1-800-633-0405 IDEM SPR, SMR, and SMR-F Medium Duty **Non-Contact Magnetic Safety Switches**





Actuator Operating Direction



SMR-F

SPR Series Plastic Housing

SMR Series Stainless Steel Housing

SMR-F Series Stainless Steel Housing Rear Mount

- Universal housing 22mm fixing footprint suitable for most general applications; 50 mm wide body
- · Withstands environments where high humidity or hose down is required.
- · Wide 12 mm sensing, high tolerance to misalignment
- · Long life switching capability up to 1A
- · Will operate with most safety relays
- · Codes are not unique and can be used with other models of the same series
- Available with 2m, 5m, or 10m cable or 250mm pigtail with quick-disconnect cable

SMR Series, SMR-F Only

- Specifically designed for food processing applications
- Suitable for CIP SIP cleaning Food Splash Zones per EHEDG guidelines
- 316 Stainless steel mirror polished finish
- Can be high-pressure hosed at high temperature - IP69K rated

SMR-F Only

- Same as SMR series, but with no-food-trap housing - rear mounting holes
- 5m cable only

See Dimensions later in this section.

SPR, SMR, and SMR-F Non-Contact Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length	Circuits	Contact Type / Rating
		F	Pigtail Versions		
<u>SPR-111013</u>	\$125.00	Plastic	2m	2 NC, 1 NO	Medium duty / 1A
<u>SPR-111014</u>	\$135.00		5m		
SPR-111015	\$151.00		10m		
<u>SMR-139013</u>	\$186.00	- Stainless steel	2m		
<u>SMR-139014</u>	\$196.00		5m		
SMR-139015	\$213.00		10m		
SMR-F-137014	\$196.00		5m		
		Quick Disco	nnect Versions (M12 8-pin)	
SPR-111016	\$157.00	Plastic	250mm	2 NC. 1 NO	Medium duty / 1A
SMR-139016	\$220.00	Stainless steel	250mm		

Female Quick Disconnect Lead				
Part Number Price		Description	Exit Type/Cable Length	
<u>140101</u>	\$60.00	Female OD Load	M12 Female 5m, 8-pin	
<u>140102</u>	\$91.00	Female QD Lead	M12 Female 10m, 8-pin	

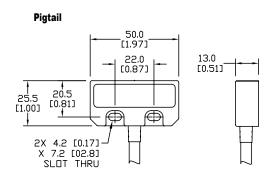


1-800-633-0405 **IDEM SPR, SMR, and SMR-F Medium Duty Non-Contact Magnetic Safety Switches**

Dimensions

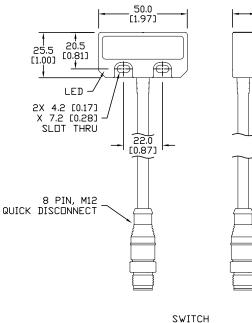
mm [in]

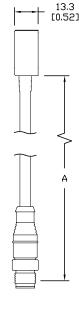
SPR Series

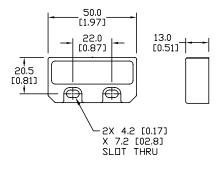




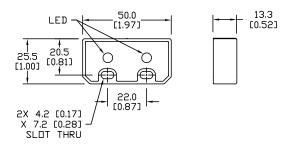
Quick Disconnect







ACTUATOR



ACTUATOR

See our website: www.AutomationDirect.com for complete Engineering drawings.

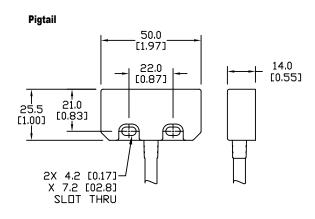
For the latest prices, please check AutomationDirect.com.

