



PHASE 3  
CONNECTORS

# POWERSAFE POWER CONNECTORS



## ULTIMATE PROVIDER OF SAFE POWER MANAGEMENT.

Designed to connect single & three phase high current power circuits, Powersafe single pole connectors are at the forefront of both safety and technical capability.



# Overview

With increased demand for temporary high-power systems in entertainment & industrial applications, the choice of high current connectors is critical to ensure safety and reliability for every use. Designed to connect single & three phase high current power circuits, PHASE 3 Powersafe single pole connectors are at the forefront of both safety and technical capability.

These connectors have been tried and tested in some of the harshest environments worldwide; from the oil fields of Canada to data centres in the Arctic Circle. Based on their impressive technical capabilities, added safety features, rugged construction, reliability and quality, they are a popular choice for professional engineers.

Standard safety features include a secondary locking system which requires a key to unlock the connection. This is in addition to finger-proofed electrical contacts on all connectors, which reduces the risk of accidental contact when the connector is live.

Connectors are available in cable and panel-mount formats with either crimp or screw contacts. Rated at 500A and 800A for single core cables from 25 - 300mm<sup>2</sup>, PHASE 3 Powersafe connectors are, at present, amongst the highest rated and safest connectors of their type on the market.



## Features

- ▶ 800A maximum (505A UL Product)
- ▶ Colour coded & mechanically keyed to prevent connection errors
- ▶ Flame retardant (UL94-V0)
- ▶ Locking mechanism to prevent accidental disconnection under load
- ▶ Finger-proof contacts to prevent access to electrical contacts when uncoupled (M & F)
- ▶ IP67 ingress protection
- ▶ Cables from 25mm<sup>2</sup> to 300mm<sup>2</sup> CSA, and a choice of screw & crimp terminals
- ▶ Multipoint, self-wiping contact area
- ▶ High impact bodies & high temperature resistant materials
- ▶ Integral cable strain relief
- ▶ Metric EN compliant cable glands, with increased cable clamping range
- ▶ No special tools required for assembly
- ▶ Daisy chain hook-up system
- ▶ Panel mount connector & mounting plates
- ▶ Rubber hand grip for ease of coupling and added impact protection
- ▶ Protective caps to protect connectors from moisture, dirt and abrasion when uncoupled (optional)

## Key Specifications

No of Contacts	1
Maximum Continuous Rating*	Up to 800A
Surge Current	75kA
Short Circuit Rating	Up to 35.5kA
Cables Cross Sectional Area C.S.A.	25mm <sup>2</sup> to 300mm <sup>2</sup>
Contact Termination	Screw or Crimp
Mating Method	Bayonet Lock
Operating Voltage	1000V AC
Max Rated Voltage to Earth	2kV AC / 3kV DC
Minimum Flashover	9.5kV DC or AC Peak
Insulation Resistance	>5M ohms @ 500V DC
Ingress Protection**	IP67
Protection against Electrical Shock	IP2X
Flammability	UL94-V0
Mating Cycles	>500
Shell Material	High Temperature Thermoplastic
Contact Plating	Silver

\* Subject to environmental factors and cable choice etc.

\*\* In accordance with EN60529

# High Current Capacity

The PHASE 3 Powersafe connector's advanced contact design achieves its 800A continuous rating by utilising an arrangement of 29 transfer bridges. Each transfer bridge is rated at 30A, giving a total of 870A per contact.

