



# Positronic Industries Presents POWER CONNECTION SYSTEMS WITH SAFETY SHROUD FEATURE

Size 12 Power Contacts

Large Surface Area Mating System

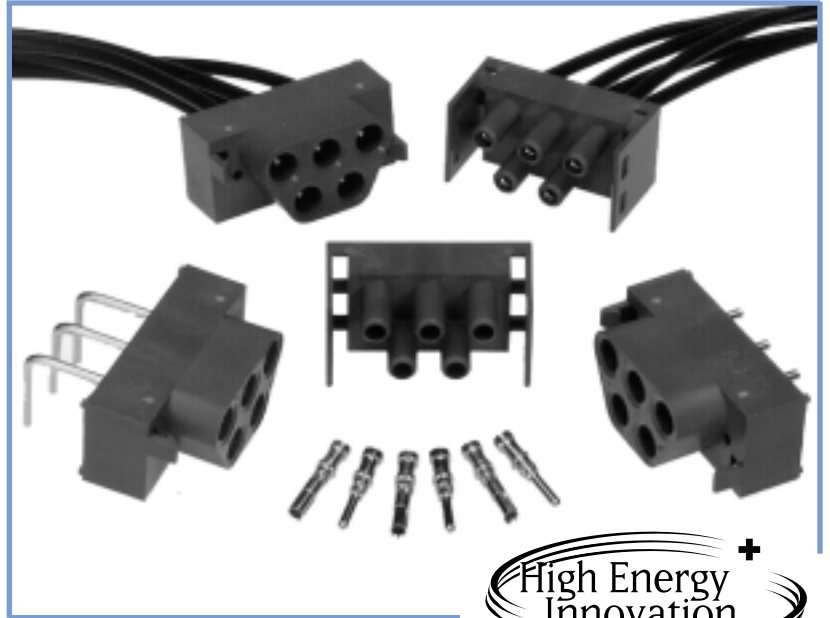
High Reliability

Integral Locking System

Safety Shrouded to Prevent Unsafe Exposure in Applications where Male Contacts are Energized when Disconnected

Hot Plug Capability to 25 Amperes

Contact Current Rating to 40 Amperes



## TECHNICAL CHARACTERISTICS

### MATERIALS AND FINISHES:

Insulator:	Glass-filled polyester, UL 94V-0.
Contacts:	Precision machined copper alloy with gold flash over nickel plate.
Push-on Fastener:	Spring tempered copper alloy, tin plate.

### ELECTRICAL CHARACTERISTICS:

Contact Current Rating:	40 amperes continuous, derated per IEC 512-3, test 5b.
Initial Contact Resistance:	0.005 ohms max. per IEC 512-2, test 2b.
Insulation Resistance:	5 G ohms per IEC 512-2, test 3a.
Voltage Proof:	3,000 minimum V r.m.s. per IEC 512-2, test 4a, method A.
Clearance and Creepage Distance:	5.60 (0.220) minimum
Working Voltage:	1,000 minimum V. r.m.s.
Hot Pluggable (50 couplings per UL 1977 paragraph 15):	250 VAC at 25 amperes
Working Temperature:	-55°C to +125°C

### MECHANICAL CHARACTERISTICS:

Removable Contacts:	Rear insertion/ front release. Female contact features "Closed Entry" design for highest reliability. 2.39 (0.094) diameter male contact.
Removable Contact	

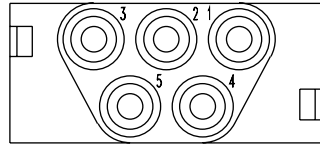
Retention in Insulator: 67N (15 lbs.) per IEC 512-8, test 15a.  
**MECHANICAL CHARACTERISTICS (continued):**

