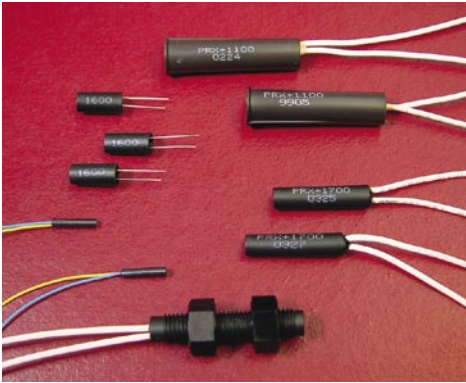


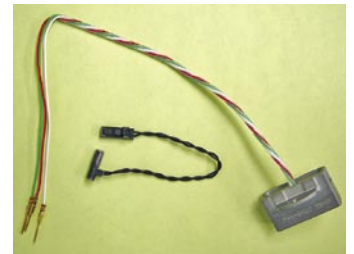
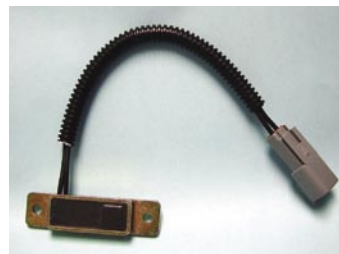
# Hermetic Switch Proximity Sensors



Proximity sensors feature over-molded reed switches or reed switches assembled in housings to protect the switch and provide easy mounting. By selecting a proximity sensor, customers can bypass switch preparation, wire cutting, wire stripping, soldering and potting. Proximity sensors report the relative position of moving objects that must be monitored. Changing actuator positions cause sensor contacts to open or close, allowing signal currents to flow. Proximity sensors respond to the actuator's magnetism.

The chart below shows you our standard proximity sensor, and the next page has our Proximity Sensor Selector Guide to direct you to a category of proximity sensors. Proximity sensor categories include: Overmolded Reed Switch, Surface Mount, Industrial/ Alarm, Tubular, Steel Sensing, Low Profile and High Power.

Do your sensors need custom housings, specific connectors, longer wires, wires of a certain color, special tubing or required engraving? Let Hermetic Switch build your custom proximity sensor package. Contact us to find out more about our value-added services.



Tubular	Surface Mount <sup>1</sup>	Overmolded Reed Switch <sup>2</sup>	Industrial Alarm	Steel Sensing	Low Profile	High Power
PRX+0700	PRX+2452 <sup>3</sup>	PRX+2451	PRX+5100	PRX+4100	PRX+7100	PRX+9100
PRX+0800	PRX+2454 <sup>3</sup>	PRX+2456	PRX+5200 <sup>4</sup>	PRX+4400	PRX+7200	PRX+9200
PRX+0900	PRX+2100	PRX+2401	PRX+5300 <sup>4</sup>	PRX+4800	PRX+7300	PRX+9300
PRX+1100	PRX+2700 <sup>3</sup>		PRX+6100		PRX+8200	PRX+9125
PRX+1200 <sup>4</sup>			PRX+6200 <sup>4</sup>		PRX+8500	PRX+9225
PRX+1300 <sup>4</sup>			PRX+6300 <sup>4</sup>		PRX+8800	PRX+9325
PRX+1500						PRX+9150
PRX+1600						PRX+9250
PRX+1700						PRX+9350
PRX+1800						
PRX+1900						

1. Leads are modified with surface mount bars, a J-bend, etc.

2. Leads are straight.

3. These Surface Mount sensors are overmolded (not in a separate housing).

4. These sensors are the Form B & C versions of the PRX+1100, 5100 and 6100. Visit our website to see the specifications for these products.

