

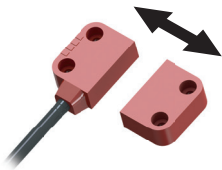
IDEM MPR and MMR Light Duty Non-Contact Magnetic Safety Switches

MPR Series Plastic Housing

MMR Series Stainless Steel Housing



Actuator Operating Direction



MPR/MMR

- Compact yet robust fitting suitable for all small guard applications
- Can be mounted unobtrusively in channels or behind doors - left or right cable exit
- Hygienic screw cap covers ensure suitability for food processing washdown
- Can be high-pressure hosed at high temperature - IP69K rated
- Wide 12 mm sensing, high tolerance to misalignment
- High switching capability - up to 0.5A
- Will operate with most safety relays
- Available with 2m, 5m, or 10m cable or 250mm pigtail cable with quick-disconnect cable
- Codes are not unique and can be used with other models of the same series

MMR-H Series Only

- Specifically designed for food processing applications
- Suitable for CIP SIP cleaning - Food Splash Zones per EHEDG guidelines
- 316 Stainless Steel mirror polished finish (Ra4)
- Can be high-pressure hosed at high temperature - IP69K rated

See Dimensions later in this section.

MPR/MMR Non-Contact Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length / Exit Type	Circuits	Contact Type / Rating
Pigtail Versions					
MPR-114005	\$71.00	Plastic	2m / Right	2 NC, 1 NO	Light duty / 0.5A
MPR-114006	\$77.00		5m / Right		
MPR-114007	\$89.00		10m / Right		
MPR-114013	\$71.00		2m / Left		
MPR-114014	\$77.00		5m / Left		
MPR-114015	\$89.00		10m / Left		
MMR-H-131005	\$125.00	Stainless Steel	2m / Right		
MMR-H-131006	\$132.50		5m / Right		
MMR-H-131007	\$144.50		10m / Right		
MMR-H-131013	\$125.00		2m / Left		
MMR-H-131014	\$132.50		5m / Left		
MMR-H-131015	\$144.50		10m / Left		
Quick Disconnect Versions (M12 8-pin)					
MPR-114008	\$92.50	Plastic	250mm / Right	2 NC, 1 NO	Light duty 0.5A
MPC-114116	\$102.50		250mm / Left		
MMR-H-131008	\$149.50	Stainless Steel	250mm / Right		
MMR-H-131016	\$149.50		250mm / Left		

Female Quick Disconnect Lead			
Part Number	Price	Description	Exit Type/Cable Length
140101	\$30.00	Female QD Lead	M12 Female 5m, 8-pin
140102	\$37.50		M12 Female 10m, 8-pin



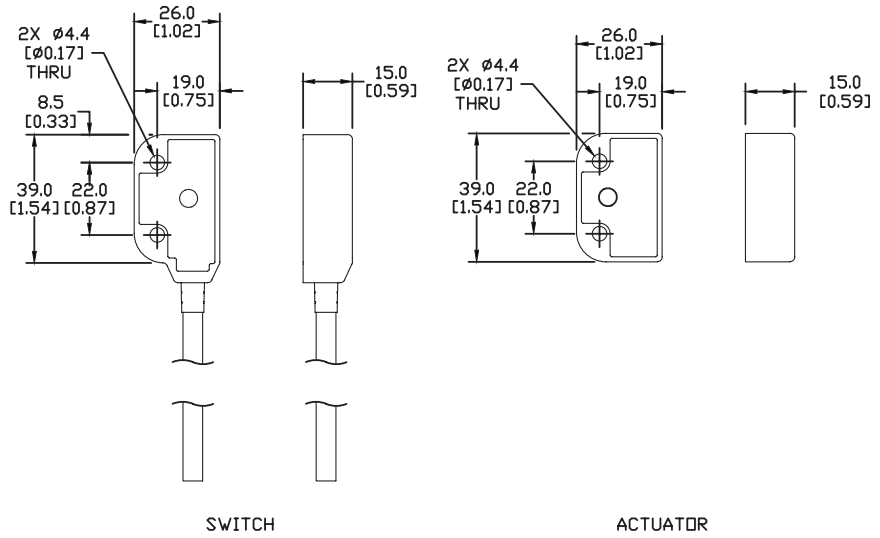
IDEM MPR and MMR Light Duty Non-Contact Magnetic Safety Switches