Fixed Contacts:	Printed board terminations, both straight and 90°. Female contact features "Closed Entry" design for highest reliability. 2.39 (0.094) diameter male contact.
Retention in Insulator:	67N (15 lbs.), minimum.
Resistance to Soldering Iron Heat:	260°C (500°F) for 10 seconds duration per IEC 512-6, test 12e, 25 watt soldering iron.
Contact Terminations:	Crimp removable contacts for wire size 12 AWG (4.0 mm <sup>2</sup> ). Straight and 90° solder printed board mount, 2.39 (0.094) tail diameter.
Connection Systems:	Cable to cable, cable to printed board and cable to panel mount.
Locking System:	Insulators provide locking between cable to cable, cable to printed board and cable to panel mount applications.
Polarization:	Provided in insulator design.
Mounting to P.C. Board:	Rapid installation push-on fasteners.
Mechanical Operations:	500 couplings

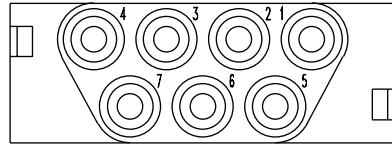
Dimensions are in millimeters (inches).  
All dimensions are subject to change.

## CONNECTOR VARIANTS

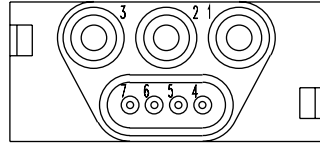
### Face View of Male Connector



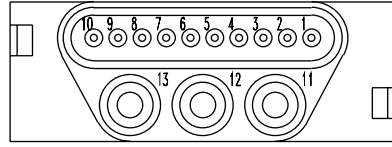
PLS5W5



PLS7W7\*



PLS7W3\*



PLS13W3\*

Positronic offers applications specific connector arrangements as prescribed per customer requirements. A mixture of contact sizes, as well as fixed solder or press-fit and removable crimp contact terminations may be loaded into the same connector housing. Female contacts may be recessed to conform to safety regulations. Mounting style options include straight solder printed board, straight compliant printed board, 90° solder printed board, panel mount and cable connectors with or without cable adapters. Consult the factory for additional information.

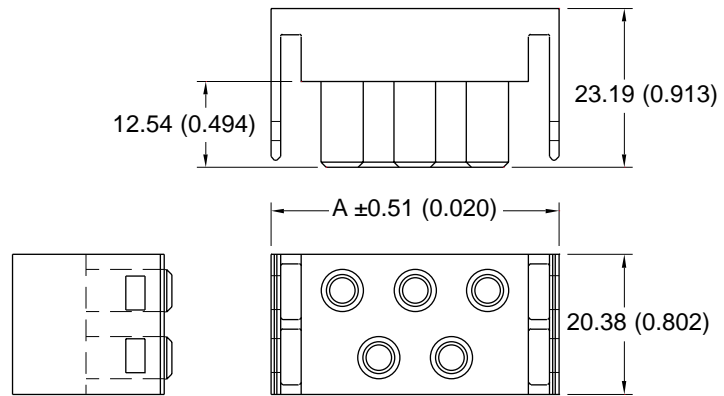
\* Consult factory for readily available variations.

### FEMALE CABLE CONNECTOR

Code 0, Order Contacts Separately

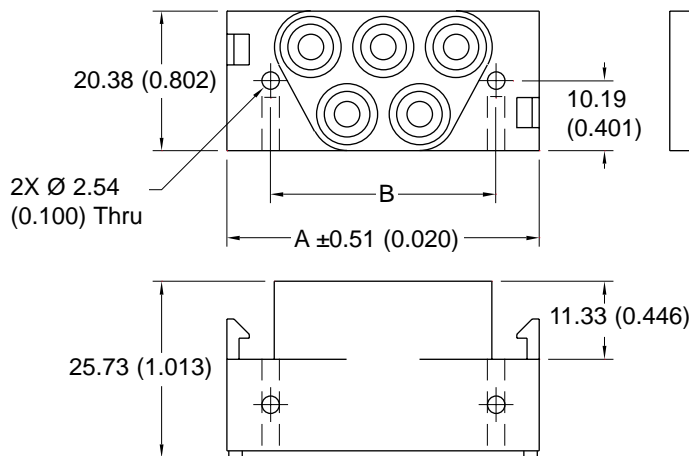
Part Number	A
PLS5W5F0000	42.04 (1.655)
PLS7W3F0000	42.04 (1.655)
PLS7W7F0000	52.64 (2.072)
PLS13W3F0000	52.64 (2.072)