# Proximity Sensor Selector Guide

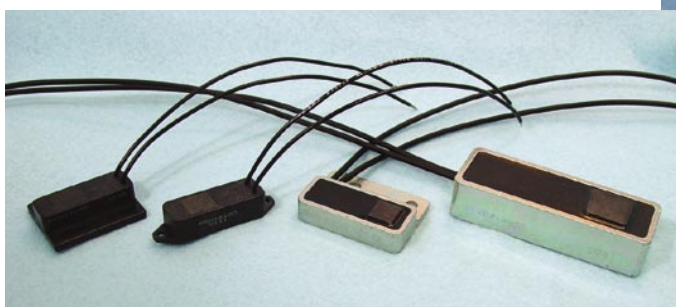
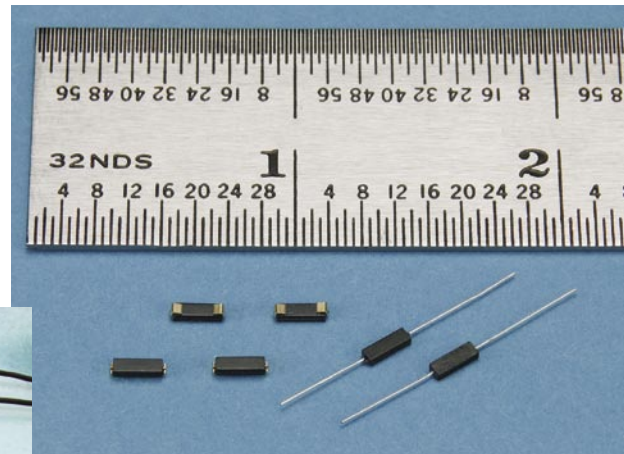
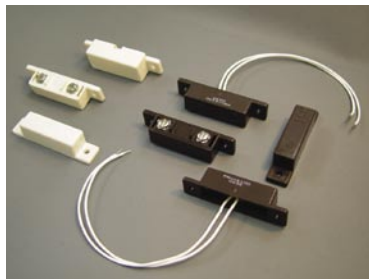
**Choices...** Hermetic offers a large variety of standard proximity sensors. Below is our Proximity Sensor Selector Guide to help you select the best sensor for your application. Should you need a sensor outside the specifications of our standard proximity sensors, Hermetic's Product Development Department will be happy to work with you in creating the best proximity sensor for your application.



## CRITERIA WITHIN PRODUCT CATEGORIES

	Small Size Housing Length	High Switching Voltage	High Wattage	Low Cost	
CATEGORY	Tubular	PRX+1500	PRX+0800, PRX+0900, PRX+1800, PRX+1900	PRX+0700, PRX+1700	PRX+1100
	Surface Mount	PRX+2452, PRX+2454	PRX+2700	PRX+2700	PRX+2700
	Overmolded Reed Switch	PRX+2451, PRX+2456	Sensors in this category share the same Switching Voltage capability	PRX+2401	PRX+2401
	Industrial/Alarm	PRX+5100, PRX+6100	Sensors in this category share the same Switching Voltage capability	Sensors in this category share the same Switching Power (wattage) capability	PRX+5100
	Steel Sensing	PRX+4400	PRX+4100	PRX+4800	PRX+4100
	Low Profile	PRX+7100, PRX+7200, PRX+7300	PRX+8200	PRX+8500	PRX+8200
	High Power	Sensors in this category have the same housing size	PRX+9150, PRX+9250, PRX+9350	PRX+9150	PRX+9100