Dimensions

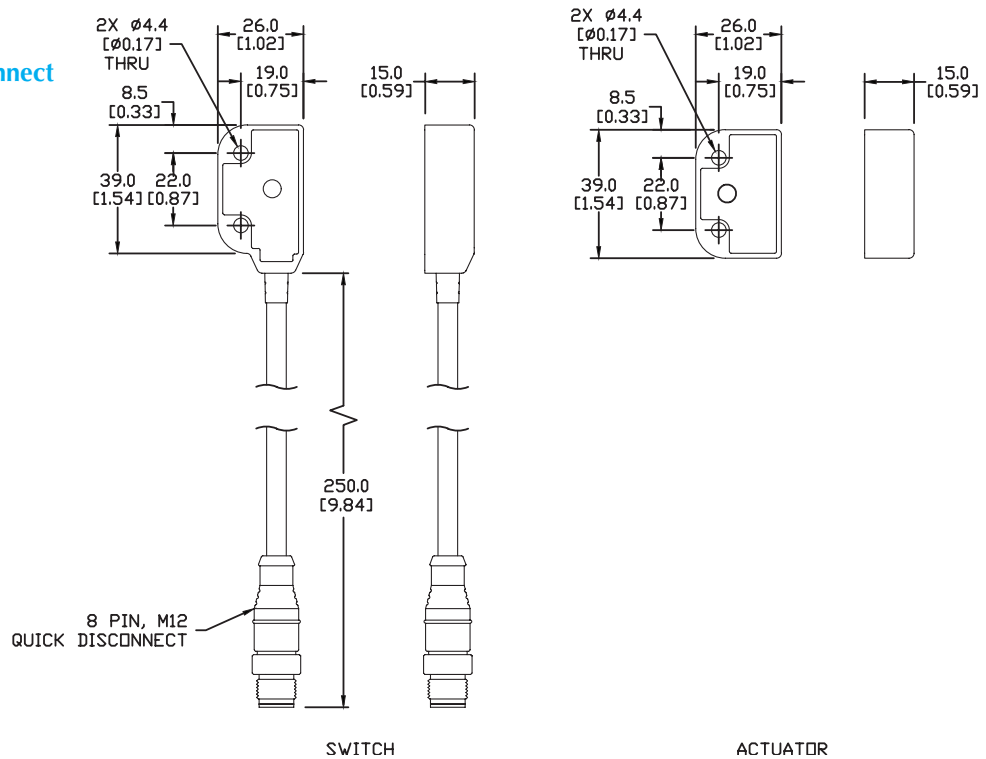
mm [inch]

MMR Series

Right Pigtail



Right Quick Disconnect



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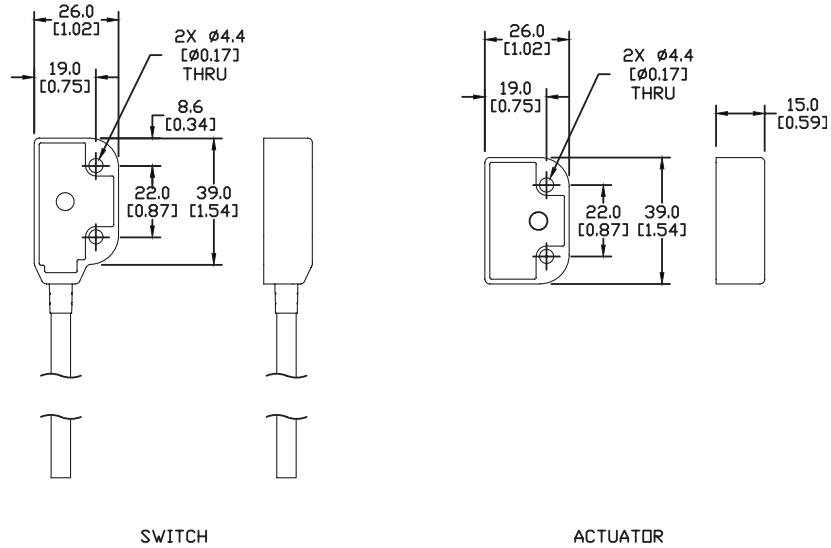
IDEM MPR and MMR Light Duty Non-Contact Magnetic Safety Switches