Typical part number:  
PLS5W5F0000



### MALE CABLE AND PANEL MOUNT CONNECTOR

Code 0, Order Contacts Separately



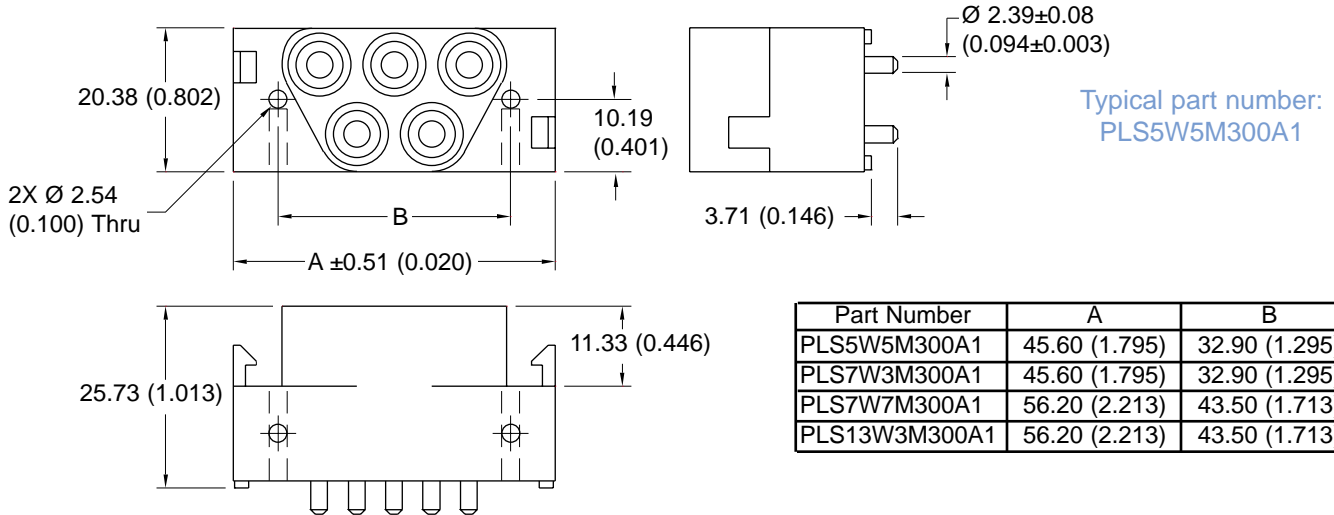
Typical part number:  
PLS5W5M0000

Part Number	A	B
PLS5W5M0000	45.60 (1.795)	32.90 (1.295)
PLS7W3M0000	45.60 (1.795)	32.90 (1.295)
PLS7W7M0000	56.20 (2.213)	43.50 (1.713)
PLS13W3M0000	56.20 (2.213)	43.50 (1.713)

Dimensions are in millimeters (inches).  
All dimensions are subject to change.  
Tolerance of dimensions, unless otherwise noted is  $\pm 0.38$  ( $\pm 0.015$ )

