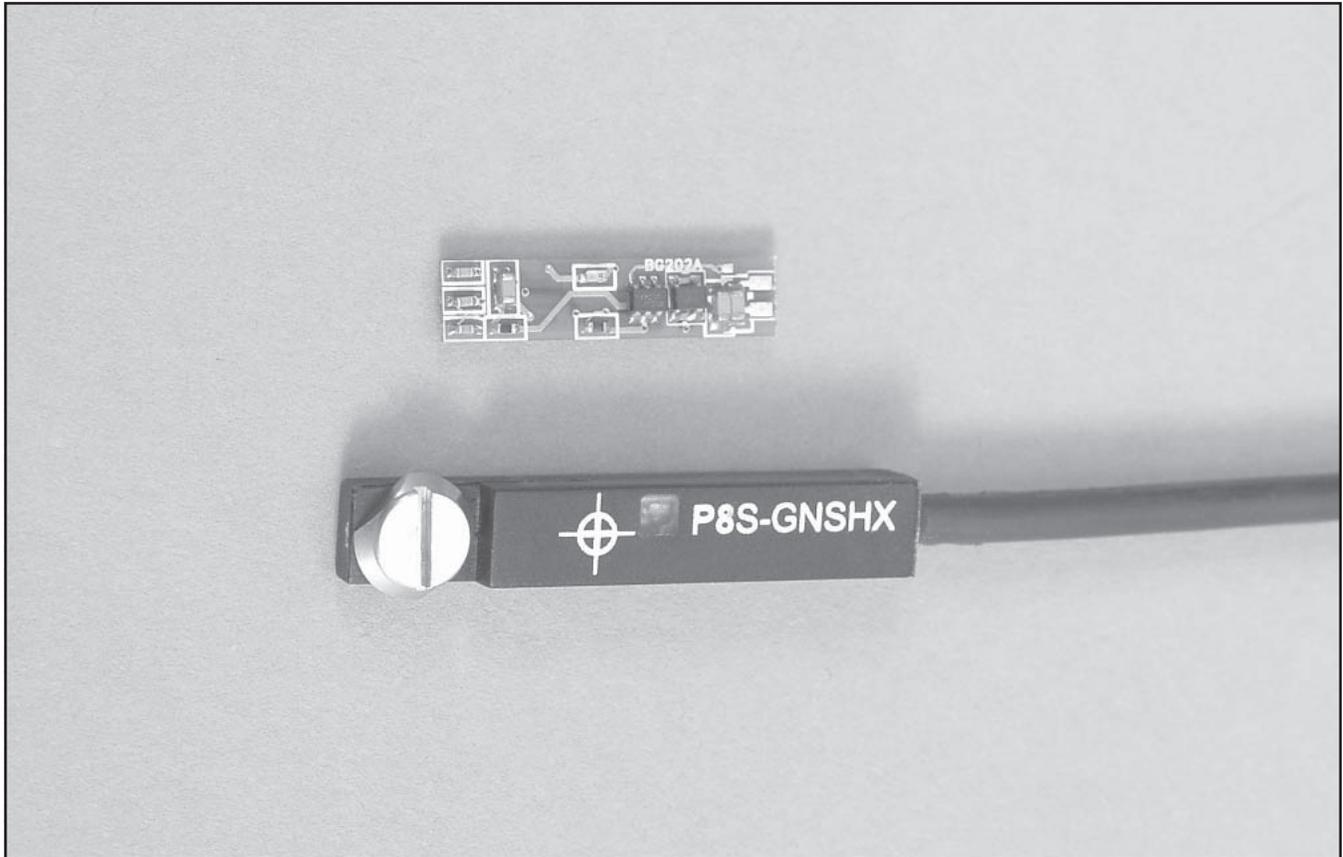


Global Drop-In Position Sensing Sensors



Sensors

- Both Reed Switch and Solid State Sensor Versions
- Sensors Available World-Wide
- Solid State Sensors use GMR Technology
- 5 Different Connection Styles
- Allow Position Sensing Anywhere Along Cylinder Position
- The Same Sensor is Used On Virtually All Series of Cylinders
- CE Approved
- Defined by Part Number: P8S-G