Dimensions

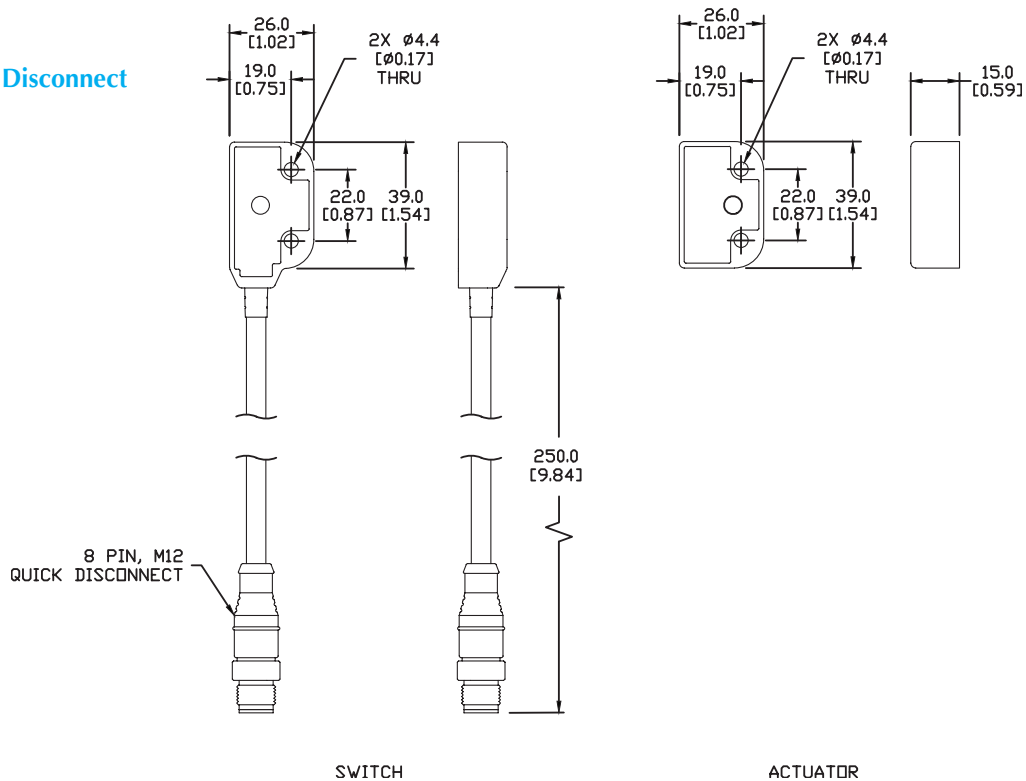
mm [inch]

MMR Series

Left Pigtail



Left Quick Disconnect

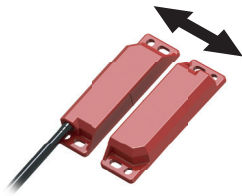


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IDEM LPR and LMR Medium Duty Non-Contact Magnetic Safety Switches



Actuator Operating Direction



LPR, LMR

LPR Series Plastic Housing

LMR Series Stainless Steel Housing

- Popular housing suitable for all industry applications
- Narrow style for flush mounting
- Can be high-pressure hosed at high temperature - IP69K rated
- Medium duty 1A
- Wide 12 mm sensing, high tolerance to misalignment
- Will operate with most safety relays
- Available with 2m, 5m, or 10m cable or 250mm pigtail with quick-disconnect cable
- Codes are not unique and can be used with other models of the same series

LMR Series Only

- Specifically designed for food processing applications
- Suitable for CIP SIP cleaning - food splash zones per EHEDG guidelines
- 316 Stainless steel mirror polished finish

See Dimensions later in this section.