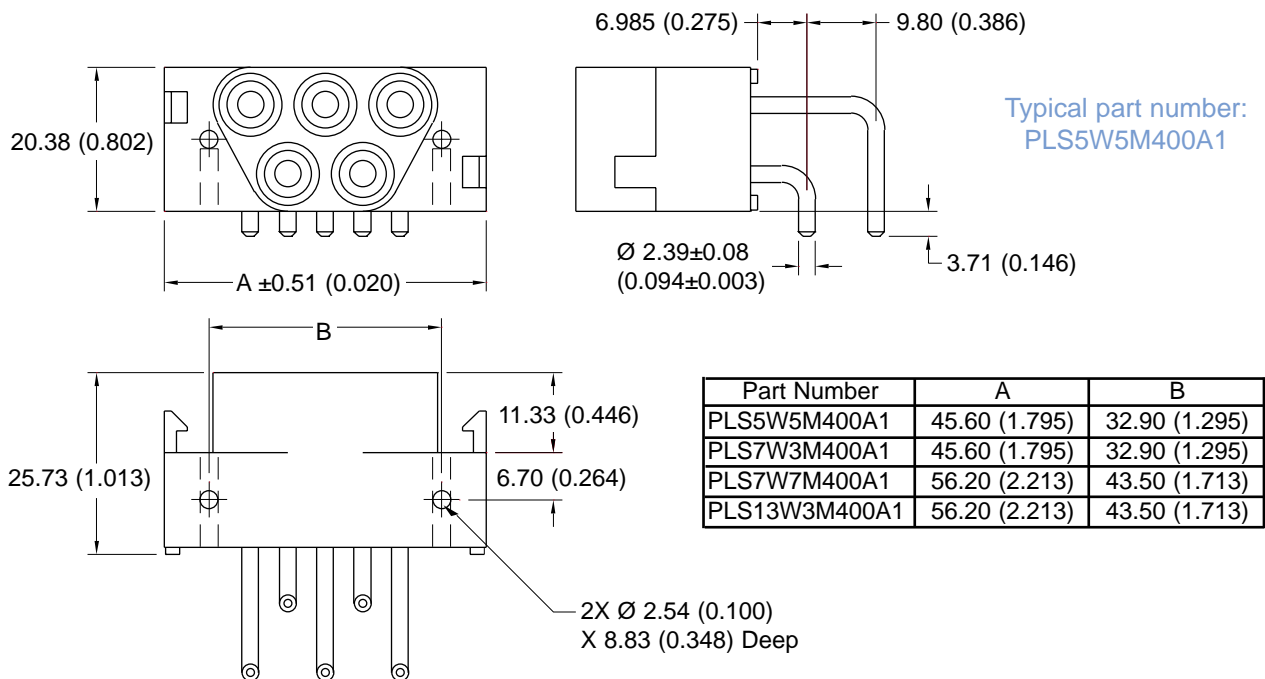
## MALE STRAIGHT PRINTED BOARD MOUNT CONNECTOR

Code 3, 3.71 (0.146) Contact Extension



## MALE 90° PRINTED BOARD MOUNT CONNECTOR

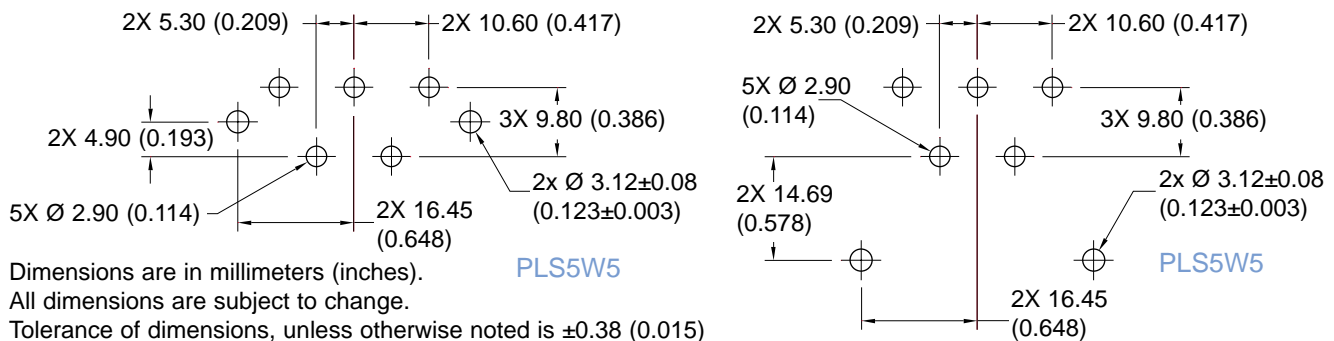
Code 4, 3.71 (0.146) Contact Extension



## PRINTED BOARD CONTACT HOLE PATTERNS

Straight Solder

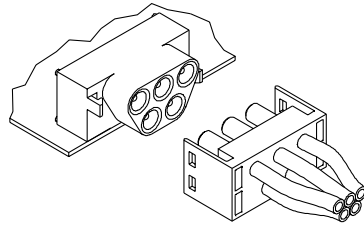
90° Solder



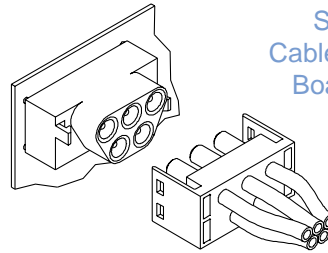
Dimensions are in millimeters (inches).  
All dimensions are subject to change.  
Tolerance of dimensions, unless otherwise noted is ±0.38 (0.015)

# CONNECTION SYSTEMS

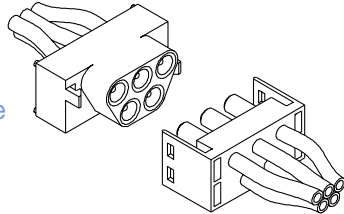
System 5  
Cable to 90°  
Board Mount



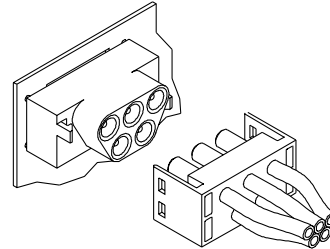
System 6  
Cable to Straight  
Board Mount



System 7  
Cable to Cable



System 8  
Panel Mounting  
to Cable



## ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Following Steps 1 Through 8

Insert "0" When Step Is Not Used

STEP	1	2	3	4	5	6	7	8
	PLS	5W5	M	3	0	0	A1	
STEP 1 Basic Series PLS - PLS Series								STEP 8 Special Options Consult factory for special options.
STEP 2 Connector Variants 5W5 - 5 Size 12 Contacts 7W3 - 4 Size 20 with 3 Size 12 Contacts * 7W7 - 7 Size 12 Contacts * 13W3 - 10 Size 20 with 3 Size 12 Contacts*								STEP 7 Contact Plating for Printed Board Type Connectors 0 - Crimp Contacts Ordered Separately. A1 - Gold flash over nickel on mating end and gold flash over nickel on termination end. A2 - Gold flash over nickel on mating end and 5.00 microns (0.000200 inch) solder coat on termination end. C1 - 0.80 micron ( 0.000030 inch) gold over nickel on mating end and 0.80 micron (0.000030 inch) gold over nickel on termination end. C2 - 0.80 microns (0.000030 inch) gold over nickel on mating end and 5.00 microns (0.000200 inch) solder coat on termination end.
STEP 3 Connector Gender M - Male F - Female								STEP 6 Cable Adapter 0 - None.
STEP 4 Type of Contact 0 - Order contacts separately for cable connectors for connection systems 5, 6, 7 and 8. 3 - Solder, Straight Printed Board Mount with 3.71 (0.146) tail extension for connection system 6. Male connectors only. ** 4 - Solder, Right Angle Printed Board Mount with 3.71 (0.146) tail extension for connection system 5. Male connectors only. **								STEP 5 Mounting style 0 - None. N - Push-on Fastener for Straight Printed Board Mount Connectors

\* Consult factory for readily available configurations.

\*\* Consult factory for availability of female version of contact type 3 and 4.

Dimensions are in millimeters (inches). All dimensions are subject to change. Tolerance of dimensions, unless otherwise noted is  $\pm 0.38$  (0.015)

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