

**canfield connector**  
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**SERIES P5600 (MPC)  
 MICRO PROTECTIVE CONNECTORS**

**Surge Suppression**

**General Description**

The Micro Protective Connectors are available in standard MINI, DIN 43650 Form "A" / ISO 4400, EN175301-803:2000 and Sub-Micro 8mm and 9.4mm. The Canfield Connector MPCs provide electrical controllers surge suppression against voltage spikes caused by the solenoids used on hydraulic and pneumatic solenoid valves.

**Dimensional Data**

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED (COMPLETE DIMENSIONAL INFORMATION IS PROVIDED ON INDIVIDUAL PAGES)

<p><b>MINI</b></p>	<p><b>ISO</b>            DIN 43650 Form "A" / ISO 4400,            EN175301-803:2000</p>	<p><b>Sub-Micro</b>            (8mm) DIN 43650 Form "C" / ISO 4400,            EN175301-803:2000</p>
<p><b>PG9</b></p>	<p><b>PG9</b></p>	<p><b>8mm Strain Relief</b>  <small>*Ground spade offset by 0.2mm toward pin 1.</small></p>
<p><b>3/8" Conduit</b></p>	<p><b>PG11</b></p>	<p><b>8mm 1/2" Conduit</b>  <small>*Ground spade offset by 0.2mm toward pin 1.</small></p>
<p><b>1/2" Conduit</b></p>	<p><b>1/2" Conduit</b></p>	<p><b>9.4mm Strain Relief</b></p>
<p><b>1/2" Conduit</b></p>	<p><b>1/2" Conduit</b></p>	<p><b>9.4mm 1/2" Conduit</b></p>

## Technical Data

- Voltage max.: 240 VAC / 120 VDC
- Current max.: ISO - 10 Amps  
MINI - 10 Amps  
Sub-Micro - 6 Amps
- Wire gauge max.: ISO - 14 AWG  
MINI - 14 AWG  
Sub-Micro - 20 AWG

NOTE: When using MAC Valves with 9.4mm Sub-Micro, consult our factory.

- Recommended cable diameter:  
PG7 - .157 to .236 inches O.D.  
PG9 - .236 to .315 inches O.D.  
PG11 - .315 to .394 inches O.D.  
1/2" Conduit - .410 inch max. for MINI & ISO  
1/2" Conduit - .250 inch max. for Sub-Micro
- Gaskets temperature max.: Nitrile: -25° to +90°C  
Silicone: -40° to +125°C
- Environmental protection: NEMA 4 and IP 65 dust tight and water resistant

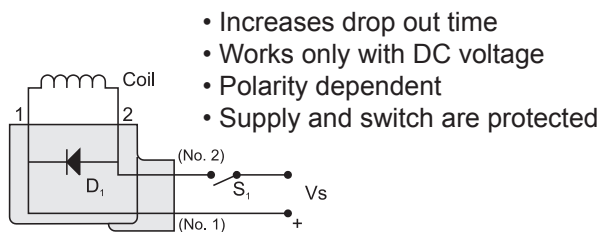
## Advantages of Suppression

- Ideal for use with reed switch proximity sensor.
- Reduce contact burnoff, increasing switch life.
- High frequency interference pulses reduced, lowering electronic noise.
- Protect programmable controllers and other types of electronic devices from inductive spikes.
- Addition of extra modules or hardware is not required.
- Most suppression systems are available with standard connectors.

## MPC Types

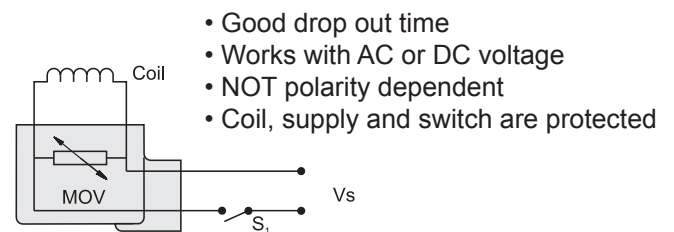
### Type 1\*

Diode in parallel with coil. When switch ( $S_1$ ) is opened, the energy stored in the coil is trapped and dissipated by the diode ( $D_1$ ).



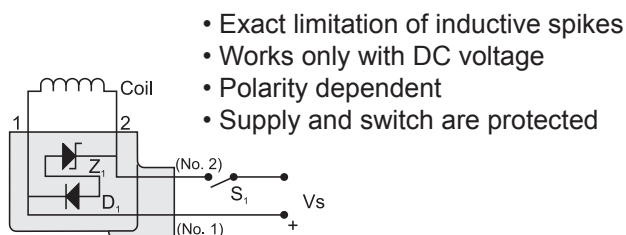
### Type 5\*

MOV (metal oxide varistor) in parallel with coil. When switch ( $S_1$ ) is opened or closed, the energy stored in the coil is limited by the MOV.



