Product Description	Conductor	Size	Colour
43408	Terminal block 24A, 1000V (Inputs / Out)	Flexible (0.5-2.5mm <sup>2</sup> ), Rigid (0.5-4m <sup>2</sup> )	1/100	Grey O
43409	Terminal block 32A, 1000V (Inputs / Out)	Flexible (0.5-4mm <sup>2</sup> ), Rigid (0.5-6m <sup>2</sup> )	1/100	Grey 🔘
43409BL	Terminal block 32A, 1000V (DC Control)	Flexible (0.5-4mm <sup>2</sup> ), Rigid (0.5-6m <sup>2</sup> )	1/100	Blue 🔵
43409E	Terminal block 32A, 1000V (Earth)	Flexible (0.5-4mm <sup>2</sup> ), Rigid (0.5-6m <sup>2</sup> )	1/100	Ylw / Gr 🕕
43401	Terminal block 41A, 1000V (Inputs / Out)	Flexible (0.5-6mm <sup>2</sup> ), Rigid (0.5-10m <sup>2</sup> )	1/50	Grey O
43525/24	Jumper (pitch 5.1mm) 25A, 600V	Flexible (2.5mm²)	1/5	Orange 🛑
43520/24	Jumper (pitch 6.1 mm) 25A, 600V	Flexible (4mm²)	1/5	Yellow O
43621/24	Jumper (pitch 7.1 mm) 50A, 600V	Flexible (6mm²)	1/5	Green 🔵
43010	End plate (1.5mm wide), Suit Euro 2.5 - Eu	uro 4	1/100	Grey
43011	End plate (1.5mm wide), Suit Euro 6 - Euro	o 10	1/100	Grey 🔘
43444	End bracket (stop modules sliding on DIN	rail)	1/100	Grey O
43300	Marking tags. Printed numbers 1-10 (2 set	(s)	1/25	White O
43310	Marking tags. Printed numbers 1-100 (1 se	et)	1/5	White O
43311	Marking tags. Printed numbers 101-200 (1	set)	1/5	White $\bigcirc$
43192	Marking tags. Blank stem. I stem = 20 Ma	rking Tags.	1/25	White O

Connection: Slot screw terminals. Mounting: DIN Rail 35. End Plates: The blocks feature I x open and Ix closed wall so only one End Plate is required to finish either a single module or multiple adjoining modules.

Jumpers: Jumpers can be used to share power from one input cable across multiple modules and are supplied in strips of 24. Ratchet jumper cutting tools also available contact sales.

End Stop: These modules feature a screw which tightens onto the DIN rail to stop modules sliding along the rail.

Accessories: Euro Omega DIN 35 Rails. Angled rail brackets. Protection covers. Test plugs. Complete range of marking tags. Colour Options: Blue, Yellow/Green, Yellow, Orange, Red, Green, Black, Brown and White,

Extended Range: Terminal blocks to suit 10mm<sup>2</sup>, 25mm<sup>2</sup>, 50mm<sup>2</sup>. 70mm<sup>2</sup>. 95mm<sup>2</sup> cable sizes are also available.

Notes: Contact sales for further information. Approvals: 🕪 🏽 🙈





43525/24 - Insulated Jumper (2.5mm<sup>2</sup>) Note: Optional cutting tool P/N: 43515

43520/24 - Insulated Jumper (4mm<sup>2</sup>) Note: Optional cutting tool P/N: 43516

43621/24 - Insulated Jumper (6mm²) Note: Can be seperated by hand, no tools required.



43408 Terminal Block 2.5mm<sup>2</sup> 44 (L) x 36 (H) x 5mm (W) Connecting capacity: 12mm (CC)



43409 Terminal Block 4mm<sup>2</sup> 44 (L) x 36 (H) x 6mm (W) Connecting capacity: 12mm (CC)



43401 Terminal Block 6mm<sup>2</sup> 50 (L) x 44 (H) x 7mm (W) Connecting capacity: 18mm (CC)



43444 - End Bracket 55 (L) x 34 (H) x 6mm (D)



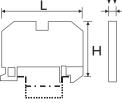
43010 - End Plate, Euro 2.5-4 44 (L) x 35 (H) x 1.5mm (D)



43011 - End Plate, Euro 6-10 50 (L) x 43 (H) x 1.5mm (D)









Connecting

43506/22

43300

43310

43311

43192

#### BLADE FUSE TERMINAL BLOCKS DIN RAIL MOUNT



- Push in various circuit protection devices including auto blade fuses or bladed circuit breakers.
- Blocks can facilitate plug in modules. Module options include diodes, MOV's and cartridge fuses.
- Disconnector options include bladed plug or knife type for on / off switching of a circuit.
- Single or multiple pole terminal blocks with optional insulated and dividable jumper.
- Termination options include screw terminals, screw-less spring terminals or hybrid terminals.
- Marking accessories are a available for both the blocks and cables.
- I 2V and 24V LED indication options.



 $\begin{tabular}{ll} \textbf{Mounting:} DIN Rail 35 & \textbf{Connection:} Screw standard. Optional cage clamp or hybrid connection. \\ \textbf{Cable:} 0.5 mm^2 to 4 mm^2 (\#24-I0AWG) \\ \end{tabular}$ 

Insulated lumper 22 Pole (Pitch 6, Imm) 25A, 600V

Marking tags. Blank stem. I stem = 20 Marking Tags.

Marking tags. Printed No. 1-10 (2 sets)

Marking tags. Printed No. 1-100 (1 set)

Marking tags. Printed No. 101-200 (I set)

Optional Components: Mini fuse module, non-fused terminal block modules and Euro Omega DIN 35 Rails. Jumpers: Jumpers can be used to share power from one input cable across multiple fuse modules and are supplied in strips of 12. They can be cut using the ratchet jumper cutting tool #43517. ^ One x 3.0mm or two x 1.5mm separator / end plates are required between each fuse module when using jumpers.

Fuse Modules: Feature 1 x open and 1 x closed wall so only 1 x end plate is required to finish either a single module or multiple modules. Fuse modules accept both auto blade fuses and auto blade circuit breakers. Cartridge fuses can be fitted by purchasing the appropriate fuse holder module which plugs directly into the fuse module.

Fuse Holders: \*One x 1.5 mm separator / end plate is required between each adjoining fuse module.

 $\textbf{End Stop:} \ These \ modules \ feature \ a \ screw \ which \ tightens \ onto \ the \ DIN \ rail \ to \ stop \ modules \ sliding \ along \ the \ rail.$ 

Blade Fuse / Breaker Modules Wire fixing: 2 x screw connectors. Optional 12V / 24V LED indicator.



Disconnector
(1) Plug type. Push in / pull out.
(2) Knife type. Slidable.

1/22

1/25

1/5

1/5

1/25

11.9

11.9

11.9

11.9



4.8 **NEW** 

4.8 **NEW** 

4.8 **NEW** 

4.8 **NEW** 



Connecting

Capacity

Separator / End Plates Separates terminal blocks. Completes a row.

1.5mm or 3.0mm width options.

Ratchet Tool - Cuts Plug In Jumpers P/N: 43517 cuts jumper 9.1mm pitch. P/N: 43516 cuts jumper 6.1mm pitch.



Plug In Component Modules Cartridge Fuse Module. M205 or 3AG. Diode Modules. Contact sales. MOV / Surge Supply Module V130LA2.



**End Stop** 

Fitted to each end of a row of terminal blocks. Stops modules sliding on DIN





#### CARTRIDGE FUSE TERMINAL BLOCKS DIN RAIL MOUNT



Part Number	Description
43445H	M205 Fuse Block 4mm <sup>2</sup> 30A, 300V Max (CSA)*
43433H	3AG Fuse Block 10mm <sup>2</sup> 30A, 600V Max (CSA)*
43444	End Bracket (stop modules sliding on DIN rail)
43300	Marking Tags. Printed No.1-10.   Stem = 20pcs
43310	Marking tags. Printed No. 1-100. 1 stem = 20pcs
43311	Marking tags. Printed No. 101-200. I stem = 20pcs
43192	Marking tags. Blank stem. I stem = 20 Marking Tags.
43097	Neutral Link Solid 5 x 20mm (M205 fuse size)
43099	Neutral Link Solid 6.35 x 31.75mm (3AG fuse size)

Mounting: DIN Rail 35

Connection: Slot screw terminals.

End Plates: Not required, enclosed holder.

End Stop: Optional

Accessories: Euro Omega DIN 35 Rails.

Extended Range: LED indicating versions also available.

Notes: Contact sales for further information.

Do not disconnect fuse under load. Fuses not included.

Approvals:\*

# 43445H (15A / 300V), (30A / 300V), IEC (6.3A / 250V)

# 43433H (0) (30A / 600V), (30A / 600V), IEC (6.3A / 250V)

Conductor

Flexible (0.5-4mm<sup>2</sup>), Rigid (0.5-6mm<sup>2</sup>) Flexible (1.5-10mm<sup>2</sup>), Rigid (1.5-16mm<sup>2</sup>)



43445H - M205 Fused Terminal Block 66 (L) x 44 (H) x 10 (W) Fuses contact sales.



43433H - 3AG Fused Terminal Block 82 (L) x 53 (H) x 10 (W) 3AG Fuses see p.11



#### POWER DISTRIBUTION BLOCKS - FINGER SAFE 1000V

# FATON

#### Bussmann

#### Features

Part

- Enclosed, safer installation; IP-20 finger-safe under specific conditions.
- High Short-Circuit Current Ratings up to 200,000A: PDBs do not have to be the weak link in achieving high SCCR for an industrial control panel.
- Small footprint saves panel space.
- DIN rail or panel mount: \*PDBFS330 & \*PDBFS504 panel mount only.
- · Sliding DIN rail latch for easy mounting.

Ampere

- DIN rail end anchors required to prevent damage to block when torqueing.
- Elongated hole for panel mounting; easier mounting with greater flexibility.
- Captive termination screws; screws do not get misplaced.
- Wire ready: captive termination screws shipped backed out to save time on conductor installations.
- Single pole or gang mountable for multiple pole applications with interlocking dovetail accessory (optional). Part 2A1279: Interlocking dovetail pin accessory, one pin interlocks two units, two pins to interlock three units.

**Configuration Openings Per Pole** 



Number	Rating	Line	Line Wire Range	Load	Load Wire Range
PDBFS204	175A		2/0 - 8AWG (70-10mm <sup>2</sup> )	•	2/0 - 8AWG (70-10mm <sup>2</sup> )
PDBFS220	175A		2/0 - 8AWG (70-10mm²)	4 ::	4/0 - I4AWG (25-2.5mm <sup>2</sup> )
PDBFS303	310A		350kcmil - 6AWG (150-16mm²)	1	350kcmil - 6AWG (150-16mm <sup>2</sup> )
PDBFS330*	380A		500kcmil - 6AWG (240-16mm²)	6	2 - I4AWG (35-2.5mm²)
PDBFS377	570A	2	300kcmil - 4AWG (150-12mm²)	12	4 - 14AWG (25-2.5mm²)
PDRESSON	620A	2	350kcmil 44WG (185 12mm²)	2	350kcmil 4AWG (185 12mm²)

350kcmil - 4AWG (185-12mm²) 350kcmil - 4AWG (185-12mm<sup>2</sup>) PDBFS500 620A PDBFS504\* 760A 500kcmil - 6AWG (240-16mm²) 500kcmil - 6AWG (240-16mm<sup>2</sup>)

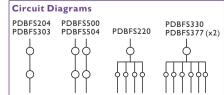
Voltage: 690VAC/DC (IEC), 600VAC/DC (UL 1953), 1000VDC (factory self certified to UL 1059 Pt.II).

I.R.: Short-Circuit Current Ratings up to 200,000kA.

Body: UL 94VO.

Studs: Tin plated AL connectors suitable for CU conductors.

Dimensions and Pack Size: Please contact sales.





#### **SCREW DOUBLE ROW TERMINAL BLOCKS**



Bussmann

#### Features

- Allows fully insulated independent terminal blocks for applications where circuits must be isolated.
- Closed back design completely insulates power from the mounting surface.
- Each screw pair is one isolated circuit. Barriers separate all circuits.
- Terminal block jumpers allow creation of common circuits.

Part		Amp*			Dimension	ons in MI
Number	Poles	Rating	Voltage	Diagram	Α	В
TB200-04B	4	30	300V	1	63.8	55.4
TB200-06B	6	30	300V	I	85.9	77.8
TB200-08B	8	30	300V	1	108.0	99.9
TB200-10B	10	30	300V	I	130.4	122.3
TB200-12B	12	30	300V	1	152.4	144.2
TB300-04B	4	30	600V	2	82.6	71.4
TB300-06B	6	30	600V	2	111.1	100.2
TB300-08B	8	30	600V	2	139.8	128.6
TB300-10B	10	30	600V	2	168.3	157.3
TB300-12B	12	30	600V	2	197.0	185.8



Wire Range: #12 - 22 AWG CU (TB200 series)

# 8 - 22 AWG CU (TB300 series)

Screw Size: #6-32 Philslot screws (TB200 series) #8-32 Philslot screws (TB300 series)

(see other screw options below)
Operating Temperature: -40°C to 130°C
Base: UL rated 94V0 thermoplastic (black)
Breakdown Voltage: 4800V (TB200 series)
7500V (TB300 series)

Terminal: Tin plated brass.

Screws: Nickel plated brass (Philslot) screws included.

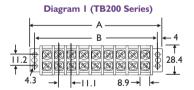
Pack Size: Varies, please contact sales.

Note: \*Maximum rating, some options may be rated lower,

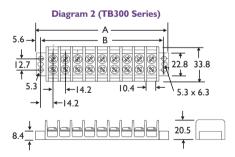
please contact sales.

Approvals: (1) (() IEC









#### Jumper Options for TB200 / TB300

TB200	TB300	
20A Jumpers	30A Jumpers	Description
J201-J	J301-J	Flat slip on
OJ7-J	OJ6-J	Closed over barrier

Note: Jumpers allow creation of common circuits.



Flat Slip On



Closed Over Barrier



#### STUD JUNCTION TERMINAL BLOCKS #10-32

# **EAT•N** Bussmann

Part	Nbr. of	Dimen	sions in l	MM
Number	<b>Positions</b>	A	<u>B</u>	<u>C</u>
C5237-I	1	50.8	31.7	-
C5237-2	2	66.7	47.5	15.9
C5237-3	3	82.5	63.4	31.7
C5237-4	4	98.4	79.4	47.5
C5237-6	6	130.8	111.1	79.4
C5237-8	8	161.9	142.9	111.11
C5237-10	10	193.7	174.6	142.9
C5237-12	12	225.4	206.4	174.6

**Rating & Voltage:** 30A at 600V (CSA) 30A at 300V (UL)

**Body:** Black Thermoplastic

**Studs:** Yellow zinc plated brass. #10-32 threaded studs on 0.625" (15.9mm) centers. Studs feature a "dog point" to guide nut onto thread.

Torque Rating: 2.8Nm max.

Mounting Holes: 9/32" x 3/8" Slot. (7.14mm x 9.52mm)

Hardware: Nuts & washers included.

Pack Size: Please call sales. Temperature Rating: 120°C

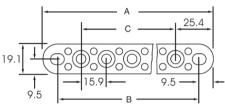
Features: Numbers & arrows molded on top of barriers

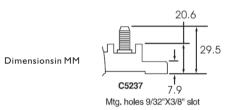
to indicate terminals.

Notes: Extended range also available contact sales.

Approvals: (1) (6







#### STUD JUNCTION TERMINAL BLOCKS #10-24



Part	Nbr. of	Dimer	nsions in	MM
Number	Positions	Α	В	С
C4559-2	2	76.2	57.I	19.0
C4559-3	3	95.2	76.2	36.1
C4559-4	4	114.3	95.2	57.I
C4559-5	5	133.3	114.3	76.2
C4559-6	6	152.4	133.3	95.2
C4559-8	8	190.5	171.4	133.3
C4559-10	10	228.6	209.5	171.4
C4559-12	12	266.7	247.6	209.5

Rating & Voltage: 30A at 600V Body: Black Thermoplastic

Studs: Zinc plated steel. #10-24 threaded studs on 0.75" (19mm) centers. Studs feature a "dog point" to guide nut onto thread.