## Connection Types



Line Drain



Panel Drain



Line Source with Rotalock



Line Source



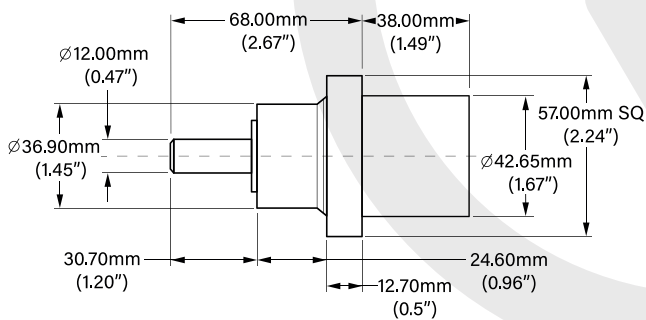
Panel Source



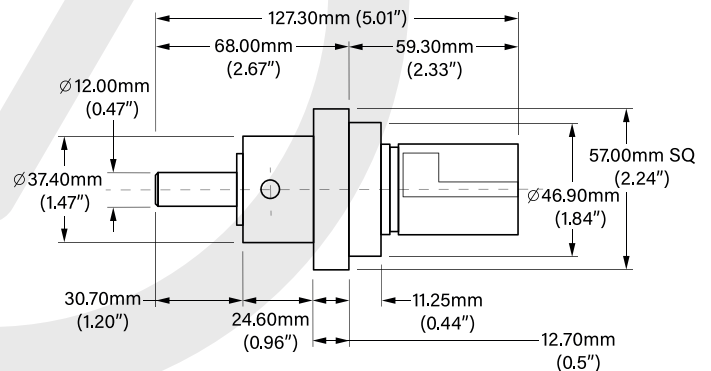
Panel Source with Rotalock

## Technical Diagrams

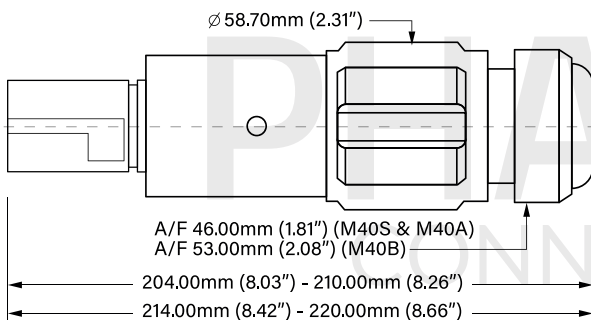
Panel Source



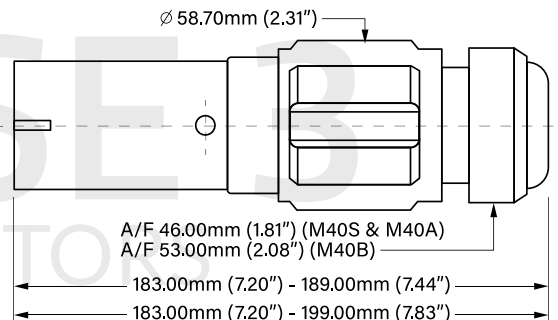
Panel Drain



Line Drain

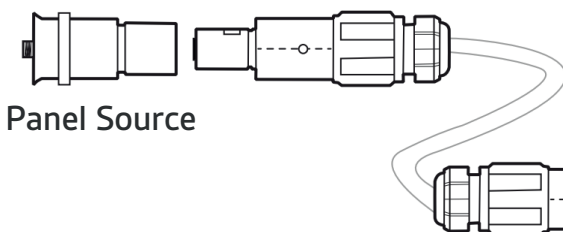


Line Source

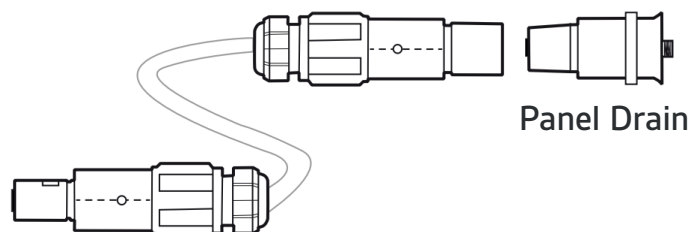


Line Drain

Line Source



Panel Source



Panel Drain

Line Source

Line Drain

# International Electrical Colour Coding Standards

REGION	GROUND	NEUTRAL (N)	LINE 1 (L1)	LINE 2 (L2)	LINE 3 (L3)
EUROPE & UK	GREEN	BLUE	BROWN	BLACK	GREY
UK (OLD)	GREEN	BLACK	RED	YELLOW	BLUE
USA (LV)*	GREEN	WHITE	BLACK	RED	BLUE
USA (HV)*	GREEN	GREY	BROWN	ORANGE	YELLOW
AUSTRALIA	GREEN	BLACK	RED	WHITE	BLUE
CANADA	GREEN	WHITE	RED	BLACK	BLUE

\*(HV) High Voltage > 1000VAC or 1500VDC

\*(LV) Low Voltage 50 to 1000VAC or 120-1500VDC

## Powersafe Range Order Codes

TYPE	KEY POSITION	COLOUR	CONTACT TYPE	CABLE SIZE	CABLE GRIP CLAMPING RANGE
LS = Line Source	E = Earth	GN = Green	S = Set screw	120 = 120mm <sup>2</sup>	M40S = 15 - 23mm
LD = Line Drain	N = Neutral	BL = Blue	C = Crimp	150 = 150mm <sup>2</sup>	M40A = 19 - 28mm
PS = Panel Source	1 = Line 1	BN = Brown	T5 = 500A Panel mount	185 = 185mm <sup>2</sup>	M40B = 22 - 32mm
PD = Panel Drain	2 = Line 2	BK = Black	T8 = 800A Panel mount	240 = 240mm <sup>2</sup>	M50 = 30 - 38mm
	3 = Line 3	GY = Grey		300 = 300mm <sup>2</sup>	
		R = Red			
		Y = Yellow			
		W = White			

\*Set screw version available up to 150mm<sup>2</sup>, reduction sleeves available for cables sizes 25, 35, 50, 70 & 95mm<sup>2</sup>. Caps and accessories also available, please ask for details. \*\*Larger cable glands upon request.

# POWERSAFE

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