

High Reliability

Size 20 fixed contacts, 7.5 amperes

Low Profile, countersink side mounting holes.

Connectors can be “stacked” side by side.

Male and female contacts can be configured within individual connectors to provide polarization and coding (keying) options.

Terminations include solder cup, straight and right angle (90°) printed board mount.

**UL Recognized:**

• UL File # E49351

## TECHNICAL CHARACTERISTICS

### MATERIALS AND FINISHES:

**Insulator:** Glass-filled DAP per ASTM-D-5948 Type SDG-F. Gray color is standard.

**Fixed Contacts:** Precision machined copper alloy, gold flash over nickel. Other finishes are available upon request.

**Locking Systems:**

**Polarization:**

**Mechanical Operations:**

**Open Entry Contacts:**

**Closed Entry Contacts:**

Straight and right angle (90°) printed board mount - 0.64 mm [0.025 inch] termination diameter. Friction.

Gender positioning of contacts.

500 operations per IEC 60512-5.

1,000 operations per IEC 60512-5.

### MECHANICAL CHARACTERISTICS:

**Contacts:**

**Size 20 Fixed:** Male contact, 1.02 mm [0.040 inch] mating diameter. Female contact, open entry is standard. “Closed Entry” available on solder cup termination for high reliability applications.

**Contact Retention in Connector Insert:**

44.5 N [10 lbs.], minimum.

**Contact Termination :**

Solder cup - 1.17 mm [0.046 inch] hole diameter for 0.5mm<sup>2</sup> [20 AWG] wire maximum.

### ELECTRICAL CHARACTERISTICS:

**Contact Current Rating:** 7.5 amperes, maximum.

**Initial Contact Resistance:** 0.010 ohms, maximum.

**Flash over Voltage:** 2000 VAC (rms).

**Test Voltage:** 1200 VAC (rms).

**Insulation Resistance:** 5 G ohms, minimum.

**Clearance and Creepage:** 0.97 mm [0.038 inch], minimum.

**Working Voltage:** 300 VAC (rms).

### CLIMATIC CHARACTERISTICS:

**Temperature Range:** -55°C to +125°C.

**Damp Heat, Steady State:** 21 days

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# GF / GFPL SERIES

## PROFESSIONAL QUALITY UTILITY CONNECTORS

### FIXED CONTACT / LOW PROFILE

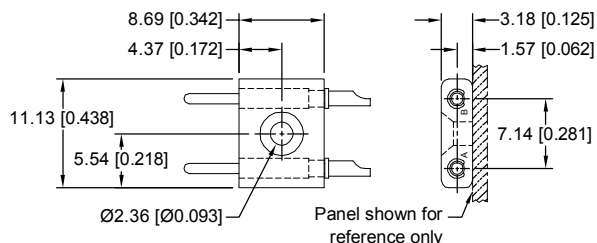
Utility  
Connectors

### INSULATOR DIMENSIONS

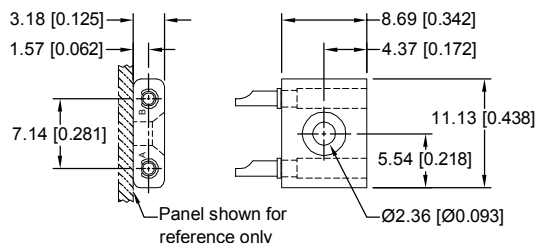
MALE OR FEMALE CONTACTS MAY BE POPULATED IN ANY POSITION

#### GF 2-POLE

##### RIGHT PANEL MOUNTED \*1

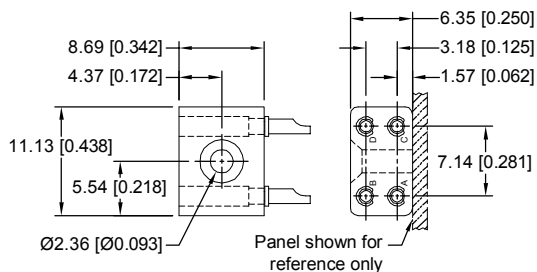


##### LEFT PANEL MOUNTED \*1

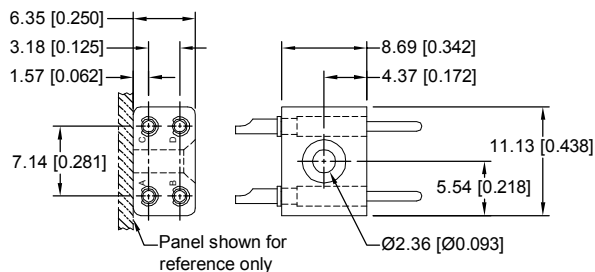


#### GF 4-POLE

##### RIGHT PANEL MOUNTED \*1



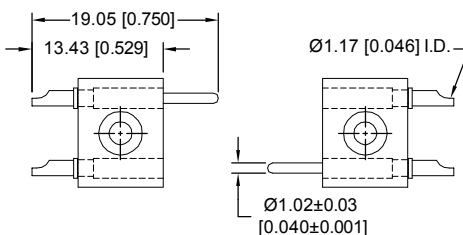
##### LEFT PANEL MOUNTED \*1



**NOTE:** \*1 When viewing the connector from the rear with the "A" contact position down, the panel on the left dictates "L" Code while the panel on the right dictates "R" code. See ordering information page "Step 5".