Torque Rating: 2.7Nm max.

Mounting Holes: 9/32" x 3/8" Slot. (7.14mm x 9.52mm)

Pack Size: Please call sales.

Options: Nuts & washers included.

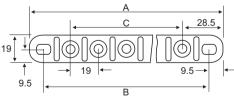
Temperature Rating: 120°C

Features: Numbers & arrows molded on top of barriers to

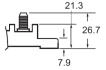
indicate terminals.

Approvals: (1) (1)





Dimensions in MM



Mtg. holes 9/32" x 3/8" slot



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## **EAT•N** Bussmann

Heavy-duty ground or power connection points in AC or DC circuits. Ideal for creating a centralized power distribution or grounding point.



C1933 1/2"-13 Stud



C1933R 1/2"-13 Stud



C1933-6B 3/8"-16 Stud



C1933-6R 3/8"-16 Stud



IB3816-2 3/8"-16 Stud



IB3816-3 3/8"-16 Stud



IB51618-2 5/16"-18 Stud



IB51618-3 5/16"-18 Stud

Part	Body	Amp	Thread	Stud	Stud			Dim	iensio	ns in i	114			
Number	Colour	Rating	Size M	Material	<b>Plating</b>	Dia.	Α	В	C	D	E	F	<u>H</u>	K
C1933	Black	400A	1/2"-13	Brass	Zinc	1	69.8	36.6	31.7	38.I	28.6	9.5	4.8	50.8
C1933R	Red	400A	1/2"-13	Brass	Zinc	1	69.8	36.6	31.7	38.I	28.6	9.5	4.8	50.8
C1933-6B	Black	250A	3/8"-16	Brass	Zinc	- 1	69.8	36.6	31.7	38.I	28.6	9.5	4.8	50.8
C1933-6R	Red	250A	3/8"-16	Brass	Zinc	I	69.8	36.6	31.7	38.I	28.6	9.5	4.8	50.8
JB3816-2	Black	250A	3/8"-16	Steel	Zinc	2	54.0	24.9	15.9	22.2	17.5	7.9	1.6	34.9
JB3816-3	Red	250A	3/8"-16	Steel	Zinc	2	54.0	24.9	15.9	22.2	17.5	7.9	1.6	34.9
B51618-2*	Black	250A	5/16"-18	Stainless	N/A	2	54.0	24.9	22.0	22.2	17.5	8.0	1.6	34.9
B51618-3*	Red	250A	5/16"-18	Stainless	N/A	2	54.0	24.9	22.0	22.2	17.5	8.0	1.6	34.9

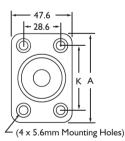


Diagram I

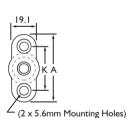
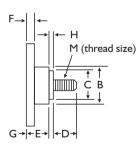


Diagram 2



Voltage: AC / DC

**Body:** Thermoplastic (\*Glass Filled Nylon) Mounting Torque Rating: 5.4Nm max.

Hardware: Hex nut & spring washer supplied in bulk. Also available without hardware.

Pack Size: 1, 10, 50, 100

Notes: \*|B51618-x rated 250A at 12VDC, 48VDC max.



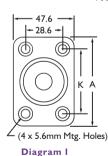
#### STUD TYPE JUNCTION BLOCKS - FEED THROUGH

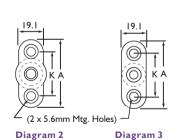


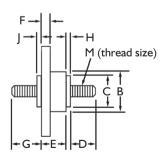
Feed-Through blocks are designed to be used on a firewall or panel.



Part	Body	Amp	Thread	Stud	Stud				Dim	ension	s in M	Μ				
Number	Colour		Size M			Dia.	Α	В	С	D	E	F	G	Н	1	K
C1925B	Black	400A	1/2"-13	Brass	Zinc	T	69.8	38. I	31.7	31.7				4.8	4.8	
C1925	Red	400A	1/2"-13	Brass	Zinc	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1925-1B	Black	400A	1/2"-13	Brass	Tin	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1925-1	Red	400A	1/2"-13	Brass	Tin	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1925-2B	Black	250A	3/8"-16	Brass	Tin	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1925-2	Red	250A	3/8"-16	Brass	Tin	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1938-1	Black	200A	5/16-18	Brass	Tin	2	52.4	23.8	17.5	22.2	17.5	7.9	23.8	1.6	1.6	33.3
C1938-1R	Red	200A	5/16-18	Brass	Tin	2	52.4	23.8	17.5	22.2	17.5	7.9	23.8	1.6	1.6	33.3
C1938	Black	250A	3/8"-16	Brass	Zinc	2	52.4	23.8	17.5	22.2	17.5	7.9	23.8	1.6	1.6	33.3
C1938R	Red	250A	3/8"-16	Brass	Zinc	2	52.4	23.8	17.5	22.2	17.5	7.9	23.8	1.6	1.6	33.3
C2791	Black	100A	1/4"-20	Brass	Zinc	3	52.4	17.5	11.2	15.9	17.5	7.9	17.5	1.6	1.6	33.3
C2791-R	Red	100A	1/4"-20	Brass	Zinc	3	52.4	17.5	11.2	15.9	17.5	7.9	17.5	1.6	1.6	33.3







Voltage: AC / DC Body: Thermoplastic

Studs: Brass

Mounting Torque Rating: 5.4Nm max.

Hardware: Hex nut & spring washer supplied in bulk. Also available without hardware.

Pack Size: 1, 10, 50, 100





Bussmann



GB3000-1R

Designed to meet multiple power / ground requirements, the GB3000 provides 3 pass-thru M6 studs for easy cable attachment in both the cabin and engine compartment of your vehicle. These blocks provide robust connections, eliminates the need to stack cables and reduces associated warranty claims based on affiliated problems. The GB3000 also provides power distribution suitable for many feed thru applications in marine, construction, agriculture, bus, military, RV and specialty vehicles.

The GB3000 series block includes 2 bus bars (removable) to create a common single circuit across the 3 feed thru studs. The GB3001 series block does not include the 2 bus bars, provides power or ground feed thru for 3 individual circuits, one for each stud.

Part	Block	Current	Body
Number	Description	Rating	Colour
GB3000-1R	Single Circuit Feed Thru	200A Max Total	Red
GB3000-1B	Single Circuit Feed Thru	200A Max Total	Black
GB3001-1R	3 Circuit Feed Thru	60A Max Per Stud	Red
GB3001-1B	3 Circuit Feed Thru	60A Max Per Stud	Black





Temperature Rating: -40°C to 85°C

Hardware: M6 nuts included.

Torque: M6 stud & mounting 5.6Nm max. Current Carrying Studs: Zinc-plated brass.

Mounting Studs: Stainless steel.

Housing: Black UL rated 94V0 thermoplastic.

Cover Colours: Black or red.

Cover Material: Santoprene cover rated 94V0 for protection from accidental shorts.

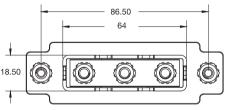
Gasket: Included for ingress protection. Black santoprene gasket rated 94V0.

Approvals: RoHS

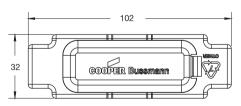




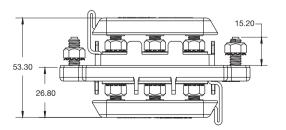


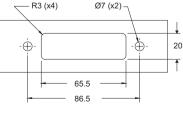


**Pictured Without Cover** 



Dimensions in MM





Panel Cutout



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#### **HEAVY DUTY BATTERY FEEDER STUDS 3/8"**



These battery feed studs are designed to bring power through fire walls and bulk heads.

#### **Features**

- Easy to install for quick distribution of power.
- Impact resistant threaded mount bushing.
- Self locking mounting nut.
- Suits panel up to 9mm thick.
- Colour coordinated to serve as easy-to-identify power points.

Part Number Description

46211-R 3/8"-16 Feeder Stud Red Body 46211-01 3/8"-16 Feeder Stud Black Body Hex Nut



Voltage: 6VDC to 36VDC

**Current Ratings:** 

- Up to 250A (continuous) at 50mm² cable.

- Up to 600A for up to 20 seconds ON (10 minutes OFF).

**Temperature Rise:** (up to 400A at 24V) from  $55.6^{\circ}$ C to  $67^{\circ}$ C using 0 AWG cable.

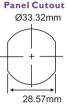
Stud: Brass.

Terminal Size: 3/8"-16, 5/8" (15.9mm) long. Hardware: 2 x Lock washer and 2 x brass hex nut.

Plastic Insulator: PBT Valox 420 SEO. Flammability Rating: V0-V2 UL94.

Bushing Size: 32.1 mm diameter, 15.9 mm length.

**Body Diameter:** 36mm **Overall Dimensions:** 40 D x 40 W x 52 H(mm)



**¼** Littelfuse°

#### **HEAVY DUTY BATTERY JUMPER STUDS 3/8"**

A battery jumper studs allow direct connection to the battery at more easily accessible locations inside or outside the vehicle.

#### **Features**

- Easy to install for quick distribution of power.
- · Impact resistant threaded mount bushing.
- Self locking mounting nut.
- Suits panel up to 9mm thick.
- Colour coordinated to serve as easy-to-identify power points.

Part Number Description

46210-02 3/8"-16 Jumper Post, Red Band & I x Red Cap 46210-03 3/8"-16 Jumper Post, Black Band & I x Black Cap

Voltage: 6VDC to 48VDC

Current Rating: 285A (continuous) at 120mm<sup>2</sup> cable, with temperature rise 25°C above ambient.

Stud: Brass

Stud Size: 3/8"-16 dia, (14.5mm) long.

Terminal Size: 13/16" (20.6mm)dia., 1-1/8" (29.9mm) long.

Contact Post: 20.6mm diameter, 28.8mm length. Grooved double nut accepts standard jumper cables.

Body: Nylon 66

Hardware: I x Lock washer and I x brass hex nut.

I x Brass double nut.



Double Nut

Body Diameter: 36mm Overall Dimensions: 40 D x 40 W x 67 H (mm)





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#### **LIGHT DUTY BATTERY FEEDER STUDS 1/4"**

Suite smaller and lighter military grade pass thru for lower power application







#### **Features**

High rating in a small package.

through a firewall or bulkhead.

• High torque rating due to patented material, combination.

Description Part Number

1/4"-28 Stud Red Body Only PTR-14D-05 PTB-14D-05 1/4"-28 Stud Black Body only O-Ring Seal Black OR-022

Voltage: TBA Rating: TBA

Grade: Commercial & Military RoHS Torque Rating: Body-Locknut-10 foot lbs. Materials: Body-Nylon 66, Conductive-Core-Copper. Studs: Stainless Steel.

Body: Locknut-Nylon 66.

Cross Section:

Hardware: 2 x Serrated Flange Nut-Zinc Plated Steel.

**Options:** Locknuts. O-Ring Material: Silicon O-Ring Size: AS568-022 Standard O-Ring Seal Dimensions: Internal Diameter: I" (25.4mm) Outside Diameter: I-1/8" (28.58mm)





for I/4" Studs Ø 22 1mm 19.6mm



Serrated Flange Nut

Overall Dimensions: 5 I D x 32 W x 36 H (mm)

#### **HEAVY DUTY BATTERY FEEDER STUDS 3/8"**

I/I6" (I.59mm)

Military grade, power feed for applications through a firewall or bulkhead.

• Higher electrical rating and lower resistance due to a larger cross sectional area and the utilization of a higher conductive material.

 Increased installation torque values resulting from our unique manufacturing.

Part Number Description

3/8"-16 Stud, Red Body & 2 x Red Caps PTR-38A-02 3/8"-16 Stud, Black Body & 2 x Black Caps PTB-38A-02

C14-1003 Pass Thru Seal Black

Voltage: TBA

Rating: 400A (2/0 or larger wire). Grade: Commercial & Military.

Torque Rating: Body-Locknut-10 foot lbs.

Body: Nylon 66, Locknut-Nylon 66. Conductive Core: 110 Copper.

Hardware: 2 x 3/8"-16 Double Nuts Zinc Plated.

Studs: Stainless Steel.

Options: Locknuts & Serrated Flange Nuts..



C14-1003



for 3/8" Studs Ø 33.4mm 28.7mm









Double Nut

**Overall Dimensions:** 64 D x 38 W x 44 H (mm)



#### **HEAVY DUTY BATTERY FEEDER STUDS 1/2"**

- Military grade, heavy duty power feed for applications through Firewalls or bulkhead.
- Higher electrical rating and lower resistance due to a larger cross sectional area and the utilization of a higher conductive material.
- Increased installation torque values resulting from our unique manufacturing design and stud material choice.

Part Number	<u>Description</u>
PTR-12B-02	1/2"-13 Stud, Red Body & 2 x Red Caps
PTB-12B-02	I/2"-13 Stud, Black Body & 2 x Black Caps
C14-1003	Pass Thru Seal Black

Voltage: TBA

Rating: 500A (4/0 or larger wire) Grade: Commercial & Military

Torque Rating: Retaining nut-40 foot lbs. Locknut-10 foot lbs.

Conductive Core: Copper. Studs: Stainless Steel. Body: Nylon 66. Caps: PVC Locknut: 1.5" Nylon 66.

Hardware: 2 x 1/2"-13 Double Nuts,

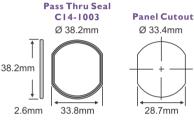
Zinc Plated Steel.

**Options:** Steel Locknuts & Serrated Flange Nuts.

Approvals: RoHS



PTR-12B-02





MIL-STD NEW

Double Nut & Cap

**Overall Dimensions:** 76 D x 38 W x 44 H (mm)

# MAXIMUM DUTY BATTERY FEEDER STUDS 1/2"

#### Features:

- Commercial grade maximum duty power feed for high current applications through firewalls or bulkhead.
- Higher electrical rating and lower resistance due to a larger cross sectional area and the utilization of a higher conductive material.
- Increased installation torque values resulting from our unique manufacturing design and stud material choice.

Part Number	Description
PTR-12C-01	1/2"-13 Stud, Red Body & 2 x Red Caps
PTB-12C-01	1/2"-13 Stud, Black Body & 2 x Black Caps

Voltage: TBA

Rating: 1000A (500 MCM wire)

Grade: Commercial

Torque Rating: Locknut-10 foot lbs. Conductive Core: 110 Copper.

Studs: Stainless Steel. Body: Nylon 66

Caps: PVC Locknut: 2.125" Nylon 66. Hardware: 2 x 1/2"-13 Flange Nut

Zinc Plated Steel. Options: Steel Locknuts. Approvals: RoHS



45.8mm



PTR-12C-01

PTB-12C-01





Flange Nut & Cap

Overall Dimensions: 76 D x 54 W x 62 H (mm)



#### STUD TYPE JUNCTION BLOCKS



Dimensions in MM

Heavy-duty ground or power connection points for DC circuits. Compact profile with insulated base. Ideal for creating a centralized power distribution or grounding point.

#### Single Stud JBS

Part	Body	Thread	Height	Stud Amp
Number	Colour	Size	A (mm)	Rating
JBSM6B	Black	M6	30	100A
JBSM6R	Red	M6	30	100A
JBSM8B	Black	M8	3 I	200A
JBSM8R	Red	M8	3 I	200A
JBSM10B	Black	MI0	34	300A
JBSM10R	Red	MI0	34	300A

Voltage: 48VDC max.

Body: Nylon, glass fibre reinforced.

Studs & Hardware: Stainless steel (included).



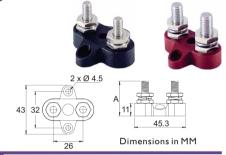
#### **Dual Stud JBD**

Part	Body	Thread	Height	Stud Amp
Number	Colour	Size	A (mm)	Rating
JBDM6B	Black	2 x M6	30	100A
JBDM6R	Red	$2 \times M6$	30	100A
JBDM8B	Black	2 x M8	31	200A
JBDM8R	Red	2 x M8	3 I	200A

Voltage: 48VDC max.

Body: Nylon, glass fibre reinforced.

Studs & Hardware: Stainless steel (included).