LPR and LMR Non-Contact Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length	Circuits	Contact Type / Rating
Pigtail Versions					
LPR-110013	\$89.00	Plastic	2m	2 NC, 1 NO	Medium duty / 1A
LPR-110014	\$99.00		5m		
LPR-110015	\$109.00		10m		
LMR-133013	\$151.00	Stainless steel	2m		
LMR-133014	\$155.00		5m		
LMR-133015	\$171.00		10m		
Quick Disconnect Versions (M12 8-pin)					
LMR-133016	\$175.00	Stainless steel	250mm	2 NC, 1 NO	Medium duty / 1A

Female Quick Disconnect Lead			
Part Number	Price	Description	Exit Type/Cable Length
140101	\$30.00	Female QD Lead	M12 Female 5m, 8-pin
140102	\$37.50		M12 Female 10m, 8-pin



IDEM SPR, SMR, and SMR-F Medium Duty Non-Contact Magnetic Safety Switches



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

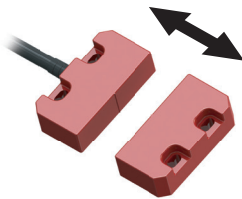
- Specifically designed for food processing applications
- Suitable for CIP SIP cleaning - Food Splash Zones per EHEDG guidelines
- 316 Stainless steel mirror polished finish
- Can be high-pressure hosed at high temperature - IP69K rated

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.

Actuator Operating Direction



SPR, SMR
SMR-F

SPR, SMR, and SMR-F Non-Contact Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length	Circuits	Contact Type / Rating
Pigtail Versions					
SPR-111013	\$93.00	Plastic	2m	2 NC, 1 NO	Medium duty / 1A
SPR-111014	\$99.00		5m		
SPR-111015	\$113.00		10m		
SMR-139013	\$119.00	Stainless steel	2m		
SMR-139014	\$123.00		5m		
SMR-139015	\$139.00		10m		
SMR-F-137014	<->		5m		
Quick Disconnect Versions (M12 8-pin)					
SPR-111016	\$119.50	Plastic	250mm	2 NC, 1 NO	Medium duty / 1A
SMR-139016	\$156.50	Stainless steel	250mm		

Female Quick Disconnect Lead			
Part Number	Price	Description	Exit Type/Cable Length
140101	\$30.00	Female QD Lead	M12 Female 5m, 8-pin
140102	\$37.50		M12 Female 10m, 8-pin



IDEM CPR, CMR, and CMR-F Heavy Duty Non-Contact Magnetic Safety Switches



CPR Series Plastic Housing

CMR Series Stainless Steel Housing

CMR-F Series Stainless Steel Housing Rear Mount

- Slim 20mm wide housing can be fitted into narrow channels
- Can be high-pressure hosed at high temperature - IP69K rated
- Wide 12 mm sensing, high tolerance to misalignment
- High switching capability - up to 2A
- 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

CMR Series, CMR-F Only

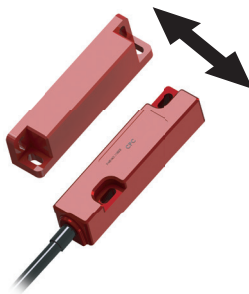
- Specifically designed for food processing applications
- Suitable for CIP SIP cleaning - Food Splash Zones per EHEDG guidelines
- 316 Stainless steel mirror polished finish

CMR-F Only

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

See Dimensions later in this section.

