

## Reed, Metal Housing



Switch: 3.2 1.5 8  
Actuator: 3.2 1.5 8  
Fixing centres = 20,  
Fixing hole, 3.3 dia. csk

- Magnetic proximity switch with hermetically sealed contacts
- Suitable for position, level sensing and security/anti-tamper
- Contacts closed with magnetic present
- Compact aluminium housing
- Good protection in harsh environments up to **IP65**

### Applications

- Process control systems
- Intruder alarm, limit and proximity applications



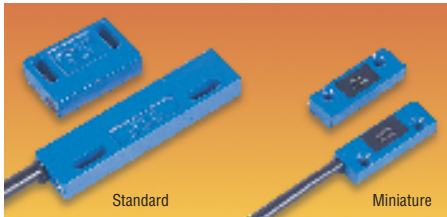
Switch contact operates when the magnet actuator moves in close proximity to the switch, typically 10mm.

Contacts	SPNO (Form A)	Switching distance, min.	10mm
Switching voltage, max.	230V ac	Operating temperature	-20°C to +70°C
Switching current, max.	0.5A	Case material	Aluminium
Switching capacity, resistive	10VA	Cable length	280mm, PVC insulated
Contact resistance, max.	300mΩ		

SEN368

Mfrs. List No.	Order Code	1+	50+	200+
CTC012	<b>309-4868</b>			
CTCM	<b>309-4870</b>			

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Standard switch: 79.5 19.3 9.8, Fixing centres = 50 (slots 14 4.7)  
Standard actuator: 38.1 25.4 9.8, Fixing centres = 28 (slots 14 4.7)  
Miniature switch: 38.3 12.7 7.7, Fixing centres = 25 (hole dia 3.1)  
Miniature actuator: 38.3 12.7 7.7, Fixing centres = 25 (hole dia 3.1)

- Magnetically operated reed proximity switches encapsulated in pressure die castings with a blue powder coated finish
- Solid construction gives protection in harsh environments, **IP64** rating
- Suitable for many applications with either inductive or resistive loads
- Intruder alarm and limit switch, micro-switch and proximity switch applications
- Normally open or changeover contacts available

Connection is by integral PVC cable, 0.5m for miniature and 0.7m length for standard switches.

Size	Contact Form (earthed*)	Max dc Contact Ratings			Order Code
		V	W	A	
Miniature	SPNO	200	15	0.5	170-838
Miniature	SPCO	175	3	0.25	170-839
Standard	SPNO*	400	100	3.0	170-842
Standard	SPCO*	500	50	1.5	170-841

Actuator Magnets	Operating Range (face-to-face from switch)		
	Miniature	Standard	Order Code
	170-838: 7 to 13mm,	170-839: 5 to 10mm	170-840
	170-842: 13 to 22mm,	170-841: 13 to 20mm	170-843

SEN59X

Type	Order Code	1+	10+	25+
<b>Switches</b>				
Miniature SPNO	<b>170-838</b>			
Miniature SPCO	<b>170-839</b>			
Standard SPNO	<b>170-842</b>			
Standard SPCO	<b>170-841</b>			
<b>Magnets</b>				
Miniature	<b>170-840</b>			
Standard	<b>170-843</b>			

## Solid State – Hall Effect



L = 30, W = 20, D = 7, Cable L = 300  
Fixing centres = 16,  
Fixing slots = 6 3.3

Connections:  
Red = +V, Green = 0V, Blue = NPN Output (4.7kΩ to +V),  
Yellow = PNP Output (4.7kΩ to 0V)

- Bounce-free switching
- High speed operation
- Solid state reliability
- Alignment and monitoring by LED indicator
- Fully encapsulated package
- NPN or PNP normally open output (by wire selection)
- High strength magnet
- Small plastic packages with fixing slots



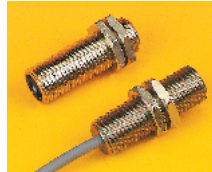
Magnetically activated proximity switch utilising Hall effect technology.

Supply voltage	10 to 20V dc	Operating distance	8mm typ.
ON-current	25mA typ.	Operating temperature	-30°C to +70°C
Output current	250mA max.	Operating frequency	100kHz max.
Output loading	4.7kΩ approx.	Output rise/fall time	2.0μs/2.0μs (max.)