#### **Dual Stud With 80A Busbar Link JBDB**

Part	Body	Thread	Height	Stud Amp
Number	Colour	Size	A (mm)	Rating
JBDBM6B	Black	2 x M6	30	100A
JBDBM6R	Red	2 x M6	30	100A
JBDBM8B	Black	2 x M8	31	200A
JBDBM8R	Red	2 x M8	3 I	200A

Voltage: 48VDC max. Link Rating: 80A max.

**Link Material:** Nickel plated brass. **Body:** Nylon, glass fibre reinforced.

Studs & Hardware: Stainless steel (included).

# Feature Includes busbar removable link.

Dimensions in MM

26

Feature 
Includes stud barrier.

#### **Dual Stud With Stud Barrier JBDPM**

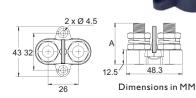
Part	Body	Thread	Height	Stud Amp
Number	Colour	<u>Size</u>	<u>A (mm)</u>	Rating
JBDPM8B	Black	2 x M8	32.5	100A
JBDPM10B	Black	2 x M I 0	35.5	200A
JBDPM810B	Black	$1 \times M8 + 1 \times M10$	35.5	300A

Voltage: 48VDC max.

Body: Nylon, glass fibre reinforced.

Studs & Hardware: Stainless steel (included).

**Notes:** Provides a termination point for extending the length of harnesses or other conductors. Use dual entry cable insulators to protect from accidental short circuits.





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#### **COMMON BUSBARS WITH COVER & LABELS**



• Heavy-duty busbars for ground or power connection points for DC circuits.

40.4

- Ideal for creating a centralized power distribution or grounding point.
- Compact profile with insulated base.
- All common busbars include sticker set and mounting hardware.

#### DC GROUND Mounting Hardware Sticker Set

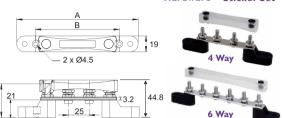
#### Single Row Busbar With M6 Studs

Part	Busbar	Dimension	ons in MM
Number	Studs	A	<u>B</u>
BB4M6	4 x M6	146	101
BB6M6	6 x M6	206	161

Voltage: 48VDC max. Rating: 100A Body: Nylon, glass fibre reinforced. Bus Material: Brass

Studs & Hardware: Stainless steel (inc).

Cover: Transparent (included).



#### Single Row Busbar With M6 Studs & M4 Screws

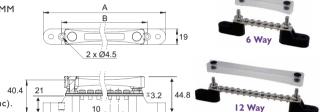
Part	Busbar	Dimensi	ions in N
Number	Screws	A	В
BB6M4	6 x M4	146	101
BB12M4	12 x M4	206	161

Voltage: 48VDC max. Rating: 150A Body: Nylon, glass fibre reinforced. Bus Material: Copper, Tin plated.

Studs: 2 x M6 (1/4")

Studs & Hardware: Stainless steel (inc).

Cover: Transparent (included).



#### Dual Row Busbar With M6 Studs & M4 Screws

Part	Bus	Busbar	Dimensio	ns in MM
Number	Bar	Screws	A	<u>B</u>
BBD6M4	Dual	2 x 6 x M4	118	107
BBD12M4	Dual	2 x 12 x M4	178	167

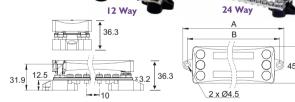
Voltage: 48VDC max. Rating: 150A Body: Nylon, glass fibre reinforced. Bus Material: Copper, Tin plated.

Studs: 4 x M6 (1/4")

Studs & Hardware: Stainless steel (inc). Cover: Transparent (included).

Features: Removable connecting link to

seperate or join the 2 bus bars.



#### Dual Row Bushar Stepped With M6 Studs & M4 Screws

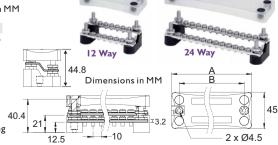
Part	Bus	Busbar	Dimensi	ons in	MM
Number	Bar	Screws	Α	<u>B</u>	
BBD6M4S	Dual	$2 \times 6 \times M4$	94	75	
BBD12M4S	Dual	2 x 12 x M4	154	135	

Voltage: 48VDC max. Rating: 150A Body: Nylon, glass fibre reinforced. Bus Material: Copper, Tin plated. Studs: 4 x M6 (1/4")

Studs & Hardware: Stainless steel (inc).

Cover: Transparent (included).

Features: Stepped design, removable connecting 'Z' link to seperate or join the 2 bus bars.





#### **COMMON BUSBAR MAXI**

### **Littelfuse**

#### Features:

- Heavy duty busbar terminal block.
- Insert-molded stainless steel studs.
- One-piece serrated flange nuts ensure correct and secure connection.

Rating: 250A

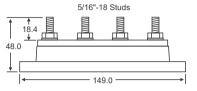
Voltage: 300VAC / 48VDC

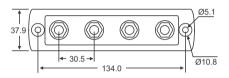
Body: Black

Bus Material: Tin plated copper

**Studs:** 5/16"-18 (M8) **Mounting Holes:** 5mm **Pack Size:** 1, 10, 50, 100







Dimensionsin MM

#### **COMMON BUSBAR POWER**

#### Features:

- Compact heavy duty busbar terminal block.
- Insert-molded stainless steel studs.
- One-piece serrated flange nuts ensure correct and secure connection.

<u>Part Number</u> <u>Busbar Studs</u> 880097 2 x 3/8"-16

Rating: 600A Voltage: 48V

Body: Glass reinforced polycarbonate

Studs: 3/8"-16 (M10)

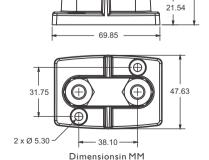
Mounting Holes: #10 or M5 screws

Hardware: Stainless steel nuts & washers included.

Bus Link: Tin plated copper. Pack Size: 1, 10, 50, 100



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2 x 3/8-16 UNC FOR 3/8"(M10) TERMINAL

CONNECTIONS

#### **BATTERY TERMINALS DIE CAST**

These terminals are designed for connecting a cable to a standard DIN post type battery. Available in both positive and negative versions. Optional cover fits the positive terminals.



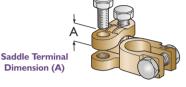




Saddle Terminal Rear View

Saddle Terminal Top View





#### **BATTERY TERMINALS STRIP TYPE**

These terminals are designed for connecting a cable to a standard DIN post type battery. Available in both positive and negative versions. Optional cover fits the positive terminals.

Part		Description	
Number	<b>Polarity</b>	& Colour	Cable Size
1506656	Negative	Terminal	10 to 20mm <sup>2</sup>
1506666	Negative	Terminal	25 to 40mm <sup>2</sup>
1506721	Positive	Terminal	10 to 20mm <sup>2</sup>
1506731	Positive	Terminal	25 to 40mm <sup>2</sup>
4410480	Positive	Cover	-

Terminal: Brass tin plated

Terminal Hardware: Steel zinc plated (M6) Terminal Temperature Rating: -40°C to 120°C

Cover Material: PP Pack Size: 1.10

Pack Size: 1.10



**Positive Terminal Cover** 4410480





**Negative Terminal** (Black Band)



**Positive Terminal** (Red Band)

#### BATTERY TERMINAL DISTRIBUTION QUICK LOCK - 3 WAY

These double ring terminals are designed for quick hand release battery terminal disconnection. Available in two versions, stud only and stud + crimp combination.

Part Number Polarity & Symbol 3 Connection Options 1507956 M6 stud, M6 stud, Cable 25 to 40mm<sup>2</sup> Negative (-)

Terminal: Brass tin plated

Terminal Hardware: Steel zinc plated (M6)

Pack Size: 1.10



2x Stud & Ix Crimp



#### **BATTERY TERMINAL DISTRIBUTION UNIT - 3 WAY**



- Battery Distribution Units (BDU) for Positive or Negative battery terminal.
- Simple connection to battery top post terminal.
- Double ring battery terminal connection. Positive I 9mm / Negative I 7mm.
- Two M6 studs and one M8 stud on the unit. Kit version includes terminals.
- Optional clip-on red colour protection cover, labelled with (+) symbol.

Part Number Kit Contents

1507701K 3 Way Positive includes 3 x terminals & red cover. 1507701, 4510503, 2 x 1606770, 1606785

1507704K 3 Way Negative includes 3 x terminals (No cover). 1507704, 2 x 1606770, 1606785

Part Number	Individual component ordering
1507701	3 Way Positive battery distribution unit. (+)
4510503	Red Clip-on housing. Suit Positive BDU only. (+
1507704	3 Way Negative battery distribution unit. (-)
1606770	M6 Screw 90 degree terminal 10-20mm <sup>2</sup> .

1606785 M8 Screw 90 degree terminal 25-40mm<sup>2</sup>.



**BDU** with Terminals Fitted



(-) BDU Kit 1507704K





**Red Clip-on Housing** 

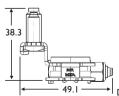
82.6 55.3 42.7

**Terminal 1606770** M6 hole 10-20mm<sup>2</sup>

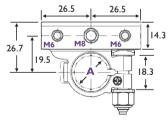


**Terminal 1606785** M8 hole 25-40mm<sup>2</sup>

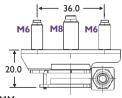




**Battery Distribution Unit** 



- (+) Positive Terminal 'A' = 19mm
- (-) Negative Terminal 'A' = 17mm



Dimensions in MM



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# RELAY + SWITCH

# Relays, Switches, Breaker Panels & Tools

# Designed for the application.



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		Contact	Ampere	Rating		
Part Number	Voltage	Action	N/O	N/C	<u>Terminals</u>	Protection
3031AHCR112	I2V	SPST	20A	-	4 x 2.8mm	½W I.IKΩ resistor
3031AHCR124	24V	SPST	I0A	-	4 x 2.8mm	½W 4.3KΩ resistor

Contact Rating (Motor /Lamp) N/O: 16A (14VDC), In-rush 80A

Coil Current: 80mA (12V), 40mA (24V) Coil Resistance:  $150\Omega$  (12V),  $600\Omega$  (24V) Contact Voltage Drop: Typ. 50mV at 10A Contact Material: Silver Tin Oxide alloy (AgSno) Operate / Release Time: 10ms max. / 10ms max.

Enclosure: flux tight seal.

Temperature: -40 to + 125°C (no freezing)

Mechanical Life Expectancy: 10 million operations. Pack Size: 1pc, 10pcs, 100pcs, 500pcs.

Options: Sealed washable enclosure. Diode protection.

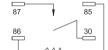
Suits Power Distribution Modules: Pages 120 - 128, 138-144.

Approval: ELV-2000/53/EC RoHS

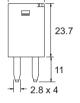


#### **Terminal Size** ☐ 2 8mm

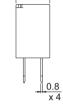
#### 303 I AHCR I series







16



#### MICRO 280 RELAYS - 301 SERIES



		Contact	Ampere	Rating		
Part Number	Voltage	Action	N/O	N/C	Terminals	Protection
3011ACR112	I2V	SPST	35A	-	4 x 2.8mm	½W 680Ω resistor
3011CCR112	I2V	SPDT	35A	20A	5 x 2.8mm	½W 680Ω resistor
3011ACR124	24V	SPST	I5A	-	4 x 2.8mm	½W 2700Ω resistor
3011CCR124	24V	SPDT	I5A	I0A	5 x 2.8mm	½W 2700Ω resistor

Coil Current: 97.5mA (12V), 49.6mA (24V) Coil Resistance: 123Ω (12V), 483Ω (24V)

Contact Voltage Drop: Typ. 40mV at 10A

Contact Material: Silver Tin Oxide alloy (AgSno) Operate / Release Time: 10ms max. / 10ms max.

Enclosure: flux tight seal.

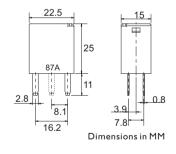
Temperature: -40 to + I 25°C (no freezing)

Mechanical Life Expectancy: 10 million operations.

Pack Size: Ipc, 10pcs, 100pcs, 500pcs.

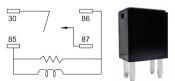
Options: Sealed washable / Dust cover enclosure. Diode protection. Suits Power Distribution Modules: Pages 120 - 135, 138-146.

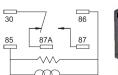
Approval: ELV-200/53/EC RoHS



#### **Terminal Size**

#### 3011ACRI series





3011CCR1 series





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#### MINI 280 RELAYS - 898 SERIES



		Contact	Ampere	Kating				
Part Number	<b>Voltage</b>	Action	<u>N/O</u>	N/C	<u>Terminals</u>	<u>Protection</u>	Bracket	Enclosure
898HIAHCRI24	24V	SPST	20A	-	4 x 2.8mm	½W 2700Ω resistor	No	Flux Tight
898H1CHCR124	24V	SPDT	20A	I5A	5 x 2.8mm	½W 2700Ω resistor	No	Flux Tight

Coil Current: 66.7mA (24V) Coil Resistance: 360Ω (24V)

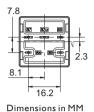
Contact Voltage Drop: Typ. 50mV at 10A Contact Material: Silver Tin Oxide alloy (AgSno) Operate / Release Time: 20ms max. / 20ms max.

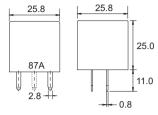
Enclosure: flux tight seal.

Temperature: -40 to + I 25°C (no freezing)

Mechanical Life Expectancy: 10 million operations.

Pack Size: Ipc, 10pcs, 100pcs, 400pcs. Approval: ELV-2000/53/EC RoHS Notes: Product to be discontinued.





#### **Terminal Size** ☐ 2 8 mm

#### 898HIAHCRI24 Series





#### 898HICHCRI24 Series





#### STANDARD FLASHER RELAYS

#### FATON Bussmann

These flashers work with standard bulbs and rely on electronic circuitry (not heat) to operate ensuring excellent performance in extreme climates. Flashes at twice the normal speed to indicate lamp outage, and features an audible click when engaged.





#### **Terminal Size** ☐ 2 8 mm

Dimensions in MM





NO.761



QR Code: 9024

#### **LED FLASHER RELAYS**

Flasher Type

Part

Number

NO.761

NO.762

The LED flashers should always be used with LED turn signals because they require less current. Using traditional thermal / mechanical flashers for LEDs will cause erratic operation by flashing too fast or too slow.

Part Number	Terminals	Electrical Rating	Number of Bulbs
NO-727-LED	5 x 6.3mm	12.6A at 12.8VDC	2 to 4
NO-758-LED	3 x 6.3mm	12.6A at 12.8VDC	2 to 6
NO-759-LED	3 x 6.3mm	12.6A at 12.8VDC	2 to 6
NO-760-LED	3 x 6.3mm	12.6A at 12.8VDC	2 to 4
NO-762-LED	4 x 2.8mm	12.6A at 12.8VDC	2 to 6

#### FATON Bussmann

NO-762-LED



Scan this OR Code for more information



QR Code: 9023



#### MICRO ISO RELAYS 871 SERIES



		Contact	Ampere	Kating				
Part Number	Volt	Action	N/O	N/C	Terminals	Protection	<b>Bracket</b>	Enclosure
8711ACR112	I2V	SPST	35A	-	2x 4.8mm, 2x 6.3mm	½W 680Ω resistor	No	Flux Tight
8711CCR112	I2V	SPDT	35A	20A	3x 4.8mm, 2x 6.3mm	⅓W 680Ω resistor	No	Flux Tight
8711ACR124	24V	SPST	I5A	-	2x 4.8mm, 2x 6.3mm	½W 2700Ω resistor	No	Flux Tight
8711CCR124	24V	SPDT	I5A	I0A	3x 4.8mm, 2x 6.3mm	½W 2700Ω resistor	No	Flux Tight

Coil Current: 97.5mA (12V), 49.6mA (24V) Coil Resistance:  $123\Omega$  (12V),  $483\Omega$  (24V) Contact Voltage Drop: Typ. 40mV at 10AContact Material: Silver Tin Oxide alloy (AgSno) Operate / Release Time: 10ms max. / 10ms max.

Enclosure: Flux tight.

Temperature: -40 to + I 25°C (no freezing)

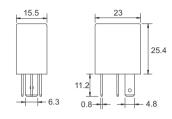
Mechanical Life Expectancy: 10 million operations.