### SOLDER CUP TERMINATION CODE SC

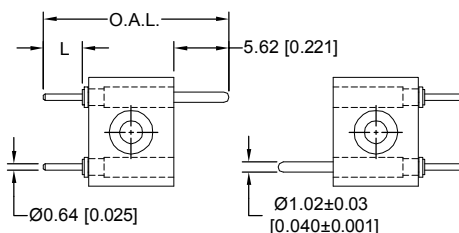
Typical part number:  
GF1M1FASCL



Typical part number:  
GF1M1FBSCR

### STRAIGHT SOLDER PRINTED BOARD MOUNT TERMINATION CODE DS3, DS4, DS5 AND DS6

Typical part number:  
GF1M1FADS3L



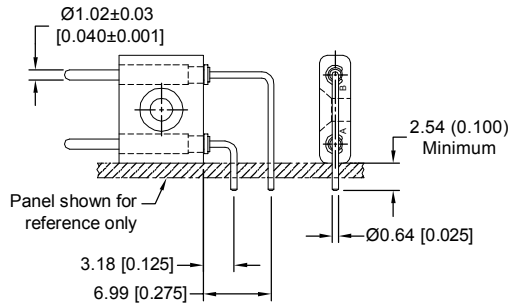
Typical part number:  
GF1M1FBDS3R

CONTACT CODE	L	O.A.L.
DS3	2.36 [0.093]	17.37 [0.684]
DS4	3.18 [0.125]	18.19 [0.716]
DS5	3.96 [0.156]	18.97 [0.747]
DS6	4.75 [0.187]	19.79 [0.779]