Actuator Operating Direction



CPR, CMR
CMR-F

CPR, CMR, and CMR-F Non-Contact Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length	Circuits	Contact Type / Rating
Pigtail Version					
CPR-113013	\$93.00	Plastic	2m	1 NC, 1 NO	Heavy duty / 2A
CPR-113014	\$103.00		5m		
CPR-113015	\$113.00		10m		
CMR-138030	\$123.00	Stainless steel	5m		
CMR-138031	\$133.00		10m		
CMR-F-135030	\$123.00		5m		
Quick Disconnect Version (M12 8-pin)					
CPR-113008	\$136.50	Plastic	250mm	1 NC, 1 NO	Heavy duty / 2A
CMR-138024	\$175.00	Stainless steel	250mm		

Female Quick Disconnect Lead			
Part Number	Price	Description	Exit Type/Cable Length
140101	\$30.00	Female QD Lead	M12 Female 5m, 8-pin
140102	\$37.50		M12 Female 10m, 8-pin



IDEM WPR and WMR Heavy Duty Non-Contact Magnetic Safety Switches

WPR Series Plastic Housing

WMR Series Stainless Steel Housing



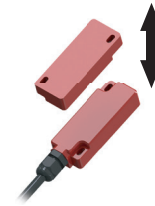
- Robust wide housing suitable for all industry applications
- Can be high-pressure hosed at high temperature - IP69K rated
- Wide 12 mm sensing, high tolerance to misalignment
- High switching capability - up to 2A
- Will operate with most safety relays
- Codes are not unique and can be used with other models of the same series
- Available with 2m or 5m cable or 250mm pigtail with quick-disconnect cable

WMR Series 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

See Dimensions later in this section.

Actuator Operating Direction



WPR

WPR/WMR Non-Contact Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length	Circuits	Contact Type / Rating
Pigtail Versions					
WPR-112005	\$103.00	Plastic	2m	2 NC, 1 NO	Heavy duty / 2A
WPR-112006	\$113.00		5m		
Quick Disconnect Versions (M12 8-pin)					
WPR-112008	\$144.50	Plastic	250mm	2 NC, 1 NO	Heavy duty / 2A
WMR-136008	\$184.50	Stainless Steel	250mm		

Female Quick Disconnect Lead			
Part Number	Price	Description	Exit Type/Cable Length
140101	\$30.00	Female QD Lead	M12 Female 5m, 8-pin
140102	\$37.50		M12 Female 10m, 8-pin



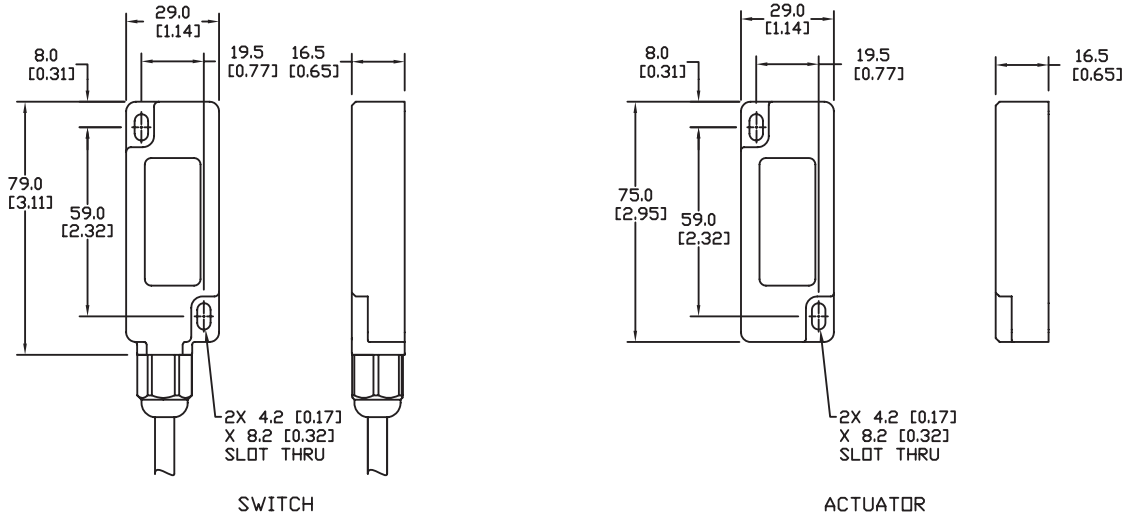
IDEM WPR and WMR Heavy Duty Non-Contact Magnetic Safety Switches