Pack Size: Ipc, 10pcs, 100pcs, 500pcs.

Options: Sealed Washable / Dust cover enclosure.
Diode protection. RoHS

Approval: ELV-2000/53/EC

Suits Holders & Blocks: Pages 137-138, 170.



Dimensions in MM





Cantaga Amanana Batina







#### **MINI ISO RELAYS 896H SERIES**



		Contact	Ampere r	kating				
Part Number	Volt	Action	N/O	N/C	Terminals	Protection	<u>Bracket</u>	Enclosure
896HIAHCRII2	12V	SPST	50A	-	4 x 6.3 mm	⅓W 680Ω resistor	No	Flux Tight
896HICHCRII2	12V	SPDT	50A	30A	5 x 6.3mm	⅓W 680Ω resistor	No	Flux Tight
896H2AHCR112	12V	DPST	2 x 30A	-	5 x 6.3 mm	⅓W 680Ω resistor	No	Flux Tight
896HIAHCRI24	24V	SPST	20A	-	4 x 6.3 mm	½W 2700Ω resistor	No	Flux Tight
896HICHCRI24	24V	SPDT	20A	I5A	5 x 6.3mm	½W 2700Ω resistor	No	Flux Tight
896H2AHCR124	24V	DPST	$2 \times 10A$	-	5 x 6.3mm	½W 2700Ω resistor	No	Flux Tight NEW

 $\begin{array}{l} \textbf{Coil Current: } 133\text{mA} \left(12\text{V}\right), 66.7\text{mA} \left(24\text{V}\right) \\ \textbf{Coil Resistance: } 90\Omega \left(12\text{V}\right), 360\Omega \left(24\text{V}\right) \\ \textbf{Contact Voltage Drop: } \text{Typ. } 50\text{mV at } 10\text{A} \end{array}$ 

Contact Voltage Drop: Typ. 30mV at TOA Contact Material: Silver Tin Oxide alloy (AgSno) Operate / Release Time: 20ms max. / 20ms max.

Enclosure: Flux tight.

Temperature: -40 to + I 25°C (no freezing)

Mechanical Life Expectancy: 10 million operations. Pack Size: Ipc, 10pcs, 100pcs, 400pcs, 1200pcs.

Options: Sealed Washable / Dust cover enclosure. Diode protection.

Approval: ELV-2000/53/EC RoHS

Suits Holders & Blocks: Pages 137-138, 170 - 172.

# All Terminals 6.3mm (1/4") 26.0 26.0 25.2 Dimensions in MM

#### 896HIAHCRI series



#### 896HICHCRI series



# 896H2AHCRI series Double Pole (N/O)







# MINI ISO BRACKET MOUNT RELAYS 896H SERIES

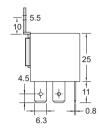




		Contact	Ampere	Rating			Steel	
Part Number	Volt	Action	N/O	N/C	<u>Terminals</u>	Protection	<u>Bracket</u>	<b>Enclosure</b>
896HIAHCISRII2	12V	SPST	50A	-	4 x 6.3 mm	½W 680Ω resistor	Yes	Sealed
896HICHCISRII2	I2V	SPDT	50A	30A	5 x 6.3mm	√2W 680Ω resistor	Yes	Sealed
896HIAHCISRI24	24V	SPST	20A	-	4 x 6.3 mm	½W 2700Ω resistor	Yes	Sealed
896HICHCISRI24	24V	SPDT	20A	I5A	5 x 6.3mm	$\frac{1}{2}W$ 2700 $\Omega$ resistor	Yes	Sealed

**All Terminals** ■ 6.3mm (1/4")







Removable Steel Bracket

#### MINI ISO BRACKET MOUNT SKIRTED RELAYS 896H SERIES

IP66



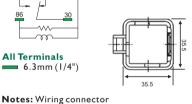


		Contact	Amper	e Kating			steei	
Part Number	Volt	Action	N/O	N/C	<u>Terminals</u>	<u>Protection</u>	<b>Bracket</b>	Enclosure
896HICHDISWRII2	12V	SPDT	50A	30A	5 x 6.3mm	½W 680Ω resistor	Yes	Skirt W/Proof
896HICHDISWRI24	24V	SPDT	20A	I5A	5 x 6.3mm	⅓W 2700Ω resistor	Yes	Skirt W/Proof

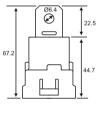
#### Relay Circuit Diagram



**All Terminals** 6.3mm (1/4")



Dimensions in MM





Skirted Relay with Removable Steel Bracket

#### also available (page 172).

#### MINI ISO RELAY FUSE HOLDER COVER & BRACKET





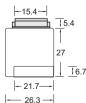


Part		Contact	Amper	e Rating			Suits Fuse.	Steel	Fuse
Number	Volt	Action	N/O	N/C	Terminals	Protection	Not Included	Bracket	Cover
995850	12V	SPST	30A	-	4 x 6.3 mm	resistor	30A Auto Fuse	Yes	Yes
995870	24V	SPST	I5A	-	4 x 6.3 mm	resistor	I 5A Auto Fuse	Yes	Yes

#### **RELATED PRODUCTS:**



**Auto & LED Auto Fuses** (see p.17)



31.7 39.3 23.3

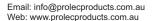




Clear Fuse Cover with Removable Steel **Bracket** 



Dimensions in MM



## MAXI ISO RELAYS 897 SERIES



Part Number	Volt	Action	N/O	N/C	<u>Terminals</u>	Protection	<b>Bracket</b>	
8971AHCR112	12V	SPST	70A	-	4x 6.3mm, 2x 9.5mm	½W 680Ω resistor	-	
8971AHCISRI12V	I2V	SPST	70A	-	4x 6.3mm, 2x 9.5mm	√2W 680Ω resistor	Metal	NEW
8971AHCR124	24V	SPST	25A	-	4x 6.3mm, 2x 9.5mm	½W 2700Ω resistor	-	
8971AHCISR124V	24V	SPST	25A	-	4x 6.3mm, 2x 9.5mm	$\frac{1}{2}W$ 2700 $\Omega$ resistor	Metal	NEW

Contact Ampere Rating

Coil Current: 133mA (12V), 66.7mA (24V) Coil Resistance:  $90\Omega$  (12V),  $360\Omega$  (24V) Contact Voltage Drop: Typ. 30mV at 10A Contact Material: Silver Tin Oxide alloy (AgSno) Operate / Release Time: 20ms max. / 20ms max.

Enclosure: Flux Type.

897 I AHCR I series

9.5mm (3/8")

Terminal Sizes 6.3mm (1/4")

Temperature: -40 to + 125°C (no freezing)

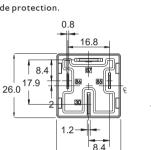
Mechanical Life Expectancy: 10 million operations.

Pack Size: Ipc. 10pcs. 100pcs. 400pcs.

Options: Sealed type washable, dust cover & diode protection.

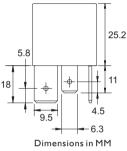
Suits Holders & Blocks: Pages 138, 170 - 171.

Approval: ELV-2000/53/EC RoHS



26.0





#### **POWER RELAYS**

These Power Relays can switch high power loads on/off to electrical accessories using a separate remote switch and well suited for use in commercial vehicles and heavy trucks.

#### 12V Power Relay (P/N: 05903300)

Designed for use in 12V circuits, it can supply intermittent current loads up to 200A and continuous current loads up to 120A max.

#### 24V Power Relay (P/N: 05903500)

Designed for use in 24V circuits, it continuous current loads up to 10

Contact



Terminal Sizes /4<sup>"</sup>)



**14** Littelfuse IP67 NEW

300)		IIIai Jizes
it can supply intermittent and 00A max.	_	6.3mm (1/ M6 stud

Part Number	Volt	Action	Amperage	<u>Terminals</u>	
05903300	I2V	SPST	200A*	2x 6.3mm Q.C, 2x M6	
05903500	24V	SPST	100A	2x 6.3mm Q.C, 2x M6	3

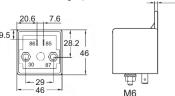
Contact Material: Silver Plated Copper Terminals: M6 Tin-plated Brass

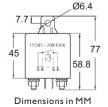
Hardware: Brass contact nuts

Bracket: Plastic

Temperature: -40 to + 100°C Pack Size: Ipc, 10pcs.

Notes: \*Continuous current load I 20A max.







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#### SD BI-STABLE RELAY WITH AUXILIARY CONTACTS



The SD series relay provides remote power switching for applications that require high continuous current passage, large engine starting needs and high ambient temperatures. Relay switching is controlled via a plug-in connector (with small cables) to switch I or 2 high amp circuits. The 2 pole version suits dual battery configurations. The SD series relay helps reduce your costs and saves weight by positioning the relay close to the battery and high current loads to reduce heavy copper cable routing. Applications include; Heavy Duty Trucks and Lifting Equipment, Construction & Agricultural Equipment.

# NEW

- Compact footprint saves space in your installation.
- Supports US DOT 11579 and EU ADR requirements for hazmat vehicle compliance.
- Plug-in connector controls relay switching and provides additional circuits and features.
- Dedicated 24-hour output to power your tachograph or other keep-alive functions.
- · Local and remote indication of the state of the relay.
- · Bi-stable internal mechanism draw no current in the on or off state saving your batteries voltage supply

Part	Switch	No.	Control	Contact	Continuous	Inrush
Number	Circuit	<u>Poles</u>	<b>Voltage</b>	<u>Voltage</u>	Rating	Current
880103	SPST	Single	9V - 16V	9V - 32V	600A	2000A x 30sec., 3000A x Isec.
880107	DPST	Double	12V - 24V	9V - 32V	600A (2 x 300A)	1000A x 30sec., 2000A x Isec.

Scan this **OR Code** for more information



QR Code: 12001







HD BI-STABLE RELAY WITH AUXILIARY CONTACTS



The HD Series Bi-Stable Relay is designed to supply high continuous current to electrical accessories on a vehicle eg. large invertor loads. It is designed for use in harsh weather, high shock and vibration environments as well as high ambient temperatures. The HD Relay is controlled using a remote switch that is connected to the relay via small gauge cable. The HD Relay delivers high performance in a compact size, perfect for heavy-duty vehicles, lifting, construction & agriculture equipment, military vehicles etc.



#### Features

- Remotely-operated device eliminates long runs of heavy cable, minimizes cabling complexity, cost and weight.
- · Bi-stable (latched) operation draws no current in On or Off. Eliminates a continuous demand on the batteries.
- LED output wire enables remote indication of relay status Open or Closed.
- Silver alloy contact assure the lowest voltage drop / resistance and extends cycling life of the device.
- · Stainless steel hardware and tin-plated copper contacts maximize resistance in harsh environments.
- · Eliminates routing of heavy gauge cables to user-accessible mechanical disconnect switches, lowering system costs.
- Supports high-amp intermittent or continuous current loads.

Part			Continuous
Number	Description	<u>Voltage</u>	Rating
880086	Relay Module	I2V	300A
880088	Relay Module	24V	300A
880092	Remote Switch		

Scan this **OR Code** for more information



QR Code: 12002



Remote Control Switch







#### MICRO RELAY HOLDER KIT - SINGLE (4 OR 5 PIN)

Part Number 990401K

Micro Relay Kit includes;

I x Micro relay holder with bracket mount 3 x Terminals TBA mm<sup>2</sup> (F4.8mm) 999060

2 x Terminals TBA mm<sup>2</sup> (F6.3mm) 999070

**RELATED PRODUCTS:** ISO Micro Relays see page 166





Dimensions in MM



#### MINI RELAY HOLDER KIT - SINGLE (4 OR 5 PIN)

Part Number 990421K

Mini Relay Kit includes;

I x Mini relay holder with bracket mount

5 x Terminals TBA mm2 (F6.3mm) 999070

RELATED PRODUCTS: ISO Mini Relays see page 166





Dimensions in MM



#### **MAXI RELAY HOLDER KIT - SINGLE (4 PIN)**

Part Number 990411K

Maxi Relay Kit includes;

I x Maxi relay holder with bracket mount

2 x Terminals TBA mm² (F6.3mm) 999070 2 x Terminals TBA mm² (F9.5mm) 999080

RELATED PRODUCTS: ISO Maxi Relays see page 168





Dimensions in MM



#### **AUTO FUSE HOLDER CONNECTOR KIT - SINGLE**

Part Number 990431K

Auto Fuse Kit includes;

I x Auto fuse holder with bracket mount 2 x Terminals TBA mm2 (F6.3mm) 999000







Fuse Cover 00359 (see p.68)



Dimensions in MM

**RELATED PRODUCTS:** 

**Auto Fuses** (see p. 17)

Slide lock fuse holder and relay connectors together to create a fuse and relay bank.

Voltage: 32VDC Pack Size: 1, 10, 50, 100 Features: Gangable. Approvals: RoHS





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#### MINI RELAY CONNECTOR KIT - SINGLE (4 OR 5 PIN)

Part Number Description

10246K Mini Relay Socket Connector Kit includes;

I x 10246 (Mini relay connector)

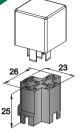
5 x 01650BK (Terminals 1-2.5mm<sup>2</sup> 20A, F6.3mm)

Voltage: 32VDC Pack Size: 1, 10, 100 Approvals: RoHS



ISO Mini Relays see page 166









MTA

#### MINI RELAY HOLDER KIT - SINGLE (4 OR 5 PIN)

Part Number Description

50135K Mini Relay Holder Kit includes;

I x 10245 (Mini relay holder) I x 00430 (Fixing plate single screw)

5 x 01650BK (Terminals 1-2.5mm<sup>2</sup> 20A, F6.3mm)

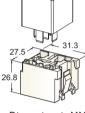
Voltage: 32VDC Pack Size: 1.10 Features: Gangable. Approvals: RoHS

#### **RELATED PRODUCTS:**

ISO Mini Relays see page 166















# MAXI RELAY HOLDER KIT - SINGLE (4 PIN)

Description Part Number

50136K

Maxi Relay Holder Kit includes: I x I 0247 (Maxi relay holder)

I x 00430 (Fixing plate single screw)

2 x 07000BK (Terminals 0.5-1.5mm<sup>2</sup> F6.3mm)

2 x 01720BK (Terminals 6-10mm<sup>2</sup> F9.5mm)

Voltage: 32VDC Pack Size: 1, 10 Features: Gangable. Approvals: RoHS

#### RELATED PRODUCTS:

ISO Maxi Relays see page 168







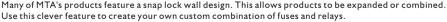
Dimensions in MM

34.5











**Snap Mount Fixing Plate** (see p.78-79)



Screw Mount **Fixing Plate** (see p.78-79)



Slide Lock M & F **Bolt Down Brackets** (see p.78-79)



Slide Lock **Fuse Holders** (see p.78-79)

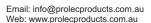


Slide Lock Relay Holders (as above)



**Lateral Lock** To Modules (see p.137 & 141)







#### MINI RELAY SEALED CONNECTOR (4 OR 5 PIN)



The Series PTSR-X Push-to-Seat sealed relay connector is specifically designed to accept standard Mini ISO skirted relays. Delphi 630 Metri-Pack terminals and 480 Metri-Pack seals. This uniquely designed sealed unit features a Push-to-Seat connection system. Terminals are crimped to cable, then pushed into base of unit. This eliminates the costly labor intensive "5 step" pull-to-seat assembly approach required by other connectors.





#### Features:

- Sealed, Ingress Protection Rated IP66.
- Labor saving "Push to Seat" connection system.
- Molded in rugged polyester thermoplastic material.
- Finger release latch.
- Accepts any wire size, in any cavity using Aptive 630 Metri-Pack sealed push to seat terminals together with 480 Metri-Pack seals.