**RIGHT ANGLE (90°) PRINTED BOARD MOUNT TERMINATION**  
AVAILABLE IN VERTICAL OR HORIZONTAL MOUNTS

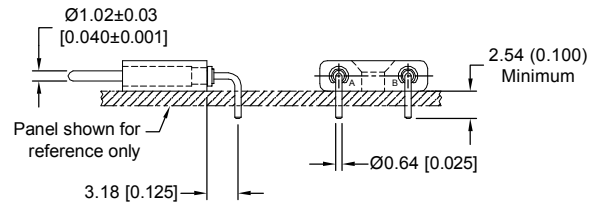
**GFPL 2-POLE**

**VERTICAL PANEL MOUNTED \*1**



Typical part number: **GFPL2M000RV**

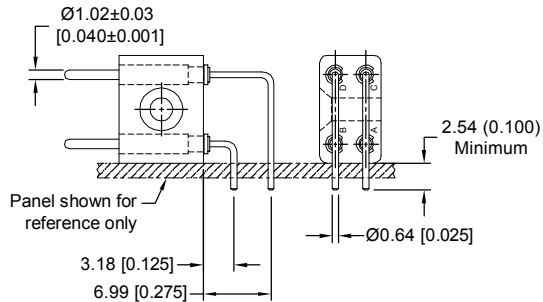
**HORIZONTAL PANEL MOUNTED**



Typical part number: **GFPL2M000H**

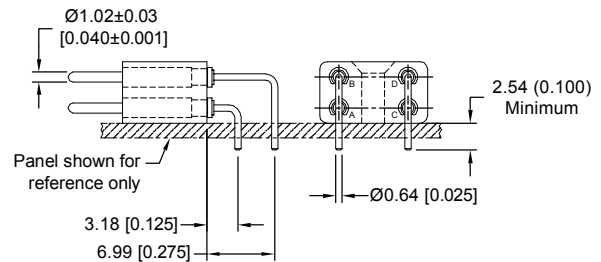
**GFPL 4-POLE**

**VERTICAL PANEL MOUNTED \*1**



Typical part number: **GFPL2M2FAC0RV**

**HORIZONTAL PANEL MOUNTED**

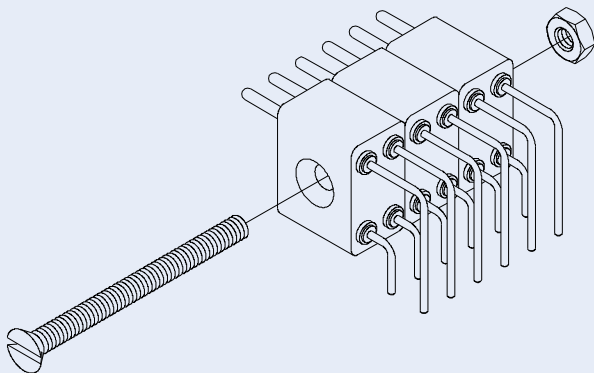


Typical part number: **GFPL2M2FCD0H**

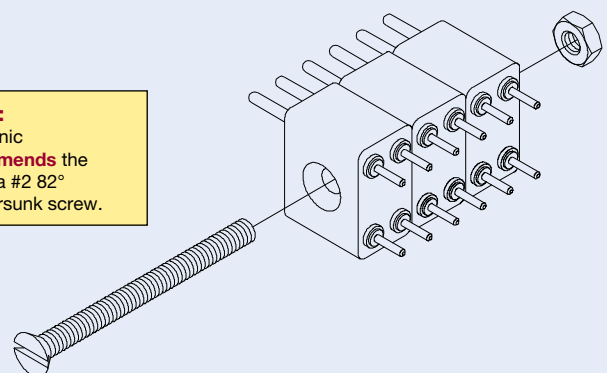
**NOTE:** \*1 When viewing the connector from the rear with the "A" contact position down, the panel on the left dictates "L" code while the panel on the right dictates "R" code. See ordering information page "Step 5".

**U N I Q U E F E A T U R E S**

GF and GFPL connectors can be "STACKED" in building block fashion to create custom configurations.



**NOTE:**  
Positronic  
recommends  
the  
use of a #2 82°  
countersunk screw.



**DIMENSIONS ARE IN MILLIMETERS [INCHES].  
ALL DIMENSIONS ARE SUBJECT TO CHANGE.**



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# GF / GFPL SERIES

## PROFESSIONAL QUALITY UTILITY CONNECTORS

### FIXED CONTACT / LOW PROFILE

Utility  
Connectors

## ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 through 5.

STEP	1	2	3	4	5	-	6
EXAMPLE	GF	3M1F	A	DS5	L		-14

### STEP 1 - BASIC SERIES

**GF** - Solder cup or straight printed board mount termination

### STEP 6 - SPECIAL OPTIONS

**CE** - Closed entry contacts on female solder cup terminations  
**-14** - 0.000030 [0.76] gold over nickel.

Contact Technical Sales for special options.

### STEP 2 - QUANTITY AND GENDER OF CONTACTS

#### 2 POLE INSULATOR

**2M0** - 2 Male, No Female.  
**2F0** - 2 Female, No Male.  
**1M1F** - 1 Male, 1 Female.

#### 4 POLE INSULATOR

**4M0** - 4 Male, No Female.  
**4F0** - 4 Female, No Male.  
**3M1F** - 3 Male, 1 Female.  
**3F1M** - 3 Female, 1 Male.  
**2M2F** - 2 Male, 2 Female.

### STEP 3 - POSITION OF POLARIZING CONTACT

**0** All contacts same gender  
**A, B, C, D** Specify polarizing position(s) of contact(s) for the second gender specified in Step 2 above.

#### EXAMPLES:

**GF4M00DS3R** No specification needed.  
**GF1M1FASCL** Specifies "A" position of the female contact.  
**GF2M2FCDSCL** Specifies "C" and "D" positions of the female contact.

### STEP 5 - MOUNTING OPTIONS

**L** - Left panel mount.  
**R** - Right panel mount.

### STEP 4 - CONTACT TERMINATION TYPE

**SC** - Solder cup. For closed entry design, add 'CE' in Step 6.  
**DS3** - Solder, Straight printed board mount with 2.36 [0.093] tail length.  
**DS4** - Solder, Straight printed board mount with 3.18 [0.125] tail length.  
**DS5** - Solder, Straight printed board mount with 3.96 [0.156] tail length.  
**DS6** - Solder, Straight printed board mount with 4.75 [0.187] tail length.

## ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 through 5.

STEP	1	2	3	4	5	-	6
EXAMPLE	GFPL	2M2F	AB	0	H		-14

### STEP 1 - BASIC SERIES

**GFPL** - Right angle (90°) printed board mount termination

### STEP 6 - SPECIAL OPTIONS

**-14** - 0.000030 [0.76] gold over nickel.

Contact Technical Sales for special options.

### STEP 2 - QUANTITY AND GENDER OF CONTACTS

#### 2 POLE INSULATOR

**2M0** - 2 Male, No Female.  
**2F0** - 2 Female, No Male.  
**1M1F** - 1 Male, 1 Female.

#### 4 POLE INSULATOR

**4M0** - 4 Male, No Female.  
**4F0** - 4 Female, No Male.  
**3M1F** - 3 Male, 1 Female.  
**3F1M** - 3 Female, 1 Male.  
**2M2F** - 2 Male, 2 Female.

### STEP 3 - POSITION OF POLARIZING CONTACT

**0** All contacts same gender  
**A, B, C, D** Specify polarizing position(s) of contact(s) for the second gender specified in Step 2 above.

### STEP 5 - MOUNTING OPTIONS

**LV** - Left panel vertical mount.  
**RV** - Right panel vertical mount.  
**H** - Horizontal mount.

### STEP 4 - CONTACT TERMINATION TYPE

**0** - Right angle (90°) printed board mount.

#### EXAMPLES:

**GFPL4M00RV** No specification needed.  
**GFPL3M1FA0H** Specifies "A" position of the female contact.  
**GFPL2M2FCD0LV** Specifies "C" and "D" positions of the female contact.

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GF SERIES

GFPL SERIES