Dimensions

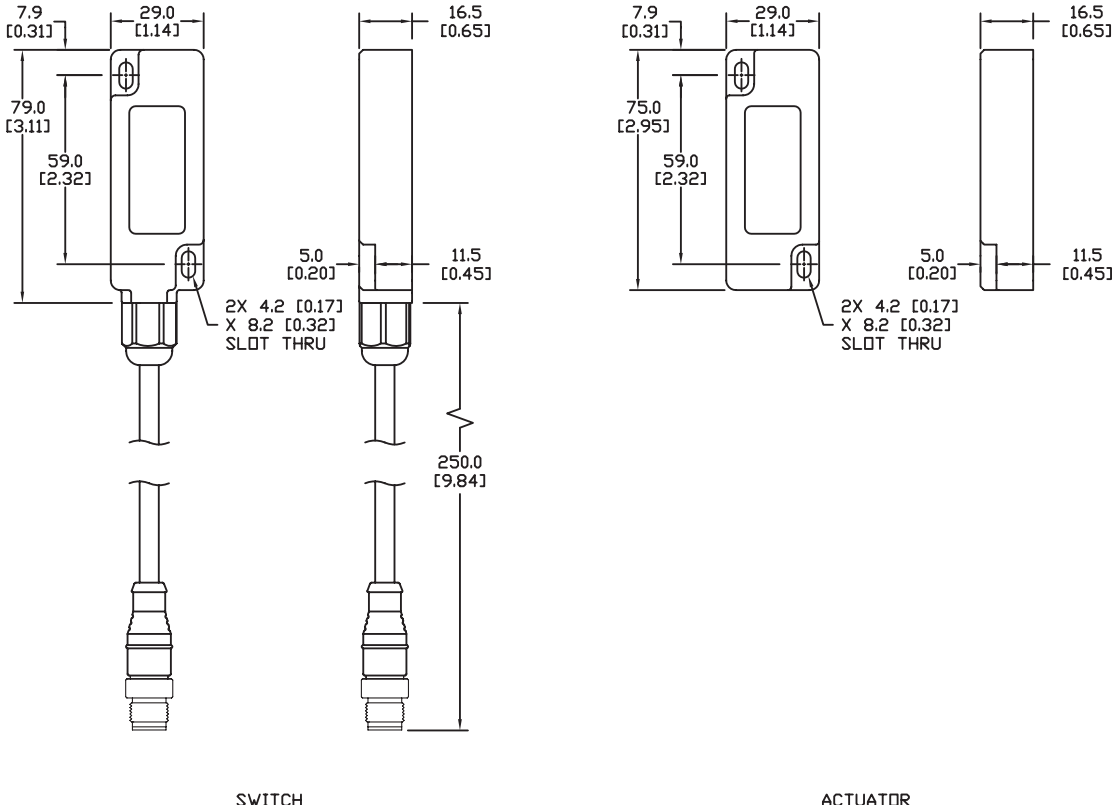
mm [inch]