*Note: Refer to product pages for exact product specifications*



*See our Reed Switch and Proximity Sensor Application Notes on pages 21-29.*

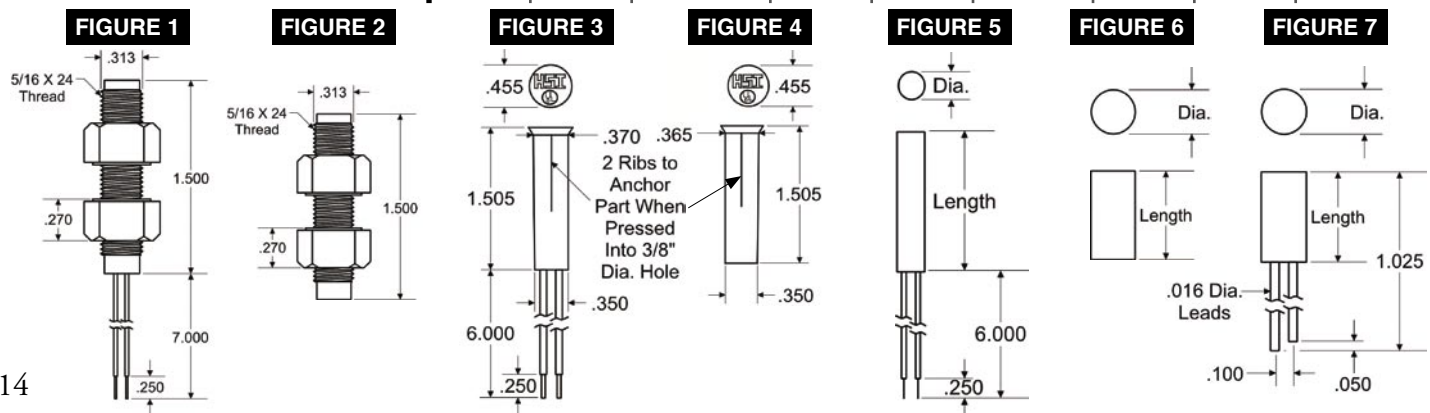
# Hermetic Switch Proximity Sensors

## TUBULAR

<i>Parameters</i>			Type	PRX+0700	PRX+0800	PRX+0900	PRX+1100	PRX+1500	PRX+1600	PRX+1700	PRX+1800	PRX+1900
Configuration				Form A SPST-NO	Form B SPST-NC	Form C SPDT	Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form B SPST-NC	Form C SPDT
Figure				1	1	1	3	5	7	5	5	5
Switching Voltage	Max	Volts DC		100	120	120	30	30	100	100	120	120
Switching Current	Max	A		0.25	0.25	0.25	0.20	0.05	0.20	0.25	0.25	0.25
Switching Power	Max	W/VA		10	3	3	4	1	4	10	3	3
Voltage Breakdown	Min	Volts DC		300	300	300	300	200	200	300	300	300
Initial Contact Resistance	Max	Ohms		0.25	0.25	0.25	0.25	1	0.25	0.25	0.25	0.25
Operating Temp.	Min Max	°C		+105	+105	+105	+10 +70	+125	+125	+105	+105	+105
Must Operate*	-			0.200in	0.200in	0.200in	0.750in	0.125in	0.125in	0.200in	0.200in	0.200in
Must Release**	-			0.750in	0.750in	0.750in	1.500in	0.400in	0.400in	0.550in	0.550in	0.550in
Wire Color/AWG				Wht/22	Red/24	Red-NC/24 Wht-NO/24 Blue-Com/24	Wht/22	Blue/28 Yell/28	Electro-Plated Tin	Wht/22	Red/22	Blue-NC/24 Red-NO/22 Wht-Com/24
Actuator Part No.				0100	0100	0100	1000	1005	1006	1007	1007	1007
Actuator Figure				2	2	2	4	6	6	6	6	6
Switch Rating				-	-	-		-	-	-	-	-
Notes				2,4	2,4	2,4	1,4,5	2,4	2,4	2,4	2,4	2,4

### *Tubular Dimensions*

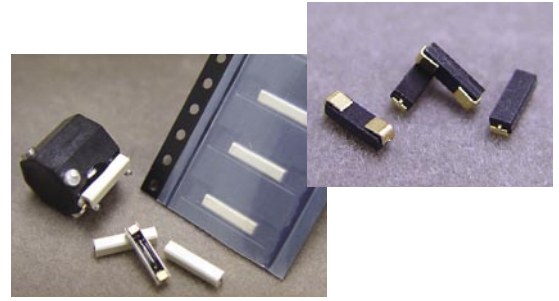
Housing Diameter	Inch	0.313	0.313	0.313	0.455	0.095	0.245	0.245	0.245	0.245
Housing Length	Inch	1.500	1.500	1.500	1.505	0.470	0.500	1.000	1.000	1.000
Actuator Diameter	Inch	0.313	0.313	0.313	0.455	0.100	0.245	0.245	0.245	0.245
Actuator Length	Inch	1.500	1.500	1.500	1.505	0.410	0.500	1.000	1.000	1.000