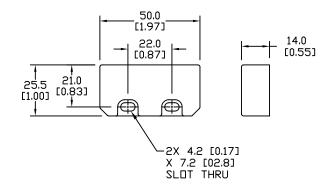
1-800-633-0405 **IDEM SPR, SMR, and SMR-F Medium Duty Non-Contact Magnetic Safety Switches**

Dimensions

mm [in]

SPR Series



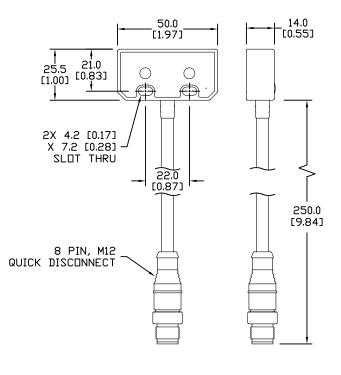


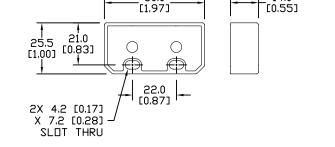
SWITCH



14.0

Quick Disconnect





50.0

SWITCH

ACTUATOR

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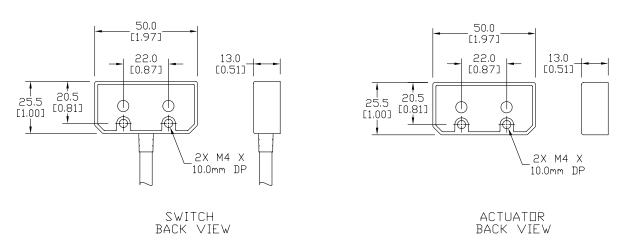
1-800-633-0405 **IDEM SPR, SMR, and SMR-F Medium Duty Non-Contact Magnetic Safety Switches**

Dimensions

mm [in]

SMR Series

Pigtail

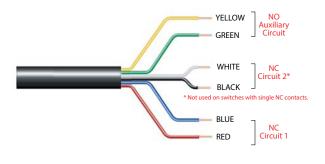


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IDEM Non-Contact Safety Switches Electrical Connections and Dimensions

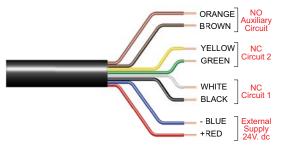
Electrical Connections

Magnetic Switches



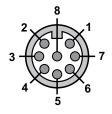
Magnetic Switches - Electrical Connections			
Quick Disconnect Connector Pin Out	Lead Color	Type of Circuit (Actuator Present)	
4	Yellow	Auxiliary (NO)	
6	Green	Auxiliary (NO)	
7	Black	NC2	
1	White	NC2	
2	Red	NC1	
3	Blue	NC1	

Coded Magnetic and RFID Switches



Coded Magnetic Switches - Electrical Connections				
Quick Disconnect Connector Pin Out	Lead Color	Type of Circuit (Actuator Present)	Output Types (Solid State)	
8	Orange	Auxiliary (NO)	200 mA max. 24 VDC	
5	Brown	Auxiliary (NO)		
4	Yellow	NC2 +	200 mA max. 24 VDC (Optocoupler)	
6	Green	NC2 -		
7	Black	NC1 +	200 mA max. 24 VDC (Optocoupler)	
1	White	NC1 -		
2	Red	Supply +24 VDC	Supply 24 VDC +10% / -15%	
3	Blue	Supply 0VDC		

