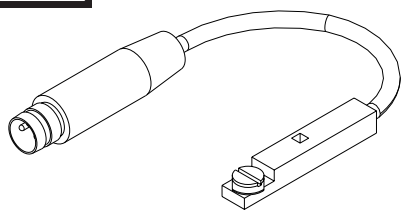
Drop-In Reed Sensor Part Numbers

REED	Wiring
P8S-GRFLX	3m flying leads
P8S-GRFTX	10m flying leads
P8S-GRSHX	.2m lead with 8mm connector
P8S-GRMHX	.2m lead with 12mm connector
P8S-GRSCX	1m lead with 8mm connector



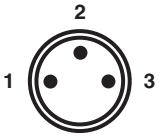
REED SENSOR SPECIFICATIONS

Type ..... Reed
Output Function ..... Normally Open
Operating Voltage ..... 10 - 120 VAC*
..... 10 - 30 VDC
Continuous Current ..... 100 mA max.
Response Sensitivity ..... 2.5 mT min.
Switching Frequency ..... 400 Kz
Voltage Drop ..... 3 V max.
Ripple ..... 10% of Operating Voltage
Hysteresis ..... 1.5 mm max.
Repeatability ..... 0.2 mm max.
EMC ..... EN 60 947-5-2
Reverse Polarity Protection ..... Yes
Enclosure Rating ..... IP 67
Shock and Vibration Stress ..... 30g, 11 ms, 10 to 55 Hz, 1 mm
Operating Temperature Range ..... -25°C to +75°C (-13°F to 167°F)
Housing Material ..... PA 12, Black
Connector Cable ..... PVC
Connector ..... PUR cable w/8 or 12 mm conn.

*8mm connector rated for 75 VAC max.

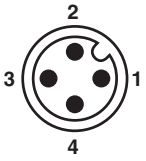
REED SENSOR - WIRING CONNECTION

Flying Lead or 8 mm Connector



Pin	Wire	Function
1	Brown	Operating Voltage
2	Black	Output signal
3	Blue	Not used

12 mm Connector

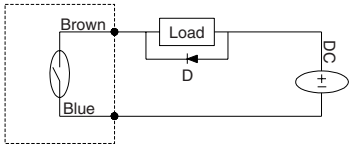


Pin	Wire	Function
1	Brown	Operating Voltage
2	White	Output signal
3	Blue	Not used
4	Black	Not used

Circuit for Switching Contact Protection (Inductive Loads)

(Required for proper operation 24V DC)

Put Diode parallel to loads following polarity as shown below.



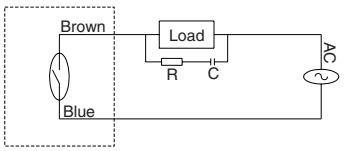
D: Diode: select a Diode with the breakdown voltage and current rating according to the load.

Typical Example—100 Volt, 1 Amp Diode
CR: Relay coil (under 0.5W coil rating)

(Recommended for longer life 125 VAC)

Put a resistor and capacitor in parallel with the load. Select the resistor and capacitor according to the load.

Typical Example:
CR: Relay coil (under 2W coil rating)
R: Resistor 1 KΩ - 5 KΩ, 1/4 W
C: Capacitor 0.1 µF, 600 V



⚠ Caution

– Use an ampmeter to test reed switch current. Testing devices such as incandescent light bulbs may subject the reed switch to high in-rush loads.

– **NOTE:** When checking an unpowered reed switch for continuity with a digital ohmmeter the resistance reading will change from infinity to a very large resistance (2 M ohm) when the switch is activated. This is due to the presence of a diode in the reed switch.

– Anti-magnetic shielding is recommended for reed switches exposed to high external RF or magnetic fields.

– The magnetic field strength of the piston magnet is designed to operate with our switches. Other manufacturers' switches or sensors may not operate correctly in conjunction with these magnets.

– Use relay coils for reed switch contact protection.

– The operation of some 120 VAC PLC's (especially some older Allen-Bradley PLC's) can overload the reed switch. The switch may fail to release after the piston magnet has passed. This problem may be corrected by the placement of a 700 to 1K OHM resistor between the switch and the PLC input terminal. Consult the manufacturer of the PLC for appropriate circuit.

– Switches with long wire leads (greater than 15 feet) can cause capacitance build-up and sticking will result. Attach a resistor in series with the reed switch (the resistor should be installed as close as possible to the switch). The resistor should be selected such that R (ohms) >E/0.3.

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