



PHASE 3  
CONNECTORS USA

# 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.



[usa.p3connectors.com](http://usa.p3connectors.com)

# 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 centers 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.

## Features

- ▶ 800A maximum (505A UL Product)
- ▶ Color 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 #4 AWG-600MCM (25mm<sup>2</sup> - 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)

## High Current Capacity

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

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 #4 AWG-600MCM (25mm<sup>2</sup> - 300mm<sup>2</sup>), PHASE 3 Powersafe connectors are, at present, amongst the highest rated and safest connectors of their type on the market.

## Key Specifications

No of Contacts	1
Maximum Continuous Rating*	Up to 800A
Surge Current	75kA
Short Curcuit Rating	Up to 35.5kA
Cables Cross Sectional Area C.S.A.	#4 AWG-600MCM (25mm <sup>2</sup> - 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

# Connection Types



Line Drain



Panel Drain



Line Source with Rotalock



Line Source



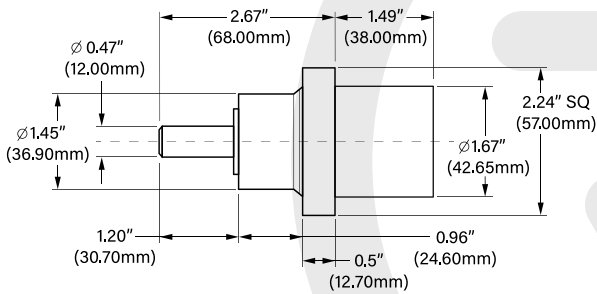
Panel Source



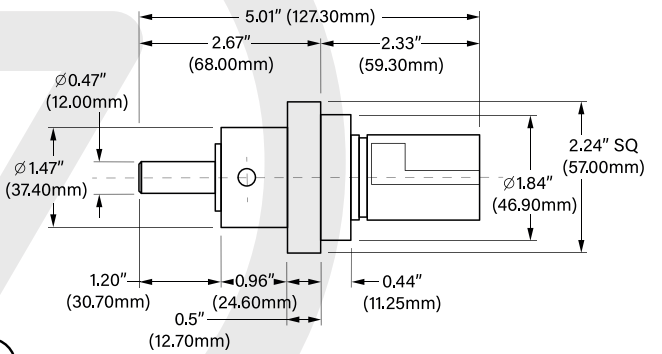
Panel Source with Rotalock

# Technical Diagrams

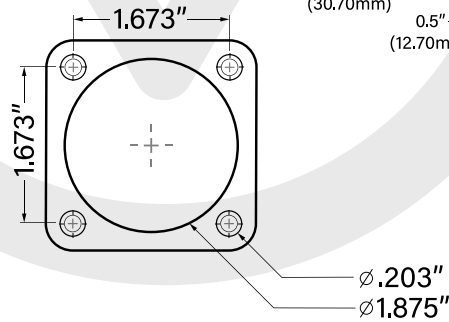
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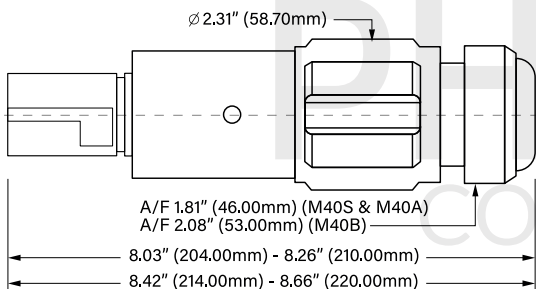
Panel Drain



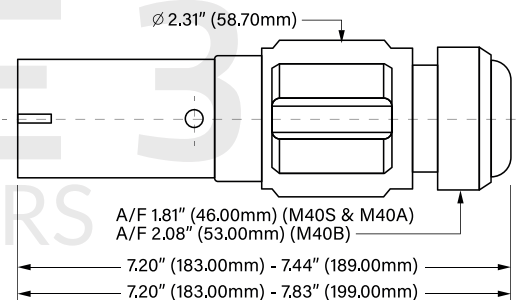
Panel Mounting Points



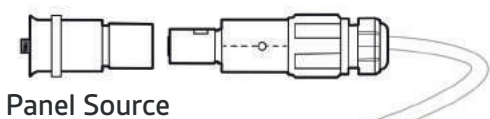
Line Drain



Line Source

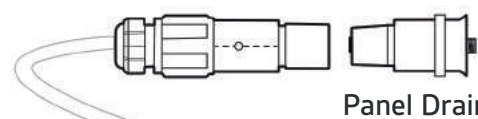


Line Drain



Panel Source

Line Source



Panel Drain

Line Source

Line Drain

# International Electrical Color Coding Standards

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

\*USA (LV) This should be used for 120/208VAC 3 PHASE \*USA (HV) This should be used for 277/480VAC 3 PHASE.

## Powersafe Range Order Codes

Using the table below, you can create an order code for any of our connectors following the format shown to the right.

# SLS-E-GN-S 120-M40A

Type      Key      Color      Contact Type      Cable Size      Cable Grip

TYPE	KEY POSITION	COLOR	CONTACT TYPE	CABLE SIZE	CABLE GRIP CLAMPING RANGE
SLS = STD Line Source	E = Earth	GN = Green	S = Set screw	120 = 120mm <sup>2</sup> (4/0)	M40S = 15 - 23mm
RLS = Rotalock Line Source	N = Neutral	BL = Blue	C = Crimp	150 = 150mm <sup>2</sup> (300 MCM)	M40A = 19 - 28mm
SLD = STD Line Source	1 = Line 1	BN = Brown	T5 = 500A Panel mount	185 = 185mm <sup>2</sup> (350 MCM)	M40B = 22 - 32mm
SPS = STD Panel Source	2 = Line 2	BK = Black	T8 = 800A Panel mount	240 = 240mm <sup>2</sup> (500 MCM)	M50 = 30 - 38mm
RPS = Rotalock Panel Source	3 = Line 3	GY = Grey		300 = 300mm <sup>2</sup> (600 MCM)	
SPD = STD Panel Drain		R = Red			
		Y = Yellow			
		W = White			

\*Set screw version available up to 300MCM (150mm<sup>2</sup>), reduction sleeves available for cables sizes #4 AWG, #2 AWG, #1 AWG, 2/0, & 3/0 (25, 35, 50, 70 & 95mm<sup>2</sup>)

# POWERSAFE

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