# SURFACE MOUNT

# OVERMOLDED REED SWITCH

# INDUSTRIAL/ALARM



PRX+2452†	PRX+2454†	PRX+2700†	PRX+2100	PRX+2451	PRX+2456	PRX+2401	PRX+5100	PRX+6100
Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form A SPST-NO
12	13	11	16	14	14	15	8	10
30	30	200	30	30	30	30	30	30
0.01	0.01	0.5	0.05	0.01	0.01	0.05	0.20	0.20
0.25	0.25	10	1	0.25	0.25	1	4	4
80	80	250	200	80	80	200	300	300
1	1	0.15	1	0.75	0.75	0.75	0.25	0.25
-40 +125	-40 +125	-40 +125	-40 +125	-40 +125	-40 +125	-40 +125	+10 +70	+10 +70
2.50mT	2.50mT	2.50mT	2.80mT	2/15 AT	2/6 AT	4/20 AT	1.000in	1.000in
0.50mT	0.50mT	0.50mT	0.50mT	-	-	-	2.500in	2.500in
-	-	-	-	-	-	-	Lug Terminal	Wht/22
-	-	-	-	-	-	-	5000	6000
-	-	-	-	-	-	-	9	9
-	-	-	-	-	-	-	UL	UL
-	-	-	3,4,6	-	-	-	1,4,5	1,4,5

## Operation

Proximity sensors need a magnet (or steel target) to operate. Hermetic Switch offers Actuators (magnets within housings) for each of our proximity sensors along with several distinct magnets without housings on page 19.

## Applications

A few applications containing proximity sensors from these 2 pages include: pacemakers, burglar alarms, anti-tank missiles, revolving doors and liquid level sensors.

## Notes

- Case color White, Brown or Gray
  - Case color Black
  - Case color White
  - Consult factory for AC Ratings
  - Also available in Form B (PRX+1200,5200,6200) & Form C (PRX+1300,5300,6300). See website for more information.
  - Solder reflow to 265°C
- \* Operate Distance Illustrations on p.18  
 † These are Overmolded Surface Mount sensors  
 ‡ Special Release Sensitivity and/or Differential is available on most models.