Connection Colors

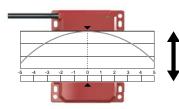


Pin View from Switch M12 Male

1-800-633-0405 **IDEM Non-Contact Safety Switches Specifications**

	Non-Contact Magnetic Switches	tches Specifications	Non-Contact RFID Coded Switche
Safety Classification and Reliability Data	Non-comaci magnetic Switches	Non-Contact Coded Magnetic Switches	Non-Comaci RFID Coded Switche
	2.2.406	No mechanical parts implemented	No
Switching Reliability (B10d)	3.3 x 10 ⁶ operations at 100mA load	No mechanical parts implemented	
SO 13849-1	Up to Category 4		
SO 13849-1	Up to PLe depending upon system architecture		
EN 62061		Up to SIL3 depending upon system architecture	
Safety Data - Annual Usage	10	8 cycles per hour / 24 hours per day / 365 days	10
PFHd	2.8 x 10 ⁻¹⁰	2.6 x 10 ⁻¹⁰	4.77 x 10 ⁻¹⁰
Proof Test Interval (Life)		20 years	1
MTTFd	470 years	866 years	1100 years
Agency Approvals		CE, cULus	
Electrical and General Specifications			
	MPR: Voltage free: 250VAC, 0.5 A max.		24VDC, 0.2 A max (optocoupler)
	LPR, LMR, SPR, SMR, SMR-F: Voltage free: 250VAC, 1.0 A max.	24VDC, 0.2 A max (optocoupler)	
Contact Ratings: Safety Contact NC	CPR, CMR, CMR-F, WPR: Voltage free: 250VAC, 2.0 A max.		
	BPR, BMR: 240VAC, 24VAC/DC, 1.0 A max.		
Contact Ratings: Monitoring (Auxilary) Contact NO	Voltage free: 24VDC, 0.2 A max.	24VDC, 0.2A max.	24VDC, 0.2A max.
Recommended Fuses (NC Circuits)	MPR: Fuse externally 0.4 A (F) LPR, LMR, SPR, SMR, SMR-F, CMR, CMR-F: Fuse externally 0.8 A (F)	NA	NA
	CPR, WPR: Fuse externally 1.6 A (F) BPR, BMR: Fuse externally 0.5 A (F)		
Contact Release Time	<2ms	NA	NA
nitial Contact Resistance	<0.5 Ω	NA	NA
Minimum Switched Current		10 DC, 1mA	
Dielectic Withstand		250VAC	
Insulation Resistance		100 Megohms	
Recommended Setting Gap		5mm [0.20 in]	
NC Switching Distance	Sao (assured C	DN) 8mm [0.31 in] close; Sar (assured OFF) 20mr	m [0,79 in] open
NC Switching Operation		circuits are closed when the guard is closed and	
NO Switching Operation		Opens before NC circuits close	
Tolerance to Misalignment	5mm [0.20 in] in any direction from 5mm [0.20 in] setting gap (See Misalignment Range drawing on this page		t Range drawing on this page)
Switching Frequency	1.0 Hz Max.		
Approach Speed	200 n	nm [7.87 in] per minute to 1000mm [39.37] per se	acond
Body Material - Polyester	CPR, LPR, MPR, SPR, WPR, BPR	CPC, LPC, MPC, SPC, WPC	LPF, SPF, BPF
Body Material - 316 Stainless Steel	CMR, CMR-F, LMR, SMR, SMR-F, BMR	CMC, CMC-F, LMC, SMC, SMC-F	LMF, BMF
	2	Polyester: -25° to +80°C (-13° to +176° F)	
Operating Temperature Range	316 Stainless Steel: -25° to +105° C [-13° to +221° F]	316 Stainless Steel: -25° to +105° C [-13° to +221° F]	-25° to +80° C [-13° to +176° F]
Storage Temperature (Low)	-55° to -40° C [-67° to -40° F]		1
Enclosure Protection	IP67, IP69K (QC versions are IP67 due to connector)		
Shock Resistance		IEC 68-2-27 11ms 30g	
Vibration Resistance	IEC 68-2-6 10-55 Hz 1mm [0.04 in]		
Cable Type	PVC, 6.5 mm outside diameter max.	PVC, 6.5 mm outside diameter max.	PVC, 6mm [0.24 in] outer diameter max.
			111aA.

Note: Always mount onto non-ferrous materials.



Misalignment Range

TING GAP: 5n

Safety Products



Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

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