Part Number Kit Contents;

PTSR-KIT I x Connector with Seal Assembly

I x Blue TPA Term, Pos. Assurance

2 x Terminals (20-18AWG)

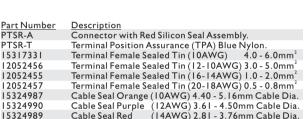
2 x Yellow Seals (18AWG)

3 x Terminals (12-10AWG)

3 x Orange Seals (IOAWG)

I x Cavity Plug Grey





Cable Seal Red (14AWG) 2.81 - 3.76mm Cable Dia. Cable Seal White (16AWG) 2.01 - 2.85mm Cable Dia. Cable Seal Yellow (18AWG) 1.60 - 2.15mm Cable Dia. 9.05mm Diameter

35232480 Cavity Plug Grey PTSR-T TPA

**Terminals** 

PTSR-A

Connector



**Cable Seals** 



7.2

41.0

Cavity Plug (1)



Voltage: 32VDC

15324988 15324991

Base Material: Polyester thermoplastic

Seal Material: Silicon TPA Material: Nylon

Terminals: Tin Plated Brass Metri-Pack 630. Cable Seals & Cavity Plug: Silicone.

Pack Size: 1, 10, 100, 500

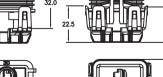
Approvals: RoHS

#### **RELATED PRODUCTS:**



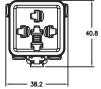
Mini ISO skirted relay with bracket (see p. 167)







Dimensions in MM





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#### **CIRCUIT BREAKER / SWITCH PANELS**



PROPNL24S4WB

Prolec offer a range of three standard black powder coated panels that can accommodate either 4 or 6 of the Series 24 switches or switchable circuit breakers. These panels can be mounted either vertically or horizontally.

#### Features

- · Australian designed and manufactured..
- Panels can be mounted either vertically or horizontally.
- Quick assembly. Snap mount components include switch or circuit breaker.
- Mount via 4 x 4mm holes. Black pan head screws included.
- Strong panel is 2mm aluminum black powder coated.
- 4 Way mounting orientation.









NEW





PROPNL24S6WB



PROPNL24S6WB

Description 4 Positions Panel (130mm x 100mm) 6 Positions Panel (190mm x 100mm) Breaker Switch Hole Plug Blank



24HP2151

#### **Custom Panels**

24HP2151

Prolec can create custom panels and labelling to suit any components or layout. Custom panels can be produced in a variety of materials, thicknesses and labelled with your own design & branding. Contact sales for further information.





(See p.55)



2410-102 Series (See p.55)





PROLEG

Alternative Switch or Switch Circuit Breaker Options

#### CIRCUIT BREAKER PUSH TO RESET DISTRIBUTION PANEL

Prolec now offers a new Australian designed and made range of standard blank black powder coated panels that suit the Series 14, 15 and 16 panel mount manual reset circuit breakers. These panels can be mounted either vertically or horizontally. Adhesive stickers can be added to the panel or it can be custom screen printed or a full colour branded label can be fitted over the entire panel. Circuit breaker thread size 3/8"-27. Components are screw mount. Electrical connection options are quick connect or screw terminal. Includes mounting hardware black counter sunk screws. Circuit breakers are not included.



14HP38

Description

12 Position Blank Panel (185mm x 110mm) Circuit Breaker Hole Plug 3/8" (9.5mm)



Circuit breakers page 54 (Bushing specification 3/8"-27) Circuit breaker boots page 54



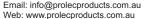




PROPNLI4SI2WB

Example of a loaded breaker panel.





#### **ROCKER SWITCHES, ACTUATORS & BRACKETS CONTURA II**



#### Switch Units

Part Number	Switch Type	Switching*	LED Indication	Rating
VIDI00I	Single Pole	On / Off	Blue Backlight / Green On	12VDC, 20A
V2D1001	Single Pole	(On) / Off	Blue Backlight	12VDC, 20A
V8D1001	Single Pole	(On) / Off / (On)	Blue Backlight	12VDC, 20A



\*(ON) = Momentary switch, must be held in ON position.

#### **Switch Actuators Contura II**

A . . <del>T</del>

Part Number	Actuator Type	Marking
VAAC001	Square & Bar Lens	(No Marking)
VAAC002	Square & Bar Lens	Air Compressor
VAAC003	Square & Bar Lens	Front Locker (
VAAC004	Square & Bar Lens	Rear Locker
VAAC005	Square & Bar Lens	Fog Lights
VAAC006	Square & Bar Lens	Driving Lights
VAAC007	Square & Bar Lens	Reverse Lights
VAAC008	Square & Bar Lens	Interior Light
VAAC009	Square & Bar Lens	Roof Lights
VAAC010	Square & Bar Lens	LED Light Bar
VAAC011	Square & Bar Lens	Work Lights
VAAC012	Square & Bar Lens	Accessories
VAAC013	Square & Bar Lens	Winch Isolator
VAAC014	Square & Bar Lens	Fuel Transfer
VAAC015	Square & Bar Lens	Auxiliary Lights
VAAC016	Square & Bar Lens	Auxiliary Battery
VAAC017	Square & Bar Lens	Power
VAAC018	Square & Bar Lens	I 2V Outlet
VAAC019	Square & Bar Lens	Battery Parallel
VA9C002	Square Lens Only	Winch
VA9C003	Square Lens Only	Horn
VVPZC00-000	Laser Etchable	Blank / Custom NEW







**Daytime** (Not Lit)

**Daytime** (Illuminated)

Nighttime (Illuminated)



Completed Switch Actuator + Switch Unit

Switch Actuator Contura V Laser Etchable Rear Lense

#### **Mounting Panel Brackets & Accessories**

Part Number	Accessory Description
VMS01	Stand-alone Mounting Panel Bracket. No Further Parts Required.
VMM01	Modular Mounting Panel Bracket (Middle Unit), Requires Ends.
VME01	Modular Mounting Panel Bracket (End Unit), Reversible.
VPS	Switch Unit Panel Seal.
VCH01-K	Connector Kit - 8 x Female 1/4" QC Terminals 16-14AWG. NEW
VHP01	Hole Plug, Snap Mount, Blank Insert.
VRT	Dual Purpose Removal Tool. Removes Actuator & Switch Body.





VHP01 **Hole Plug** 

Panel Seal



Stand Alone Panel





**End Panel** 



Assembled Panels Example



Ex: Completed Panel 3x Panels & Switches

Middle Panel Actuator: Black, hard optical grade polycarbonate, Nylon 66 overlay. Switch Housing: Thermoplastic polyester alloy, flame retardant.

Switch Mechanism: Brass roller pin eliminates need for lubricants.

VMM01

Terminals: 1/4" Quick Connect, tin plated. Contacts: Silver plated. Endurance: 50,000 to 100,000 electrical cycles.

Ignition Protected: Sealed construction. ULI 500 / ISO8846, 94/25/EC. Backlighting LED: Blue controlled intensity for even illumination.

Ingress Protection Rating: Dual seal protection locks out elements.

Certified to IP66 / IP68 for front panel components. Panel seal prevents water/dust ingress into the panel.

Bulk Pack Size: 1, 10, 20, 100

Retail Pack Size: 1, 10



**OR Code** for more information

Scan this

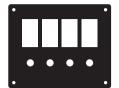


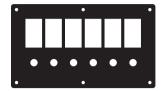
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101.4 x 22.9mm



Prolec's Australian made 4, 6 or 8 way panels, enable you to build your own customised circuit breaker / switch panel. Simply order the panel that suits your requirements, then order the switches and circuit breakers (sold separately). Switches are available with different electrical configurations and the switch actuators come in a wide variety of symbols & labelling. Our manual reset circuit breakers are available in ratings from 3A to 20A. Once the switches and breakers are fitted into the panel, connect your cables to them using standard 1/4" Q/C terminals.





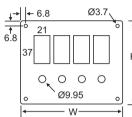


PROPNLI4V4WSB

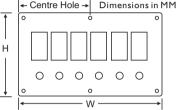
PROPNLI4V6WSB

PROPNLI4V8WSB

RELATED PRODUCTS:



4 Way Panel



6 & 8 Way Panel

0000	
Winds	11
1	



 Dimensions
 Centre

 (W x H)
 Hole

 135 x 110mm

3/8"-27 Bushing (Refer page 54)

INUITIDET	Description	( Y Y A I I )	11016
PROPNL14V4WSB	4 Way Blank Panel	Ì 35 x l Í 10mm	_
PROPNL14V6WSB	6 Way Blank Panel	190 x 110mm	95mm
PROPNL14V8WSB	8 Way Blank Panel	240 x 110mm	I20mm
VHP01	Hole Plug Breaker	13 x 10.5mm	9.5mm
14HP38	Hole Plug Switch	48 x 23mm	37 x 21 mm
	· ·		



Snap Mount

(Refer page 174)



Rocker Switch Hole Plug 37x21mm

Circuit Breaker Hole Plug 3/8" (9.5mm)

Panel Material: Aluminum Black Powder Coated.
Panel Thickness: 2 3mm

ranei inickness: 2.3mm

Part

Nlumbar

Hardware: Includes black countersunk screws.

Note: Switches & circuit breakers are not included with the panel.

Description



#### :



Weatherproof Boots Clear or Black Options 3/8"-27 Thread, IP67 (Refer page 54)

#### How to order to complete your custom DIY switch breaker panel:

Step One: Choose a 4, 6 or 8 way blank panel. (As above) Step Two: Choose the rocker switch units / bases. (Page 174)

**Step Three:** Choose the rocker switch actuators / covers. (Page 174)

**Step Four:** Choose the panel mount circuit breaker for each position. (Page 54)

Step Five: If required choose protective boots for the circuit breakers. (Page 54)

#### Sample Loaded 8 Way Panel (Non Wired).

Carling Rocker Switches Contura V, Series II Laser Etched LED Lens

Mechanical Products — Series 14, 15 or 16 Circuit Breakers Manual Reset TIII (Weatherproof Boot Black)



Loaded Front View 8 Way Switch & Breaker Panel



Loaded Rear View 8 Way Switch & Breaker Panel



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EAT•N Bussmann

Battery Switch Terminals are primarily designed to prevent battery drain by providing a quick and safe way to completely disconnect the negative terminal of a battery. Simply unscrew the plastic knob one 1/4 turn and the battery is disconnected. To restore power, screw the knob down again.

A secondary application of this product is for use as an anti-theft device. By completely removing the knob, the vehicle cannot be started. Installing the included fuse holder (to bypass the switch) allows power flow to low current accessories ie, alarm, clock or door locks, but high current loads like a starter motor will not function until the knob is re-installed. The fuse can be removed to completely disconnect power.



BMS-I (Kit - Suit Top Post)

BMS-2 (Kit - Suit Side Post)

Part Number BMS-1 BMS-2	<u>Description</u> Top Post Battery Switch Kit Side Post Battery Switch Kit	
	Both Kits Contain:	

I x Battery switch. I x Inline mini fuse holder.

Lx 20A Mini fuse

2 x Crimp terminals.

I x Wing nut & bolt.

Ampere Rating: 100A continuous, 600A cranking.

**Negative Top Post** 



**Negative Side Post** 



Scan this **OR Code** for more information



QR Code: 9019

#### Notes: Suitable for boats. Recommended by inboard and outboard motor manufacturers using DFI / FFI / EFI electronic fuel injection systems, but use without fuse and holder.

BATTERY DISCONNECT CIRCUIT BREAKER SERIES 53 The Series 53 Battery Disconnect Breaker Switch incorporates a traditional battery

disconnect switch (non-engine) & circuit breaker into a single device. This unique single rotary switch allows OEM cost savings by eliminating the added components, material and labour of a separate battery switch and circuit breaker / fuse. For end users and maintenance personnel, the Series 53 provides a quick way to disconnect traditional downstream circuit(s) to prevent unintentional battery drain or provide disconnected battery power during storage and/or maintenance.

- Current ratings IOA to 70A. Voltage 32VDC.
- · Rotary switch knob, with Push to Reset breaker button.
- · One-Piece terminal stud design never loosens over time.
- Designed for panel mounting (front or rear of panel).
- Ignition protected and weatherproof IEC 60529, (IP66 & IP67).
- · Designed and manufactured in USA.
- Housing: Thermoplastic.
- · Approvals: UL 1077, SAE J553, ABYC, CE



For complete product details on this product please see catalogue page 56.



IGNITION

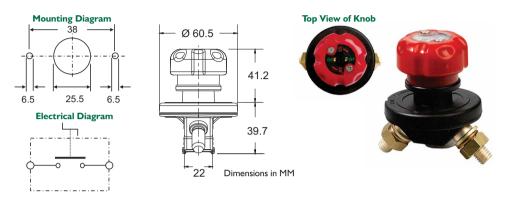
#### **BATTERY DISCONNECT SWITCHES 12-24VDC**



Manual Battery Disconnect Switch with ROTATE to SWITCH ON & PUSH KNOB to SWITCH OFF in the event of an emergency. Switch status is indicated though a window on the top of the knob.



Part		Intermittent		Ingress			
Number	Amperage	Current	Circuitry	Rating	Mount	Terminals .	Notes
08080200	150A	1200A at 5s	SPST	IP65	Through-Hole	MIO Ag Plated Copper	Push to Off



#### **BATTERY DISCONNECT SWITCH 12-24VDC**



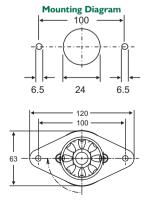
The Littelfuse Battery Disconnect Switch features a TURN to SWITCH ON and PUSH to OFF operation. Easy to operate and shut off vehicle power in emergency situations. Switch features an identical mounting pattern to metal body removable key switches, so the same application has multiple options with minimal design changes.

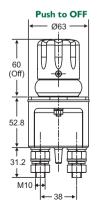


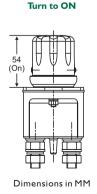
#### **Features**

- 250A continuous current rating.
- Waterproof and dust proof to IP65.
- Push to off emergency shutdown feature.
- Highly visible bright red handle.

Part Intermittent Ingress Number Circuitry Rating Contacts Amperage Current Mounting **Terminals** 08098400 2500A at 3s Silver Plated Brass 250A SPST IP65 Flange Mount MI0 Brass











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# **¼** Littelfuse®

These battery disconnect switches all feature a removable key handle and compact plastic body. The 08098700 is the standard manual battery disconnect switch rated to 100A with M8 terminals. The 08098780 is rated to 150A max, continuous current with M10 stud terminals designed for heavier current loads which makes it one of the most popular products for 12V or 24V applications. The 08099080 is also rated to 150A with M10 terminals, but features both a seal on the handle and a tethered cover to seal the key hole when the handle is removed. It's weatherproof to IP43.



Part		Intermittent		Ingress		Copper	Terminal	
Number	<b>Amperage</b>	Current	Circuitry	Rating	Mount	Terminals	<b>Hardware</b>	Notes
08098700	100A	500A at 5s	SPST	IP4X	Flange	M8	Steel-Zinc	-
08098780	150A	1000A at 5s	SPST	IP4X	Flange	MI0	Brass	-
08099080	150A	1000A at 5s	SPST	IP43	Flange	MI0	Steel-Zinc	Key Seal & Cap

# Flange

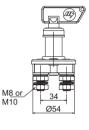
#### **Electrical Diagram**





Dimensions in MM

**BATTERY DISCONNECT SWITCHES 12-24VDC** 







08098700 08098780

08099080

#### **BATTERY DISCONNECT SWITCH 12-24VDC**



Manual battery switch with removable or fixed handle and available with weather protective boots. 08098800 - Switch with removable handle. Interchangeable with Bosch. 0341002003 switches. 08098881 - Switch with removable handle and chain. Includes red, yellow rubber boots & black cover for weather protection and to help identify different applications.

08098882 - Switch with fixed handle and integrated lock-out tag-out. Red, yellow and black rubber boots for weather protection and to help identify different applications. This new design that does not require an accessory for lock-out tag-out functionality.



Part		Intermittent		Ingress		Copper	Ierminal	
Number	Amperage	Current	Circuitry	Rating	Mount	Terminals	Hardware	Handle
08098800	250A	2500A at 3s	SPST	IP65	Flange	MI0	Zinc-Plated	Removable
08098881	250A	2500A at 3s	SPST	IP65/IP69K	Flange	MI0	Zinc-Plated	Removable
08098882	250A	2500A at 3s	SPST	IP65/IP69K	Flange	MI0	Zinc-Plated	Fixed

#### **Electrical Diagram**



# Mounting Diagram





08098800





08098881

08098882



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#### **MASTER DISCONNECT SWITCH 6-32VDC**



The 75920 Master Battery Disconnect switch is designed to protect service personnel and your vehicle systems. The switch protects vehicles from both battery drain and theft as well as allowing service personnel to lock-out tag-out. It also serves as an effective emergency power cutoff.