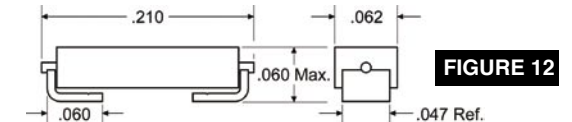


FIGURE 12

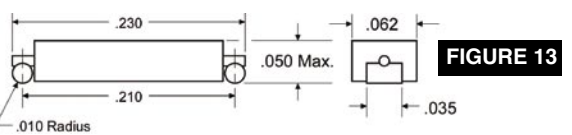


FIGURE 13

FIGURE 8

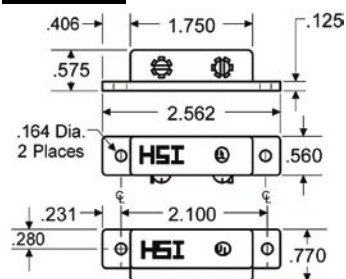


FIGURE 9

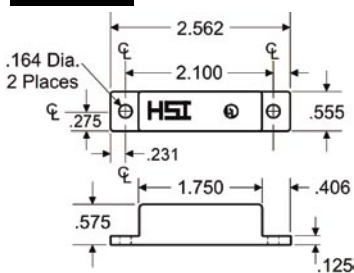


FIGURE 10

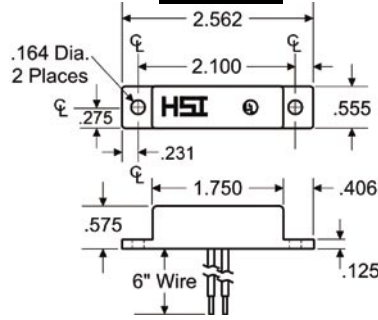


FIGURE 11

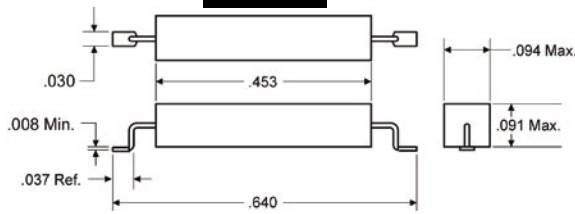


FIGURE 14

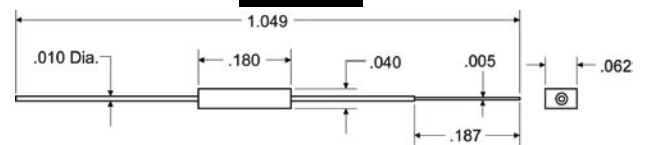


FIGURE 15

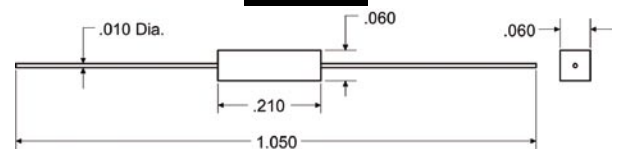
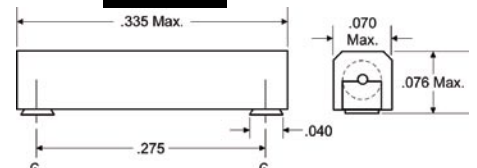


FIGURE 16

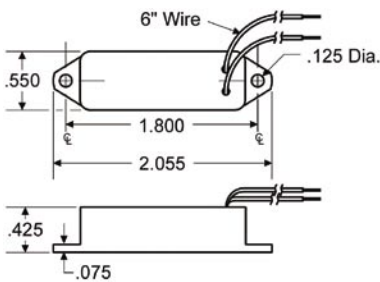


# Hermetic Switch Proximity Sensors

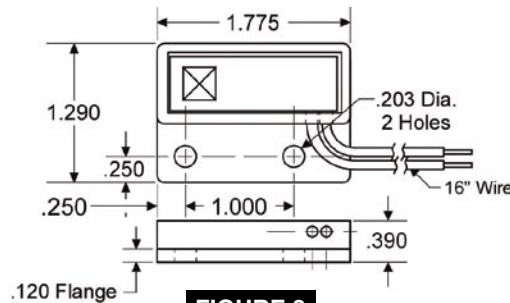
## STEEL SENSING

## LOW PROFILE

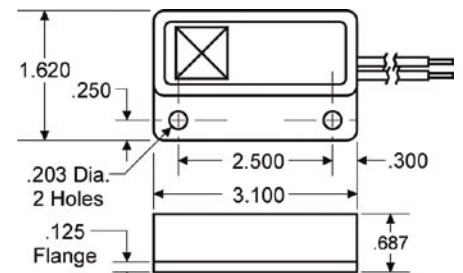
Parameters			STEEL SENSING			LOW PROFILE						
			PRX+4100	PRX+4400	PRX+4800	PRX+7100	PRX+7200	PRX+7300	PRX+8200	PRX+8300	PRX+8500	PRX+8800
Configuration	Type		Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form A SPST-NO	Form C SPDT	Form B SPST-NC	Form A SPST-NO	Form C SPDT-NO	Form A SPST-NO	Form B SPST-NC
Figure			1	3	5	2	2	2	6	6	6	6
Switching Voltage	Max	Volts DC	100	50	50	30	30	30	200	120	See Note 5	120
Switching Current	Max	A	0.25	0.25	3	0.20	0.10	0.10	0.50	0.25	2 AC	0.25
Switching Power	Max	W/VA	10	10	200	4	3	3	10	3	250VA	3
Voltage Breakdown	Min	Volts DC	200	50	50	300	200	200	400	400	N/A	400
Initial Contact Resistance	Max	Ohms	1.0	1.0	1.0	0.25	0.25	0.25	0.25	0.25	N/A	0.25
Operating Temp.	Max	°C	+80	+125	+125	+75	+80	+75	+105	+60	+100	+105
Must Operate*		Inch	0.250	0.250	0.400	0.500	0.500	0.500	0.500	0.500	0.500	0.500
Must Release*†		Inch	0.310	0.310	0.675	1	1	1	1	1	1.25	1
Wire Color/AWG			Blk/20	Blk/16	Blk/16	Gray/24	Red-NC/28 Wht-NO/28 Blk-Com/28	Gray/24	Wht/22	Blue-NC/22 Red-NO/22 Wht-Com/22	Wht/22 Red/22	Red/22
Actuator Part No.			STEEL TARGET			7000	7000	7000	8100	8100	8100	8100
Actuator Figure			See Page 18			4	4	4	7	7	7	7
Switch Rating			-	-	-	-	-	-				-
Notes			1,3,6	2,3	2,3,4	1,3	1,3	1,3	1,3	1,3	1,5,6,7	1,3