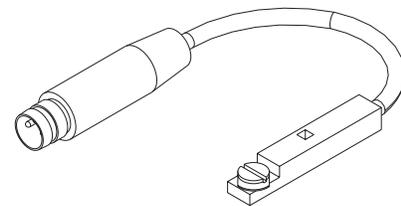
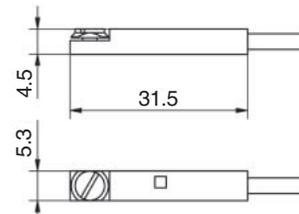
Drop-In Solid State Sensors

PNP Sensor Part No.	Wiring	NPN Sensor Part No.
P8S-GPFLX	3m flying leads	P8S-GNFLX
P8S-GPFTX	10m flying leads	P8S-GNFTX
P8S-GPSHX	0.2m lead with 8mm connector	P8S-GNSHX
P8S-GPMHX	0.2m lead with 12mm connector	P8S-GNMHX
P8S-GPSCX	1m lead with 8mm connector	P8S-GNSCX

Solid State Sensor

SPECIFICATIONS

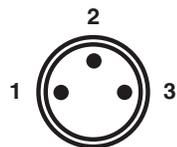
Type Electronic
 Output Function Normally Open
 Sensor Output PNP/NPN
 Operating Voltage 10 - 30VDC
 Continuous Current 200 mA max.*
 Response Sensitivity 2.8 mT min.
 Switching Frequency 5 KHz
 Power Consumption 10 mA max.
 Voltage Drop 2 VDC max.
 Ripple 10% of Operating Voltage
 Hysteresis 1.5 mm max.
 Repeatability 0.1 mm max.
 EMC EN 60 947-5-2
 Short-circuit Protection Yes
 Power-up Pulse Suppression Yes
 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.



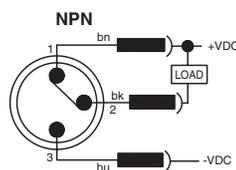
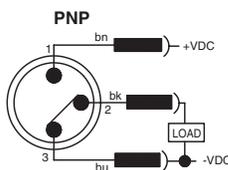
*M12 connector is rated for 100 mA maximum continuous current.

SOLID STATE SENSOR - WIRING CONNECTION

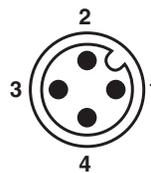
Flying Lead or 8 mm Connector (shown)



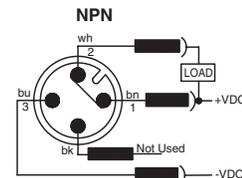
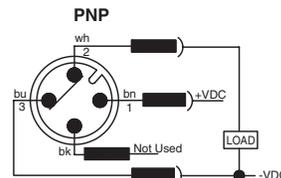
Pin	Wire	Function
1	Brown	Operating Voltage
2	Black	Output signal
3	Blue	0V



12 mm Connector

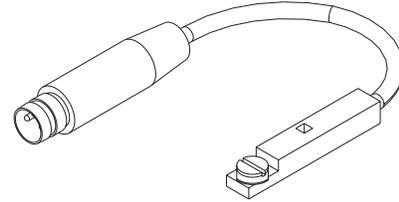


Pin	Wire	Function
1	brown	Operating Voltage
4	black	Not used
2	white	Output Signal
3	blue	0V



Drop-In Reed Switches

Switch Part No.	Wiring
P8S-GRFLX	3m flying leads
P8S-GRFTX	10m flying leads
P8S-GRSHX	0.2m lead with 8mm connector
P8S-GRMHX	0.2m lead with 12mm connector
P8S-GRSCX	1m lead with 8mm connector



Reed Switch 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.

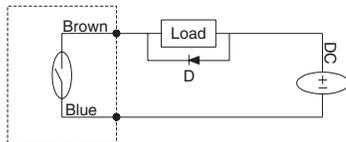
*8mm connector rated for 75 VAC max.

REED SWITCH - 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.



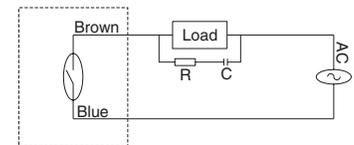
D: Diode: select a Diode with the breakdown voltage and current rating according to the load.

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 ammeter 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.