#### **Features**

- High amperage capacity: 400A at 12V DC.
- Can be used in high side or low side applications.
- Waterproof and dustproof to IP68.
- Composite engineered polymer housing will not rust or corrode.
- Tested per SAE 1455 for salt, calcium chloride and magnesium chloride.
- Large red knob is easy to operate with gloves.
- 90° switch travel makes it easy to identify the switch position.
- Large divider on base prevents accidental shorting of high energy cables.
- Fits standard Master Disconnect mounting pattern.

Part			Ingress	Switch Pos		Actuator
Number	<u>Voltage</u>	Circuitry	Rating	Symbol	Feature	Colour
75920	6V-36V	SPST	IP68	"On"-"Off"	Lockout	Red
75920-01	6V-36V	SPST	IP68	"On"-"Off"	Lockout	Yellow 📉



Continuous Current: | 2V:400A

24V:300A 36V:200A

Intermittent Current: 12V:1000A, 90sec on, 5 min off.

12V:1500A, 60sec on, 5 min off. 12V:2000A, 30sec on, 5 min off. 12V:3000A, 15sec on, 5 min off.

Operating Temperature: -40 to 85 degC Terminal Studs: Copper 3/8"-24. Hardware: Stainless steel nuts (included)

Corrosion Test: 96 hours - salt spray test to ASTM standard.

Vibration and Shock Test: SAE 11455 Ingress Protection Rating: IP68.

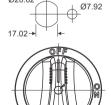
Approvals: SAE ( RoHS

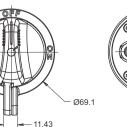
#### **Mounting Diagram #I Without Panel Punch**



#### #2 With Panel Punch

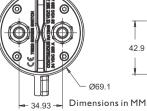
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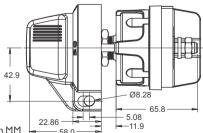




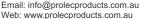














#### **MASTER DISCONNECT SWITCH 48VDC**

The Littelfuse Master Disconnect Switch isolates the batteries and eliminates battery drain when vehicle is stored overnight or for longer periods. Electrically cuts off battery power for safety or when the vehicle is being serviced. Units have a depth of only 75mm (knob front to end of studs) - can be installed in locations where behind-panel space is limited.





**¼** Littelfuse











#### Features

- 300A continuous current rating.
- Ignition protected to SAE JI 17 I and ISO 8846 for installation in a battery box or on vehicles carrying hazardous loads.
- Plastic construction will not corrode.
- Stands up to road splash and salt spray.
- Ingress protected to IP67/ IP69K.
- Switch can be mounted anywhere on the vehicle.
- Stainless steel hardware (included) and tin-plated copper contacts minimize resistance in harsh environments.

Part			Cranking Rating	Ingress	
Number	Voltage	<u>Amperage</u>	12VDC, 30 Sec	Circuitry	Rating
880062	48V	300A	1250A (1 x 4/0 cable)	SPST	IP67 / IP69K

Mounting: Panel Mount. Front or Rear Options. Front Panel Mount: 67mm (2-5/8") Hole. See (A) Rear Panel Mount: 60mm (2-3/8") Hole. See (B) Terminal Stud Size: 3/8"-16 (accepts MI0 terminals).

Terminal Studs: Tin-plated copper. Hardware: Stainless steel nuts (included). Ingress Protection Rating: IP67 / IP69K.

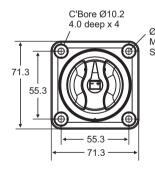
Ignition Protection: Meets ISO 8846 & SAE JI 171

Inrush Rating (2 sec): 3,500A.

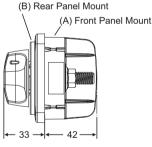
Cranking rating (2 sec): 1,250A (1 x 4/0 cable)

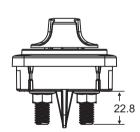


Rear Side



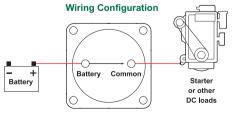








Dimensions in MM



Master Battery Disconnect (shown in ON state)



# **MASTER DISCONNECT SWITCH 36-48VDC**

The Littelfuse Master Disconnect Switch isolates the batteries and eliminates battery drain when vehicle is stored overnight or for longer periods. Electrically cuts off battery power for safety or when the vehicle is being serviced. Units have a depth of only 75mm (knob front to end of studs). can be installed in locations where behind-panel space is limited.

**Littelfuse** 













D - -- 4

- 300A continuous current rating.
- · Lockout feature. Padlock capability.
- Switch can be mounted anywhere on the vehicle.
- Plastic construction will not corrode.
- Stands up to road splash and salt spray.
- Ingress protected to IP67/ IP69K.
- Ignition protected to SAE J1171 and ISO 8846 for installation in a battery box or on vehicles carrying hazardous loads.

Cranking Pating

• Stainless steel hardware (included) and tin-plated copper contacts minimize resistance in harsh environments.

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Number	Voltage	Amperage	12VDC, 30 Sec	Circuitry	Rating	<u>Feature</u>
880064	48V	300A	1250A (1 x 4/0 cable)	SPST	IP67/IP69K	Lockout
880154	32V	600A	2500A (1 x 4/0 cable)	SPST	IP67 / IP69K	High Cranking & Lockout

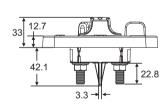
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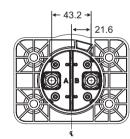
Mounting: Flange Mount.

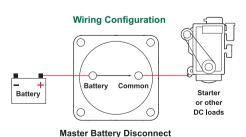
Terminal Stud Size: 3/8"-16 (accepts MI0 terminals).

Terminal Studs: Tin-plated copper. Hardware: Stainless steel nuts (included). Ingress Protection Rating: IP67 / IP69K. Ignition Protection: Meets ISO 8846 & SAE | | | | 7 |

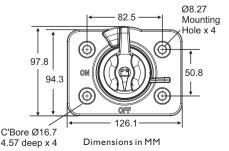




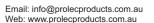




(shown in ON state)







# **MASTER DISCONNECT SWITCH 12-48VDC**

multiple batteries, in either the positive or the negative line.

**Littelfuse** 











- 500A continuous current rating per circuit.
- Ingress protection to IP67 and IP69K means that the switch can be mounted in exposed locations on the vehicle.

The Littelfuse Master Disconnect 2 Pole Switch cuts all battery power from vehicle electrical systems with applications needing switching of two circuits. Can be used to switch two vehicle voltage circuits simultaneously (24V & 12V). Disconnect a battery or

- Drop-in replacement for competitive Master Disconnect Switches, with higher vibration and shock capabilities.
- Direct lockout/tagout capability in On or Off position, with padlock or hasp.

Part Number 880175 880175-0001 880175-0002	Amperage 500A 500A 500A	Switch Circuit DPST DPST DPST	Ingress <u>Rating</u> IP67 / IP69K IP67 / IP69K IP67 / IP69K	Mount Surface Surface Surface	Actuator Colour Black Red Yellow
880175-0002	500A	DPST	1P6//1P69K	Surface	Yellow



Voltage: 48VDC.

Max Continuous Current Ratings:

500A per circuit with  $2 \times 4/0$  input and  $2 \times 4/0$  output cables. 350A per circuit with  $1 \times 4/0$  input and  $1 \times 4/0$  output cables.

Terminal Stud Size: M12 x 25mm. Terminal Studs: Tin-plated copper Hardware: Stainless steel nuts (included) Ingress Protection Rating: IP67/IP69K.

Inrush Rating (I sec): 3,000A per circuit with  $2 \times 4/0 + 1 \times 2$  AWG.

Cranking rating (30 sec):

2,250A per circuit with  $2 \times 4/0$  input and  $2 \times 4/0$  output cables. 1,750A per circuit with  $1 \times 4/0$  input and  $1 \times 4/0$  output cables.

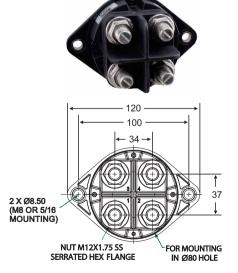
Temperature Rating: -50 °C to +85 °C, DC-Rated to 105 °C.
Recommended Terminal Torque: 20 Nm (30Nm max).

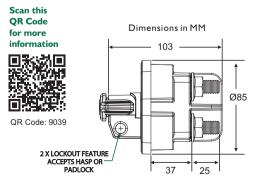
Recommended Mounting Torque: 15Nm (20Nm max).

**Notes:** Ambient temperature can reach 105  $^{\circ}$ C with appropriate derating. Stud terminals must never exceed 125  $^{\circ}$ C under any condition.











# BATTERY DISCONNECT SWITCH 24VDC



250A-500A bipolar disconnect switch with fixed or removable handle. Modern design, made of high performance materials in terms of resistance to high temperatures, chemical and atmospheric agents. This battery master switch represents an evolution of our expertise and is also supplied in up to 500A DC version.

# **NEW**



#### **Features**

- Product series features modern advancements in the design evolution of manual battery disconnects.
- Smartkey allows operator to make the handle removable or fixed, locking it in either the OFF or ON position.
- Protective rubber cap with an auto-protection feature ensures dirt protection when the handle is inserted.
- Up to 500A continuous current.
- IP69K rating for high pressure wash.

### **Applications**

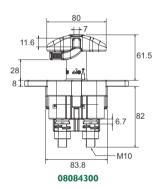
Heavy Trucks Off-Road Construction Material Handling Mining Vehicles Agriculture Marine Emergency Vehicles

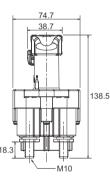
Part		Intermittent		Ingress		Silver Plated
Number	Amperage	Current	Circuitry	Rating	Mounting	<b>CopperTerminals</b>
08084300	250A	1000A at 10s	DPST	IP67/IP69K	Flange	MIO
08084400	500A	1500A at 10s	DPST	IP67/IP69K	Flange	MI2

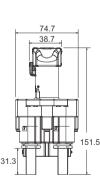
Voltage: 24VDC.

Terminal Stud Size: noted above.
Terminal Studs: Tin-plated copper

Hardware: Stainless steel nuts (included) Ingress Protection Rating: IP67 / IP69K. Temperature Rating: -40 °C to +85 °C

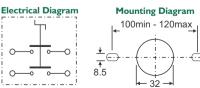






M12





83.8 **08084400** 

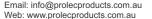
28

Dimensions in MM

61.5

M12





### Part Number 9602460

**Economy Crimper:** Suits insulated terminals. **Wire Size Range:** 0.25mm<sup>2</sup> to 6mm<sup>2</sup>

Notes: Economy Type.

Pack Size: |



### Crimping Range

• 0.25-1.5mm² AWG20-16

2.5mm² AWG14

4-6mm² AWG12-10

Part Number 9602500

Ratchet Crimper: Suits insulated terminals. Wire Size Range: 0.25mm² to 6mm²

Pack Size: |



0.25-1.5mm<sup>2</sup> AWG20-16

2.5mm² AWG14

4-6mm² AWG12-10



# TERMINAL CRIMPING TOOL

Part Number 9602450

Economy Crimper: Suits terminals. Wire Size Range: 1.5mm<sup>2</sup> to 6mm<sup>2</sup>

Pack Size: |



Part Number 9602455

Ratchet Crimper: Suits terminals. Wire Size Range: 0.5mm<sup>2</sup> to 6mm<sup>2</sup>

Pack Size: |



# **TUBULAR TERMINAL CRIMPING TOOL**

PROLEG

Part Number CRIMPER-04

Crimps: Tubular terminals.

Wire Size Range: 10mm<sup>2</sup> to 95mm<sup>2</sup> Wire Size Range: #8AWG to 3/0AWG Notes: Tool can also be held in vice jaws.

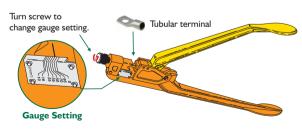
Pack Size: |

#### **RELATED PRODUCTS:**



**Tubular Terminals** 

(see p.188)





# TERMINAL CRIMPING TOOL



This tool is designed to crimp a terminal and a seal onto a stripped end of a electrical cable.

Part Number CT-P78

Crimps: Aptiv Delphi Metri-Pack 150 & 280 & Tyco AMP MCP 2.8 terminals.

Terminal Gauge Range: #22 to I 2AWG (0.35mm² to 3mm²)
Features: Parallel jaw design eliminates terminal rocking.
Notes: Suits terminals used with PDM's products including;

Littelfuse BPDMA104, PDM3100, PDM2100,

Bussmann CFH, 15300, 15400, XTCK4

Pack Size: |



### **Crimping Tool Head Legend**

- A: Crimp Metri-Pack 150 seals
- B: Crimp Metri-Pack 280 & AMP MCP 2.8 seals
- I: Crimp #22 (0.35mm²) terminals
- $\boldsymbol{2}$  : Crimp #20 to #18 (0.5 to 0.8mm²) terminals
- 3: Crimp #16 to #14 (1.0 to 2.0mm²)terminals
- 4: Crimp #12 (3.0mm<sup>2</sup>) terminals



Scan this QR Code for more information



QR Code: 8001

Need help using this crimp tool? Scan the QR code to view instructions.

# **RATCHET TERMINAL CRIMPING TOOL KIT**



These tools are designed to crimp a terminal and cable seal onto a stripped end of a electrical cable.



### Features:

- · Quickly change between different jaw sets.
- Ratchet mechanism with automatic quick release.
- Parallel jaw design eliminates terminal rocking.
- Crimps terminal and seal in one press.



CT-JA18B pictured with jaw set inserted

Part Number Kit Includes

CT-IA18B

Quick change ratchet crimper tool (8.7") 220mm H6 Jaw set to suit: (#22/20-18AWG) 0.35/0.5-0.8mm²

H7 Jaw set to suit: (#16-14/12AWG) 1.0-2.0/3.0mm<sup>2</sup>

Crimps: Aptiv Delphi Metri-Pack 280 & Weather Pack terminals. Terminal Gauge Range: #22 to I 2AWG (0.35mm² to 3mm²) Features: Parallel jaw design eliminates terminal rocking. Notes: Suits terminals used with PDM's products including; Littelfuse BPDMAI04, PDM3I00, PDM2I00, Bussmann CFH, I5300 & I5400, XTCK4 Pack Size: I

### **Crimping Tool Set Legend**

H6 Position I: Crimp #22 (0.35mm²) terminals

**H6 Position 2**: Crimp #20 to #18 (0.5 to 0.8mm²) terminals **H7 Position 1**: Crimp #16 to #14 (1.0 to 2.0mm²) terminals

H7 Position 2: Crimp #12 (3.0mm²) terminals



H6 Jaw set



H7 aw set



# TERMINAL CRIMPING TOOL OEM STYLE



Part Number 06285847

Crimps: Aptiv Delphi Pack-Con Series 3 & 5 Terminals. Two cavity crimp tool. Spring loaded. Terminal Gauge Range: #20 - #10AWG (0.5mm² to 5mm²)

Notes: Suits terminals used with Bussmann RTA Autofuse panels 157 series fuse blocks (p 92). Crimps core wings only. Pack Size: I



# TERMINAL REMOVAL TOOLS DELPHI APTIV



These tools are designed to remove terminals fitted in PDM's, holders or connectors.

Part Number 12094429



Extracts: Delphi GT 150: GT 280: 150 Metri-Pack: 280 Metri-Pack: 280 Tangless & 280 Bus Bar: 630 Pull-To-Seat; Lamp Socket Bases, B-I & W-3; 800 Metri-Pack Female.

Notes: As used in Bussmann I 5303, I 5305, I 5401, CFH-A series Power Distribution Modules.

As used in GEP FRH-A24, PDM-R3AC1, PDM-S3AC1, PDM-U3AC1 Power Distribution Modules. As used in Littelfuse BPDMA104, PDM31001 and PDM71001 Power Distribution Modules.

Pack Size: |

Part Number 12094430

12094430

Extracts: Delphi Pack-Con series 3 & 5 terminals.

Notes: As used in Bussmann RTA 157 series rear terminal fuse blocks (p 92).