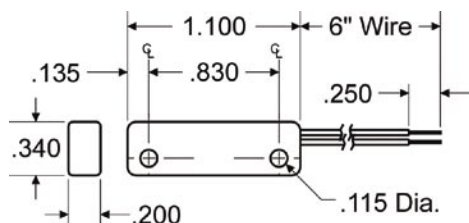
**FIGURE 1**



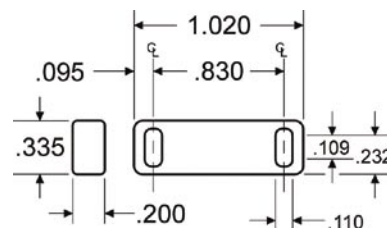
**FIGURE 3**



**FIGURE 5**

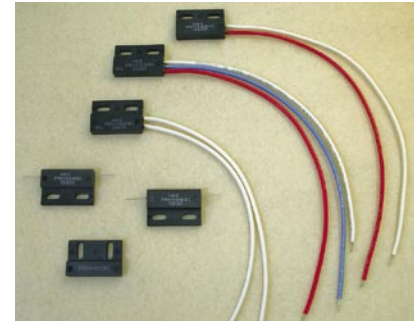


**FIGURE 2**



**FIGURE 4**

# HIGH POWER



PRX+9100	PRX+9200	PRX+9300	PRX+9125	PRX+9225	PRX+9325	PRX+9150	PRX+9250	PRX+9350
Form A SPST-NO	Form B SPST-NC	Form C SPDT	Form A SPST-NO	Form B SPST-NC	Form C SPDT	Form A SPST-NO	Form B SPST-NC	Form C SPDT
8	8	8	8	8	8	8	8	8
250	150	150	120	120	120	300	300	300
1	1	1	3	3	3	3	3	3
15	25	25	100	100	100	200	100	100
300	300	300	300	150	150	300	300	300
0.30	0.30	0.30	0.70	0.70	0.70	0.70	0.70	0.70
+80	+80	+80	+80	+80	+80	+80	+80	+80
0.750	0.750	0.750	0.750	0.750	0.750	0.500	0.500	0.500
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Wht/22	Red/22	Red-NC/22 Wht-NO/22 Blk-Com/22	Wht/22	Red/22	Red-NC/22 Wht-NO/22 Blk-Com/22	Wht/22	Red/22	Red-NC/22 Wht-NO/22 Blk-Com/22
9000	9000	9000	9000	9000	9000	9000	9000	9000
9	9	9	9	9	9	9	9	9
-	-	-	-	-	-	-	-	-
1,3	1,3	1,3	1,3,4	1,3,4	1,3,4	1,3,4	1,3,4	1,3,4

## Operation

Proximity sensors need a magnet (or steel target) to operate. Hermetic Switch offers Actuators (magnets within housings) for each of our proximity sensors along with several distinct magnets without housings on page 19.

## Applications

A few applications containing proximity sensors from these 2 pages include: farm equipment, mowing tractors, RV hydraulic jacks, food processors and airplane controls.

## Notes

1. Case color Black
  2. Metal housing
  3. Consult factor for AC Ratings
  4. 3.0 Watts minimum
  5. Part #8500 is for 6-120VAC loads only. Sensor will latch on with DC loads & will remain on until voltage is removed.
  6. Also available in Form B
  7. UL recognized component available
- \* Operate Distance Illustrations on p.18  
 † Special Release Sensitivity and/or Differential is available on most models