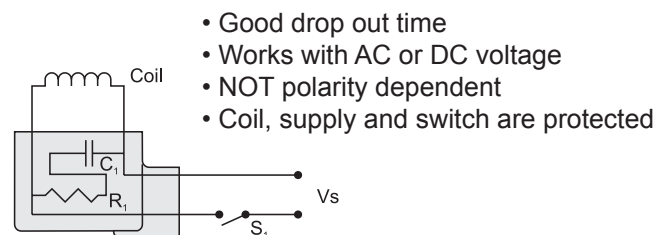
### Type 2

Diode & Zener in parallel with coil. When switch ( $S_1$ ) is opened, the energy stored in the coil is trapped and dissipated by the diode ( $D_1$ ) and zener diode ( $Z_1$ ) and the coil resistance.



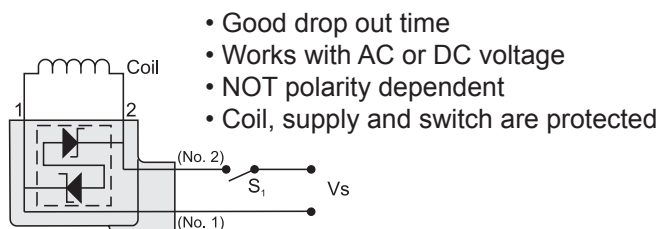
### Type 6

RC Network in parallel with coil. When switch ( $S_1$ ) is opened or closed, the energy stored in the coil is absorbed by the capacitor ( $C_1$ ) and dissipated by the resistor ( $R_1$ ).



### Type 3

Transorb in parallel with coil. When switch ( $S_1$ ) is opened or closed, the energy stored in the coil is limited by transorb.



\*Most Commonly Used

## Ordering Information

Use a prefix of "G" for Individually Bagged

P 5  0  -      0 0

### Orientation

1 - Ground down  
Other ground orientations available.  
Please consult factory.

### Operating Voltage

3 - 6 - 48 VDC  
4 - 48 - 120 VDC  
5 - 6 - 48 V AC/DC 50/60 Hz  
6 - 48 - 120 V AC/DC 50/60 Hz  
7 - 120 - 240 V AC/DC 50/60Hz

### Gasket

1 - Nitrile  
2 - Silicone  
3 - Nitrile profile<sup>††</sup>

### Connector Type

3 - MINI strain relief PG9  
4 - MINI 3/8" conduit  
5 - MINI 1/2" conduit  
6 - ISO strain relief PG9  
7 - ISO strain relief PG11  
8 - ISO 1/2" conduit  
B - Sub-Micro strain relief PG7 (9.4mm)<sup>\*\*</sup>  
C - Sub-Micro 1/2" conduit (9.4mm)<sup>\*\*</sup>  
D - Sub-Micro strain relief PG7 (8mm)<sup>\*\*</sup>  
E - Sub-Micro 1/2" conduit (8mm)<sup>\*\*</sup>

### Housing Color

0 - Black "B" standard. Translucent if lighted.  
1 - Gray "A"

### Lighting Specification

0 - Unlighted  
1 - Lighted

### MPC Circuit

1 - Diode (DC Only)  
2 - Diode & Zener diode (DC Only)  
3 - Transorb (AC/DC)<sup>†</sup>  
5 - MOV (AC/DC)  
6 - RC network (AC/DC)



Quick-Ship  
Bulk Packs

### SERIES P5600

Can-Pak	
Part Number	Qty
CP-P5103-1311000-025	25
CP-P5103-1311000-100	100
CP-P5103-1351000-025	25
CP-P5103-1351000-100	100
CP-P5107-1351000-025	25
CP-P5107-1351000-100	100
CP-P5103-1611000-025	25
CP-P5103-1611000-100	100
CP-P5103-1651000-025	25
CP-P5103-1651000-100	100
CP-P5107-1651000-025	25
CP-P5107-1651000-100	100

<sup>†</sup> NOT available in Operating Voltage 7

<sup>††</sup> NOT available in Sub-Micro

\* NOT available in MINI type connectors

\*\* MPC Circuits 1 & 5 only

*Consult factory for custom configurations.*

Each connector kit contains screw, washer and gasket assembly.

NOTE: When using MAC Valves with 9.4mm Sub-Micro, consult our factory.

### Ordering Example:

P5103-1310000

Ground down, 6 - 48 VDC, nitrile gasket, MINI strain relief PG9, Diode, unlighted, black house