Pack Size: 1

# **TERMINATED & SEALED CABLES**



These pre-terminated and sealed cables and jumpers have been designed for quick installation into Power Distribution Modules (PDM's) with cavities that mate with Delphi Aptiv 280 Metri-Pack terminals and seals. They are available in two models: Tangless or Tanged. The dual terminated and sealed jumpers are a quick way to link a mini fuse cavity to a ISO 280 relay cavity. Whilst the single terminated and sealed cables can be used for power or signal applications. The un-terminated end can be joined to other cables simply with a butt splice connector.

Part Number	Product	Termination Type	Cable Specifications	Suit Various PDM's
CAB2.0X85TS1J	lumper	Dual End, Tangless	Red 1.84mm <sup>2</sup> x 90mm	15303-1 to 15303-6,
CAB2.0X300TS1	Cable Lead	Single End, Tangless	Red 1.84mm <sup>2</sup> x 300mm	15305-1, 15305-2, 15305-3,
CAB2.0X300TS2	Cable Lead	Single End, Tangless	Blue 1.84mm <sup>2</sup> x 300mm	15305-4, 15305-5, 15305-6,
CAB2.0X85TS1TJ	lumper	Dual End, Tanged	Red 1.84mm <sup>2</sup> x 90mm	BPDMA104, CFH-Axx,
CAB2.0X300TS1T	Cable Lead	Single End, Tanged	Red 1.84mm <sup>2</sup> x 300mm	FRH-A24, PDM-3AC1,
CAB2.0X300TS2T	Cable Lead	Single End, Tangled	Blue 1.84mm <sup>2</sup> x 300mm	PDM-S3ACI, PDM-U3ACI,
			4 5	PDM-31001, PDM71003
			LP 4L	15401 15402 15403 15404

Terminal Type: Delphi Aptiv Metri-Pack 280

Notes: As used in Bussmann RTMR rear terminal fuse / relay blocks.

Pack Size: 1, 10, 50, 100

CAB2.0X85TS1x











# TERMINAL, SEAL AND CAVITY PLUG KITS

# PROLEG

#### Features:

- Suits various models of hard wired power distribution modules.
- Fitted with genuine original equipment components.
- Australian designed & made compartment box. Kitted locally.



### 280 Tangless Female Sealed - I 20pcs

Suits: Bussmann RTMR's 15305 & 15305 Series

Part Number Kit Contains:

TERMKIT001 10pcs x 0.8 - 1.0MM Terminals:

30pcs x 1.0 - 2.0MM 10pcs x 2.0 - 3.0MM

Cable Seals: 10pcs x 2.03 - 2.85MM Green

30pcs x 2.81 - 3.49MM Grey 10pcs x 3.45 - 4.3MM Blue

Cavity Plugs: 20pcs x 6.7MM Green



# 280 Tanged Female Sealed - 170pcs

Suits: GEP Power PDM's 280 Style Littelfuse HWB I 8 & HWB 60

Kit Contains: Part Number

TERMKIT002 Terminals: 10pcs x 0.8 - 1.0mm

40pcs x 2.0 - 3.0mm 20pcs x 5.0mm

Cable Seals: 10pcs x 2.03 - 2.85mm Green

40pcs x 2.81 - 3.49mm Grey 20pcs x 3.45 - 4.3mm Blue

Cavity Plugs: 30pcs x 6.7mm Green



# 280 Tanged Female Sealed - 310pcs

Suits: GEP Power PDM's 280 Style Bussmann RFMR's 154 Series

Part Number Kit Contains:

TERMKIT003 Terminals: 20pcs x 0.8 - 1.0mm

 $70pcs \times 2.0 - 3.0mm$ 40pcs x 5.0mm

Cable Seals: 20pcs x 2.03 - 2.85mm Green

70pcs x 2.81 - 3.49mm Grey 40pcs x 3.45 - 4.3mm Blue

Cavity Plugs: 50pcs x 6.7mm Green



### MCP 2.8 Tanged Female Sealed - 170pcs

Suits: Bussmann RTMR 15310 Series

Part Number Kit Contains: TERMKIT004

Terminals: 30pcs x 0.5 - 1.0mm

40pcs x 1.5 - 2.5mm

Cable Seals: 30pcs x 1.5 - 2.1mm Blue 40pcs x 2.2 - 3.0mm White Cavity Plugs: 30pcs x 6.7mm Natural





# **INSULATED HEAT SHRINK BUTT SPLICE CONNECTORS**



Perma-Seal splices provide a rugged, environmentally sealed connection for wire sizes that will insulate, seal and protect joints from physical abuse and abrasion, water, salt and other corrosive compounds.

Part Number 19164-0013	Connector Butt Splice	Wire Gauge 22-18AWG	<u>Colour</u> Red	A (mm) 15	B (mm) 39.4	C (mm) 4.7
19164-0044	Butt Splice	16-14AWG	Blue	15	39.4	4.95
19164-0056	Butt Splice	12-10AWG	Yellow	15	45.7	6.99



Barrel Type: Closed

Material Plating - Mating & Termination: Tin

Material Metal: Copper Insulation: NiAc™

Temperature Range Operating: -55°C to +125°C

Wire Insulation Diameter: 5.97mm max.

Pack Size: 10, 50, 100, 500



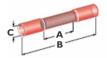


I/. Insert both cables & crimp



2/. Apply heat to seal





# MALE & FEMALE PVC INSULATED DISCONNECTS



Part Number	Nylon Insulated	Wire Section	LI (mm)	L2 (mm)	Dia	Colour
1852000	I/4" Male Push On	0.25-1.00mm <sup>2</sup>	12	21.0	1	Red
1856000	I/4" Male Push On	1.00-2.50mm <sup>2</sup>	12	21.0	2	Blue
1862000	I/4" Male Push On	2.50-6.00mm <sup>2</sup>	13	22.5	3	Yellow
1851500	I/4" Female Push On	0.25-1.00mm <sup>2</sup>	-	23.5	4	Red
1855500	I/4" Female Push On	1.00-2.50mm <sup>2</sup>	-	23.5	5	Blue
1860500	I/4" Female Push On	2.50-6.00mm <sup>2</sup>	-	24.0	6	Yellow



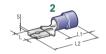




Crimping Tools (see p. 184)

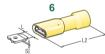




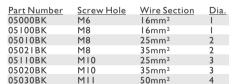








# **TUBULAR TERMINAL CRIMPING TOOL**



# MIA



### **RELATED PRODUCT:**

MI3

05040BK





75 mm<sup>2</sup>









# Information, Notes & Part Number Index

# Industry know-how.



INFORMATIC



Fuses are current sensitive devices and selected to be the weakest link in the circuit. Circuit protection is provided when the fuse link melts and safely interrupts the over current demand. The key criteria to judge the performance of a fuse is the time versus current characteristic curve. This curve can be used to match the fuse with the anticipated over current load expected in the application.

### **Types of Over Current**

Short Circuit: A short circuit is a current condition that greatly exceeds the rating of the device. It is caused when a malfunction or accident creates a break in the normal path allowing electricity to flow directly to ground. This shorter current path bypasses the resistance offered by the circuit components connected in the normal current path. In this situation, there is virtually no resistance to impede the current and the current will build to a level where the heat generated can cause insulation or equipment breakdown.

**Overload:** An overload is an over current that is within the normal current path. Overloads occur when the current exceeds the value for which the equipment or associated wiring is rated. This typically occurs when too many devices are connected to the circuit or when a device connected to the circuit malfunctions. Sustained overloads may slowly cause overheating of the wiring and the components. The circuit protection device must open before these types of overloads cause damage.

### **Selecting Over Current Protection**

During normal conditions, an over current protection device must carry the current without nuisance openings. However, when an overload or short circuit occurs, the device must interrupt the over current and withstand the voltage across the device after arcing. To properly select an over current device, the following items must be carefully considered:

**Voltage Rating:** Represents the maximum system voltage present in the circuit in which the over current device is installed. The system voltage should not exceed this value for proper operation of the device during an over current event

**Current Rating:** This is the ampere value marked on the circuit protection device. It is established by the manufacturer as a value of current which the device can carry, based on a controlled set of test conditions. The current rating of a fuse is typically de-rated by 25% to ensure continuous operation in an ambient temperature of  $25^{\circ}$ C and avoid nuisance blowing. Example: A fuse with a current rating of 10A is usually recommended for operation at no more than 7.5A ( $10A \times 0.75$ ) based on an ambient temperature of  $25^{\circ}$ C. If the ambient temperature is higher, a re-rating must be calculated as per the section below.

**In-rush Characteristics:** During the operation of protected equipment, system current can significantly vary. This is particularly evident when motor or other inductive loads in the circuit cause large current surges during start-up or shutdown. A time-delay fuse should be used in applications where in-rush currents are possible.

### **Re-rating For Ambient Temperature**

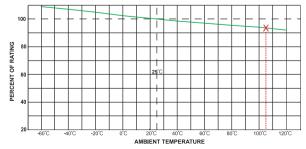
The current carrying capacity tests of fuses are performed at 25°C and will be affected by changes in ambient temperature. At higher ambient temperatures, a fuse will respond faster to a given overload. Conversely, at lower ambient temperatures, a fuse will respond slower to a given overload. Selecting the correct fuse for higher or lower ambient temperatures requires the use of an ambient temperature re-rating chart. These charts vary by product and manufacturer ie. a slow acting fuse will have a different re-rating curve to a fast acting fuse.

**Example:** We need to select the correct fastacting fuse for a circuit with a normal operating current of 15A and an ambient temperature of 105°C.

The formula below uses a 105°C re-rating factor of 0.88 (read from the chart on the right) and the standard 25°C de-rating factor of 0.75

Normal Operating Current Re-rating x De-rating 15A 0.88 × 0.75

The fuse rating we require is: 22.73A at 105°C.







### Thermal Circuit Breakers

The basic components of a thermal circuit breaker are the composite alloy reed, two precious metal contacts and the interconnecting terminals. When an over current occurs, heat is generated as the current flows through the reed causing the reed to deflect and snap open. This separates the contacts and safely interrupts the current flow. Two important parameters used to judge the performance of thermal circuit breakers are the time versus current characteristic curve, similar to the fuse, along with the speed at which the contacts snap open. The relative speed at which the contacts separate is a measure of the cycle life under electrical loading demands.

### **Types Of Thermal Circuit Breakers**

In contrast to fuse links, thermal Circuit Breakers are resettable. There are SAE definitions for the different types of thermal circuit breakers. Four different reset operational methods are generally available. Type I, Type III and Type III\*.

Type I (Automatic Reset): Cycles or continuously resets until the fault is corrected. Type I circuit breakers are typically used to protect circuits which occasionally experience momentary overloads such as wiper motor and headlamp circuits where a self resetting device is preferred. They are not designed for long term cycling. It is recommended they are installed downstream of a main fuse, manual reset breaker or momentary switch.

Type II (Modified Reset): Non-cycling. Once tripped, the open circuit condition is maintained, except for a low milliamp draw through the resistor. The circuit breaker resets when power is turned off. Requires a minimum voltage/current to maintain open circuit. Type II circuit breakers are typically used in applications where fuse replacement is objectionable, such as power window, seat and sunroof circuits.

**Type III (Manual Reset):** Non-cycling. Manually resettable circuit breakers remain in the open position until a button, lever or other external reset device is manually depressed to re-engage the circuit. Type III circuit breakers are typically used in applications where a manual reset is desired for safe diagnosis of a circuit fault.

**Type III\* (Manual Reset - Push to Trip):** Same as a Type III manual reset breaker however the user can press a button on the breaker to open the circuit manually.

Type III\* (Manual Reset - Switchable): Same as a Type III manual reset breaker however the user can open the circuit by moving an external switch lever to the OFF position. This same lever can be used to re-engage the circuit by moving the lever back to the ON position, just like a switch.

















Type II

Modified Reset
(Switch Power
Off / On To Reset)



Type III

Manual Reset
(Push Button To Reset)



Type III P.T.T Manual Reset (Push Button To Trip Move Lever To Reset)



Type III Switchable Manual Reset (Moveable Lever)





### Match Wire Gauge To Fuse

In order to protect wiring under all overload and short circuit conditions, it is necessary to standardize the fuse and wire selection process. Fuses have controlled opening characteristics and each wire gauge has its respective current carrying capacity. Fuses need to be selected to always protect the wire insulation from damage. In the selection of wire gauge at various ambient temperatures, it is important to consider the worst case or highest ambient temperature for the application. Wires derate to a much higher degree than fuses, because wire insulation temperature capability is affected much more severely.



Littlefuse provide the following table advising the recommended maximum continuous current rating for the size of wire based on the type of insulation (either GXL or GPT) and the ambient temperature (25°C, 80°C or 105°C).

W	/ire Size			Maximum Continuous Current (Amperes)				
AWG	B&S	mm²	mm (dia.)	At 2 GXL	At 25°C GXL GPT		0°C GPT	At 105°C GXL
-	-	0.3	0.62	15	10	GXL	4	9
20	_	0.5	0.81	21	15	16	6	13
-	_	0.75	0.98	27	21	20	7	17
18	-	0.8	1.02	31	22	23	7	19
16	-	1.0	1.29	33	23	25	9	20
15	-	1.5	1.45	43	30	33	12	27
14	-	2.0	1.63	50	36	37	14	32
13	-	2.5	1.83	60	42	45	15	38
12	-	3	2.05	68	47	51	18	42
-	-	4	2.26	80	56	61	22	50
10	-	5	2.59	90	65	68	23	58
-	-	6	2.76	103	73	78	28	64
8	8B&S	8	3.26	125	87	96	30	79
-	-	10	3.57	146	103	111	40	90
6	6B&S	13	4.12	170	120	129	47	105
4	-	19	5.19	221	156	166	61	137

### Wire Size Definitions:

American Wire Gauge or AWG for short (used within the US) - is the standard method denoting wire diameter. Measuring the diameter of the conductor (the bare wire) with the insulation removed. AWG is sometimes also known as Brown and Sharpe (B&S) Wire Gauge. Whilst countries outside of the US use a metric measurement ie  $mm^2 = Millimetres$  Squared.

### Wire Insulation Types SAE J-1128:

**GXL**: General purpose cross link polyethylene insulation wire with a maximum insulation temperature of 155°C. Type GXL automotive primary wire is the most common type. It works with most standard automotive wire connectors and may be applied in engine compartments where higher heat resistance is required according to SAE J-1128. GXL automotive wire is thin-walled, giving it a small diameter for hard-to-fit areas in trucks and trailers. Its recommended temperature range is -51°C to 125°C.

**GPT**: General purpose thermoplastic insulation wire with a maximum insulation temperature of  $90^{\circ}$ C. Type GPT automotive wire is intended for use whenever SAE J-I 128 specifies general circuit wiring. GPT automotive primary wire features extruded insulation and has a recommended temperature range of  $-40^{\circ}$ C to  $80^{\circ}$ C.



# **WIRE GAUGE SELECTION (CONTINUED)**



Maximum Allowable Amperage Of Conductors Under 50 Volts (Per SAE J-378)

	Wire Siz	ze	80			f Conducto 5°C	or Insulation 125°C			
Wire	Wire	Wire	Outside	Inside	Outside	Inside	Outside	Inside		
Gauge	Gauge	Gauge	Engine	Engine	Engine	Engine	Engine	Engine		
AWG	mm²	mm (dia.)	Spaces	Spaces	Spaces	Spaces	Spaces	Spaces		
18	0.8	1.02	I5A	11.7A	20A	17.0A	20A	22.3A		
16	1	1.29	20A	15.6A	25A	21.3A	30A	26.7A		
14	2	1.63	25A	19.5A	35A	29.8A	40A	35.6A		
12	3	2.05	35A	27.3A	45A	38.3A	50A	44.5A		
10	5	2.59	50A	39.0A	60A	51.0A	70A	62.3A		
8	8	3.26	70A	54.6A	80A	68.0A	90A	80.IA		
6	13	4.12	100A	78.0A	120A	102.0A	125A	111.3A		
4	21	5.19	130A	101.4A	160A	136.0A	170A	151.3A		
3	26	5.83	150A	117.0A	180A	153.0A	195A	173.6A		
2	33	6.54	175A	136.5A	210A	178.5A	225A	200.3A		
- 1	42	7.35	210A	163.8A	245A	208.3A	265A	235.9A		
0	53	8.25	245A	191.1A	285A	242.3A	305A	271.5A		
00	67	9.26	285A	222.3A	330A	280.5A	355A	316.0A		
000	85	10.40	330A	257.4A	385A	327.3A	410A	364.9A		
0000	107	11.68	385A	300.3A	445A	378.3A	475A	422.8A		

# **INGRESS PROTECTION (IP) RATING**

The Ingress Protection rating is a two-digit number used to rate the degree of protection provided against the intrusion of solid objects (including body parts like hands and fingers), dust, accidental contact and water in mechanical casings and with electrical enclosures. The first digit represents protection against ingress of solid foreign objects. The second digit represents protection against harmful ingress of water. The higher each rating, the more protection is offered as shown in tables below.