WPR Series

Pigtail



Quick Disconnect



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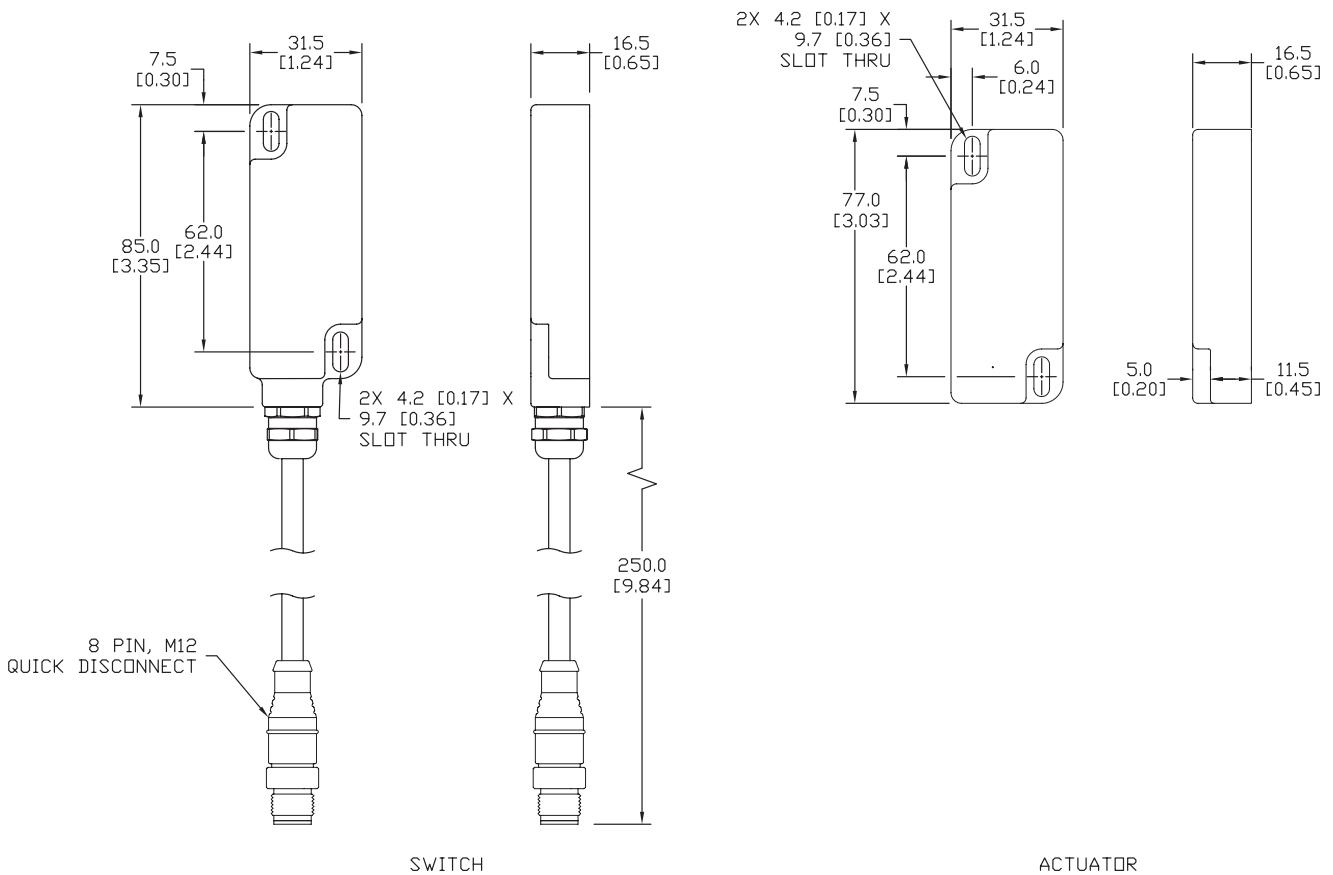
IDEM WPR and WMR Heavy Duty Non-Contact Magnetic Safety Switches

Dimensions

mm [inch]

WMR Series

Quick Disconnect

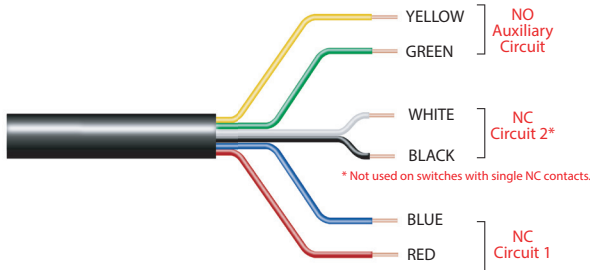


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IDEM Non-Contact Safety Switches Electrical Connections and Dimensions