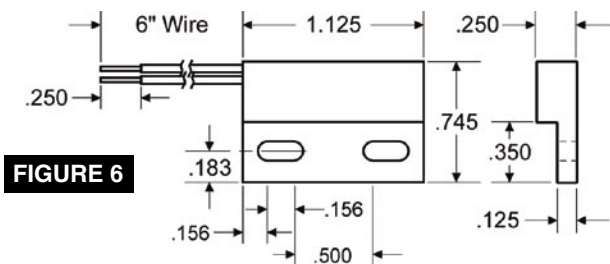


FIGURE 6

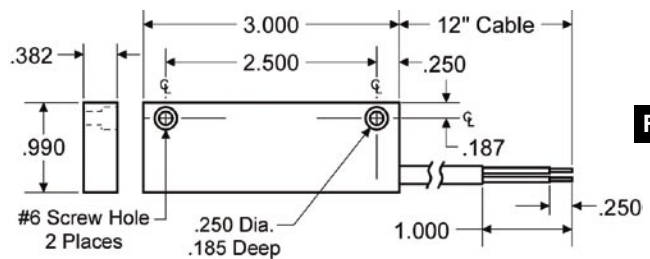


FIGURE 8

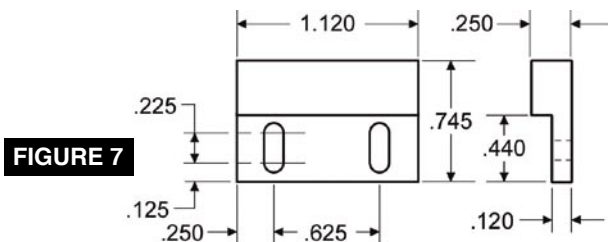


FIGURE 7

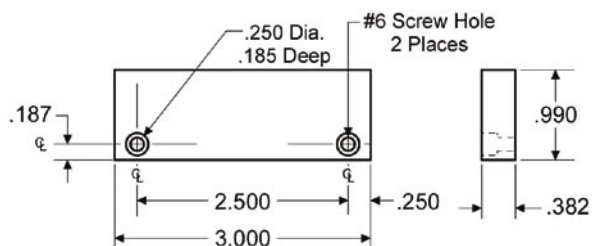
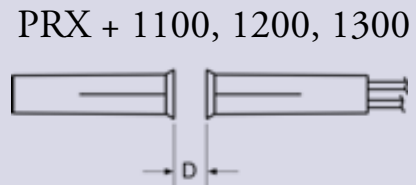
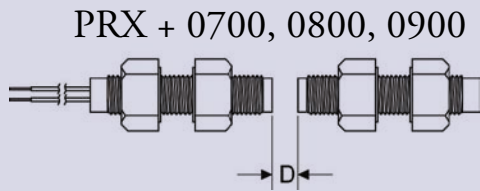
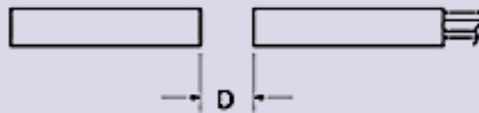


FIGURE 9

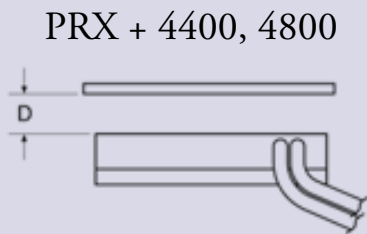
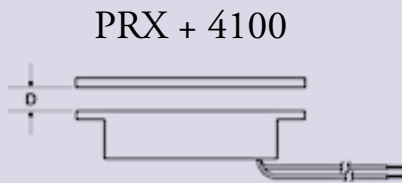
# Hermetic Switch Operating Distance Illustrations



PRX + 1500, 1600, 1700, 1800, 1900



Tubular



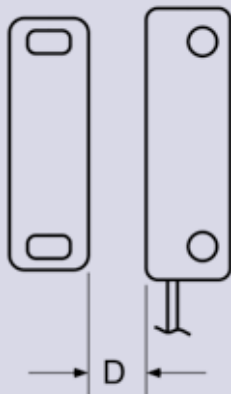
Steel Sensing

PRX + 5000, 6000 Series

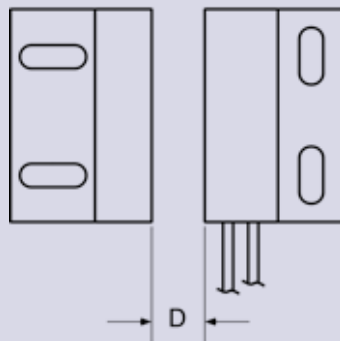


Industrial/Alarm

PRX + 7000 Series

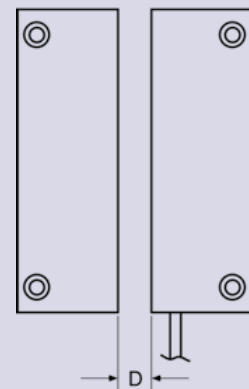


PRX + 8000 Series



Low Profile

PRX + 9000 Series



High Power