Val	ue Protection from SOLIDS								
x	No protection.								
1	Protected against solid objects over 50mm e.g. hands, large tools etc.								
2	Protected against solid objects over 12.5mm e.g. fingers, tools etc.								
3	Protected against solid objects over 2.5mm e.g. screwdriver, thick wires etc.								
4	Protected against solid objects over 1.0mm e.g. thin wires, screws etc.								
5	Dust Protected. Limited protection against dust ingress (no harmful deposit).								
6	Dust Tight. Totally protected against dust ingress.								



IP67 Example Catalogue Symbol For IP Rating

Valu	e Protection from WATER
x	No protection
1	Protected against vertically falling drops of water. Should have no harmful effect.
2	Protected against vertically dripping water at any angle of up to $15^\circ$ from the vertical. Should have no harmful effect.
3	Protected against water spray at any angle up to $60^\circ$ from the vertical. Should have no harmful effect.
4	Protected against water splashing against the enclosure from any direction. Should have no harmful effect.
4K	Splashed water, at high pressure, only for road vehicles.
5	Protected against low pressure water jets from any direction. Should have no harmful effect.
6	Protected against high pressure water jets from any direction. Should have no harmful effect.
6K	Powerful water jets, at high pressure (flooding), only for road vehciles $% \left( \frac{1}{2}\right) =\frac{1}{2}\left( \frac{1}{2}\right) =$
7	Protected against harmful effects of 30 min. immersion in water at depth of 15cm (top of device) to 1M (bottom of device).
8	Protected against continuous immersion in water at a depth and conditions specified by the manufacturer.

For pressure / steam jet cleaning, only for road vehicles.





The following table lists a range of standard Imperial bolts including the number of threads per inch according to each of the different standards. Metric bolts are also listed based on closest matching diameter. Metric bolts are not equivalent to Imperial bolts. To ensure proper fit, a bolt must be threaded into a nut of the same type. ie UNC 1/4" bolt with a UNC 1/4" nut. However, if you wanted to bolt down a product that is specified with an M8 hole size, you could use either an M8 bolt or a 5/16" bolt, as they both require a hole size approximately 8mm in diameter.

	IMI	PERIAL	BOLTS			METRIC B	OLTS	
Size (IMP.)	Size (MM)	BSW (TPI)	BSF (TPI)	UNC (TPI)	UNF (TPI)	Size (MM)	Metric Coarse (Thread Pitch)	Metric Fine (Thread Pitch)
#6	3.5	-	-	32	40	M3.5	0.6	0.35
#8	4.2	-	-	32	36	M4	0.7	0.5
3/16"	4.8	24	32	24	32	M5	0.8	-
#10	4.83	-	-	24	32	-	_	-
#12	5.5	-	-	24	28	-	-	-
1/4"	6.4	20	26	20	28	M6	1.0	-
5/16"	7.9	18	22	18	24	M8	1.25	1
3/8"	9.5	16	20	16	24	MI0	1.5	1.25
7/16"	Ш	14	18	14	20	-	-	-
1/2"	13	12	16	13	20	MI2	1.75	1.5
9/16"	14	12	16	12	18	MI4	2.0	1.5
5/8"	16	11	14	11	18	MI6	2.0	1.5
3/4"	19	10	12	10	16	M20	2.5	2.0
7/8"	22	9	11	9	14	M22	2.5	2.0
I"	25	8	10	8	12	M24	3.0	2.0
1-1/8"	29	7	9	7	12	M30	3.5	3.0
1-1/4"	32	7	9	7	12	M33	3.5	3.0

Abbreviations:

UNC = Unified National Coarse. BSW = British Standard Whitworth. IMP. = Imperial. UNF = Unified National Fine.

TPI = Number of threads per inch. BSF = British Standard Fine. MM = Millimeter.

# CALCULATING WATTS, AMPS & DC VOLTAGE

It is simple to calculate either DC Volts, Watts or Amps provided you know the other 2 values. Just use the appropriate formula as shown below;

Unknown Value	Known values	Example Answer
Watts =	Amps x Volts	$2A \times 12Vdc = 24W$
Amps =	Watts / Volts	24W / I2Vdc = 2A
DC Volts =	Watts / Amps	24W/2A = 12Vdc

# **IGNITION PROTECTION**



An electrical device that has been certified Ignition Protected is suitable for use in marine engine compartments and fuel tank spaces. There are generally two test standards accepted by the Marine Industry - SAE | 1171, External Ignition Protection of Marine Electrical Devices and ULI 500, Ignition- Protection Test for Marine Products. The requirements and test procedures for the two standards are similar. Essentially, three test results will allow a device to be certified IGNITION-PROTECTED.

- 1. The device or component is constructed so that a defined flammable hydrocarbon mixture surrounding the device will not ignite if a normal electrical arc, spark or heat source ignites the mixture inside the device.
- 2. Under the conditions of item 1, the device or component has insufficient energy to ignite the mixture inside the device.
- 3. Under the conditions of item 1, the source of ignition is hermetically sealed from the surrounding mixture. An Ignition- Protected device is not necessarily Explosion-Proof. Explosion-Proof devices are as applied to U.S. Coast Guard inspected vessels or as defined by the National Electric Code.



# **PACKAGING OPTIONS & DISPLAYS**

# PROLEG

### **Retail Clamshell - Single Cavity**







### Counter Displays Modular Multi Peg



### **Assortment Trade Kit**



**DIY Boxed Kit** 



### **Retail Clamshell Packaging Index**

The packaging index below lists the product types and pack quantities that are available in clamshell packaging. To order these products in blister packaging just add the SP or AP suffix to the part number. ie. To order a 5pc 'Spare Pack' of a 10A Minifuses (on page 15), use the part number: MIN010SP. ie. To order a 5pc 'Assortment Pack' of Minifuses (on page 15), use the part number: MIN000AP.

Product Type Series or Description	Spare Pack (SP) Pieces per Pack	Assortment Pack (AP) Pieces per Pack	Clamshell Type	Inner Box Packs per Box	Catalogue Page Number	
SFE Cartridge Fuse	5	10	Mini	10	10	
AGC Cartridge Fuse	5	5	Mini	10	10	
5AG Cartridge Fuse	2	_	Mini	10	12	
6AC / GBC Fuse	5	5	Mini	10	12	
Micro2, Micro3 & Mcase	_	16	Mini	10	35	
Micro2 Fuse	5	7	Mini	10	13	
Micro3 Fuse	5	4	Mini	10	13	
Low Profile Minifuse	5	5	Mini	10	14	
Minifuse	5	5	Mini	10	15	
Minifuse LED Indicating	2	5	Mini	10	15	
Autofuse	5	5	Mini	10	17	
Autofuse LED Indicating	2	5	Mini	10	17	
Maxifuse	Ī	_	Mini	10	18	
Maxifuse LED Indicating	i	-	Mini	10	18	
Fusible Links PAL	i	_	Mini	10	20-22	
Midi Fuse	i	_	Mini	10	24	
Mega Fuse		_	Mini	10	25	
Battery Fuse	l l	_	Mini	10	28	
Lift Truck Fuse ANL		_	Junior	10	27	
Mini Blade Breaker	l l	_	Mini	10	48	
Auto Blade Breaker		_	Mini	10	49-51	
Shortstop Breaker	i	_	MiniB	10	52-53	
14 & 15 Series Breaker	i	_	Mini	10	54	
18 Series Breaker	i	-	Midi	i	57	
Mid Range Breaker	i	_	Midi	i	63	
High-Amp Breaker	i	_	Maxi	i	64-66	
3AG Panel Mt. Holder	i	_	Mini	10	69	
3AG Inline Fuse Holder	i	_	lunior	10	69-71	
Mini & Auto Fuse Inline	i	_	Junior	10	72-77	
Maxi Fuse Inline Holder	i	_	Midi	10	80	
Add-A-Circuits All Styles	l i	_	lunior	10	83	
Midi Fuse Block		_	Junior	10	81-82	
Battery Fuse Bar Kit	l i	_	Midi	10	106	
Battery Tap	i i	_	Mini	10	161-162	
Relays	l i	-	Junior	10	164-166	
Fuse Pullers	i i	_	Mini	10	44	
Rocker Actuators	i	-	Mini	TBA	174	
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		01600KI	138	08098780	178	1507956	161
00011	111	01601	140	08098800	178	152001	80
00011FDUK	111	01602	140	08098881	178	152001KIT1	80
00330	75	01620	140	08098882	178	152001KIT2	80
00331	75	01630	140	08099080	178	152900	80
00341 00352	75 75	01650 01651	137 137	08240 08245	112 112	15305-1-6-3 15305-1-6-4	129 129
00357	75 75	01655	137	08250	112	15305-1-6-4	130
00358	44	01660KI	138	08331	138	15305-2-0-4	132
00359	68	01690K	138	08332	138	15305-4-0-4	131
00380KI	82	01698K	138	08401	138	15305-5-6-4	131
00380K2	82	01706	140	08502	138	15305-6-6-4	131
0390	79	01707	140	08503	138	15310	128
1039 I	79	01720BK	171	0FHZ0005Z	108	15317331	172
0392	78	01940	137	0FHZ0009Z	108	15324980	119
00400	78	02050	138	0FHZ00853-BX	107	15324981	119
0400K1	78	02330	78	0FHZ00854-BX	107	15324982	119
00400K2	78	02330KI	78	0FHZ0201Z	107	15324983	119
0400K3	78	02330K2	78	0FHZ0202Z	107	15324987	172
0415	78	02330K3	78	0FHZ0211Z	107	15324988	172
0420 0430	68	02400113P 0297900	14 14	0FHZ0212Z	107	15324989 15324990	172
0440	78 78	0297900	14	1		15324990	172 172
0540K	78 89	02981001	99	100132-1	93	15324991	1/2
0560K	89	0300468	111	100132-1	93 171	15324995	119
0580K	89	0300552	111	10246K	171	15324996	119
0590K	88	0300839	118	10247	171	15324997	119
0600K	88	0301	96	12010300	119	15344631	119
0610K	88	0301873	118	12020321	92	15344632	119
0650	137	0495900	21	12020400	92	15401-1-2-1-0A	134
0655K	137	04980900	94	12045699	110	15402-1-2-1-0A	134
0660	137	04980903	94	12052455	110	15404-1-0-1-0A	134
0665K	137	04980921GXM5	81	12052456	110	155320U	74
0670	137	04980933	110	12052457	110	155430U	74
0680	137	04981038	98	12059255	119	1560020	87
0690	137	05000BK	188	12077411	119	1560021	87
0691	137	05010BK	188	12077413	119	15710-TP	92
0697	78	05020BK	188	12084201	119	15711	92
0698	78	05021BK	188	12094429	186	15712	92
0699	140	05030BK	188	12094430	186	15713	92
0700	137	05040BK	188	12110845	133	15714	92
0705K	137	05100BK	188	12110846	133	1580-101	54
0710	112	05110BK	188	12110847	133	1580-131	54
0940402ZP 0970025	23	05903300	168	12110853	133	1600-382-1	54
0970025	44 44	05903500 05925	168 112	12129409	110 133	1600-382-2 1606770	54
0970026	44 44	06285847	112	12129409	133	1606770	162 162
0970054	44	0695900.PXPS	20	12162067	172	1680-318-1	54
1001K	79	07000BK	171	121AA2M	52	1680-330-1	54
1001K	79	07501	89	121AB2M	52	171-P0	62
1001K2	79 79	07650	79	121AB2P	52	171-10 171-P2	62
1005K	79	07660	79	123AB2P	52	171-SO	60
1005K2	79	07670	79	1241962-1	93	171-S2	60
1005K3	79	07671	79	1400-103	54	174-P2	62
101	96	07741	138	1480-103	54	174-S2	60
101881	19	07900	78	1480-123	54	174-S3	61
1180	140	07901	78	14HP38	173	175-P0	62
1237	140	07911	137	1500-101	54	175-P2	62
1376	140	07912	78	150322	69	175-SO	60
1400K1	72	07920	78	150332	69	175-\$1	61
1400K2	72	07930	78	1506120	161	175-S2	60
1435K	86	07940	78	1506130	161	175-\$3	61
1460K1	138	07981002ZXS	114	1506270	161	17LED-R	60
1470K	138	07985003ZXS	115	1506280	161	1800E	57
1484K	138	07992	138	1506656	161	181F	64
1494K	138	07993	138	1506666	161	1810E	57
1504K	138	0799C001ZXS	108	1506721	161	1851500	188
1510KI	138	08080200	177	1506731	161	1852000	188
1520	140	08084300	183	1507701	162	1855500	188
1530	140	08084400 08098400	183	1507701K	162	1856000	188
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I-968876-I	121	43445H	149	896HICHCISR	167	B162-7003/J	136
19A-P10-N	58	43506/22	148	896H1CHCR	166	BAT-TAP	84
19A-P21-N	59	43509/12	148	896HICHDISWR	167	BAT-TAP-POST	84
19M-P10-B	58	43515	147	896H2AHCR	166	BB12M4	159
19M-P11-B	58	43516	147	8971AHCISR	168	BB4M6	159
19M-P21-B	59	43517	148	8971AHCR	168	BB6M4	159
IAG	10	43520/24 43525/24	147	898HIAHCR 898HICHCR	165	BB6M6 BBD12M4	159
2		43525/24	147 148	8AG	165 10	BBD12M4S	159 159
21000	79	4358101	148		10	BBD121143 BBD6M4	159
211	48	4358102	148	9		BBD6M4S	159
212	48	43585	148	901-327	121	BBS	12
21200	79	4358630	148	913-007-001	74	BC800	68
21210	79	435G0520	148	913-008-001	74	BFR063-38-M6	103
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# **CATALOGUE SYMBOLS**



New Product



Military Standard / Grade



Information

PROLEG



**Updated Product** 

IP chart see page 193



Ignition Protected



Video Content



Silver Plated



Do It Yourself



QR Code: 9999

OR Code Scan this for more information

**IP66** Ingress Protection



Electric Vehicle Application 500V, 800V, 850V, 1000V.

# INTERNATIONAL APPROVAL MARKINGS



AEC

AS (Australia) Australian Standard

Yacht Council

Automotive

Electronics

Council

USCG US Coast Guard

ABYC American Boat &



CSA (Canada)



UL (Canada)





Cus UL (Canada & USA)



UL (USA)



UR (Canada) canada & USA)



UR (USA)

SAE SAE (International) (C) CCC (China)





METI (Japan)





(S) SEMKO (Sweden)

CE (EU)

DIN DIN (Germany)

IEC IEC (Global)

▲ TÜV (Germany)









HF Halogen Free

# **AUTOMOTIVE BATTERY TERMINAL TYPES**







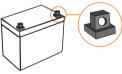
### SIDE TERMINAL Threaded Terminal

3/8"-16 Positive & Negative

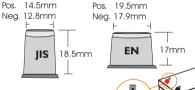


# **FLAG TERMINAL**

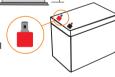
Nut and Bolt Fixing



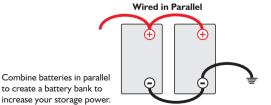
#### Pos. 17.5mm Pos. 19.5mm Neg. 15.9mm Neg. 17.9mm SAE / IIS DIN 18mm 18mm



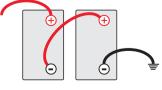
### **FASTON TERMINAL** Quick Connect Terminal FI 4.8mm, F2 6.35mm



# **BATTERY PAIRING**



Wired in Series



Combine 2 x 12V batteries in series increases your voltage to 24V.





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