SEN359

Mfrs. List No.	Order Code	1+	25+	100+	250+
Switch PSS25S/30	<b>723-0400</b>				
Magnet PSSM	<b>723-0412</b>				

## Hall Effect Sensor with Magnet



Connections:-  
Red: +V  
Green: 0V  
Blue: NPN output (4.7kΩ to +V)  
Yellow: PNP output (4.7kΩ to 0V)

L = 35, Cable L = 300, Dia. = M18

- Bounce-free operation
- High speed operation
- Solid state reliability
- Alignment and monitoring by LED indicator
- Fully protected to **IP65**
- NPN or PNP normally open output (by wire selection)
- Threaded barrel for easy fitting and adjustment
- Screened and insulated cable

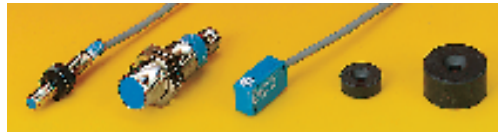
Mechanically activated proximity switch utilising Hall Effect Technology. Sensor and Actuator should be used as a set.

Supply voltage	10-20V dc	Operating temperature	-30°C to +70°C
ON-current	25mA	Operating frequency	100kHz
Output current	250mA	Output rise/fall time	2.0μs max.
Output loading	4.7k	Case material	Nickel Plated Brass
Operating distance	10mm		

SEN370

Mfrs. List No.	Order Code	1+	25+	100+	250+
PTS25S/30	<b>309-4819</b>				

## Solid State – Long Range Sensing



M8: L = 50 (cable type), 59 (plug-in type)  
M18: L = 50 (cable type), 65 (plug-in type)  
Rectangular: H = 16, W = 10, D = 28 (body)

Magnets:  
M3.0: Dia. = 20, H = 6.5, Hole dia. = 4.3  
M5.0: Dia. = 31, H = 15, Hole dia. = 5.3

- Can be installed flush and non-flush in metal
- Long sensing ranges, even with small size sensors
- Can be used to detect magnets behind surfaces such as wood, plastic or non-ferrous metal
- High switching frequency
- Short circuit and reverse polarity protection
- Barrel sensors in robust metal housings
- Plastic rectangular housing similar to V3 style microswitch
- Prewired 2m cable or plug-in connector options
- LED status indication
- **IP67** enclosure rating
- Suitable magnets available, centre drilled and countersunk

Sensing range, axial (using M4.0 magnet)

In non-magnetisable material	M8 = 60, M18 = 70, Rectangular = 60
Flush in magnetisable material	M8 = 20, M18 = 55, Rectangular = 20
Operating voltage	10 to 30V dc
Switching output	PNP, normally open, 300mA max.
Case material	M8/M18: brass, nickel plated; Rectangular: plastic
Connection, plug-in	M8/Rectangular: M8 screw lock; M18: M12
Magnet material	Barium ferrite

Mfrs. List No's:	MM08-60APS-ZUO = 722-9495, MM08-60APS-ZTO = 722-9501, MM18-70APS-ZUO = 722-9513, MM18-70APS-ZCO = 722-9525, MQ10-60APS-KUO = 722-9537, MQ10-60APS-KTO = 722-9549, M3.0 = 722-9550, M5.0 = 722-9562.
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FOR SUITABLE SENSOR CONNECTORS SEE **ORDER CODE 1394**

SEN336

Proximity Switches	Connection	Order Code	1+	5+	10+
M8 barrel	Cable	<b>.722-9495</b>			
M8 barrel	Plug-in	<b>.722-9501</b>			
M18 barrel	Cable	<b>.722-9513</b>			
M18 barrel	Plug-in	<b>.722-9525</b>			
Rectangular	Cable	<b>.722-9537</b>			
Rectangular	Plug-in	<b>.722-9549</b>			
<b>Magnets</b>					
Dia. = 20, H = 6.5 (drilled)		<b>.722-9550</b>			
Dia. = 31, H = 15 (drilled)		<b>.722-9562</b>			