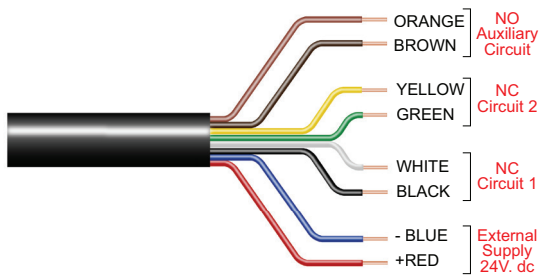
Electrical Connections

Magnetic Switches



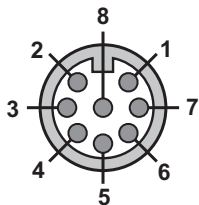
Magnetic Switches - Electrical Connections		
Quick Disconnect Connector Pin Out	Lead Color	Type of Circuit (Actuator Present)
4	Yellow	NO
6	Green	NO
7	Black	NC2
1	White	NC2
2	Red	NC1
3	Blue	NC1

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

IDEM Non-Contact Safety Switches Selection Guide

Magnetic Safety Switches



Specification	MPR and MMR Series Light Duty	LPR and LMR Series Medium Duty	SPR, SMR, and SMR-F Series Medium Duty
Body Material	Plastic, Stainless steel	Plastic, Stainless steel	Plastic, Stainless steel
Contact Configuration & Rating	2 NC and 1 NO contacts; 0.5A	2 NC and 1 NO contacts; 1A	2 NC and 1 NO contacts; 1A



Specification	CPR, CMR, and CMR-F Series Heavy Duty	WPR Series Heavy Duty
Body Material	Plastic, Stainless steel	Plastic
Contact Configuration & Rating	1 NC and 1 NO contacts; 2A	2 NC and 1 NO contacts; 2A

Coded Magnetic Safety Switches



Specification	MPC Series	LPC and LMC Series	SPC, SMC, and SMC-F Series
Body Material	Plastic	Plastic, Stainless steel	Plastic, Stainless steel
Contact Configuration & Rating	2 NC and 1 NO contacts; 0.2A	2 NC and 1 NO contacts; 0.2A	2 NC and 1 NO contacts; 0.2A



Specification	CPC, CMC, and CMC-F Series	WPC Series
Body Material	Plastic, Stainless steel	Plastic
Contact Configuration & Rating	2 NC and 1 NO contacts; 0.2A	2 NC and 1 NO contacts; 0.2A

IDEM Non-Contact Safety Switches Selection Guide

RFID Safety Switches



Specification	LPF Series	SPF Series
Body Material	Plastic	Plastic
Contact Configuration & Rating	2 NC and 1 NO contacts; 0.2A	2 NC and 1 NO contacts; 0.2A

IDEM Non-Contact Safety Switches Specifications

Non-contact Safety Switches Specifications			
	Non-Contact Magnetic Switches	Non-Contact Coded Magnetic Switches	Non-Contact RFID Coded Switches
Safety Classification and Reliability Data			
Switching Reliability (B10d)	3.3 x 10 ⁶ operations at 100 mA load		No mechanical parts implemented
ISO 13849-1	Up to category 4 with safety relay		
ISO 13849-1	Up to PLe depending upon system architecture		
EN 62061	Up to SIL3 depending upon system architecture		
Safety Data - Annual Usage	8 cycles per hour / 24 hours per day / 365 days		
PFHd	2.8 x 10 ⁻¹⁰	2.6 x 10 ⁻¹⁰	4.77 x 10 ⁻¹⁰
Proof Test Interval (Life)	20 Years		
MTTFd	866 Years		1100 years
Agency Approvals	CE, cULus		
Electrical and General Specifications			
Contact Ratings: Safety Contact NC	MPR: Voltage free: 250 VAC, 0.5 A Max. LPR, LMR, SPR, SMR, SMR-F: Voltage free: 250 VAC, 1.0A Max. CPR, CMR, CMR-F, WPR: Voltage free: 250 VAC, 2.0A Max.	24 VDC, 0.2A Max. (Optocoupler)	
Contact Ratings: Monitoring (Auxiliary) Contact NO	Voltage free: 24 VDC, 0.2A Max.	24 VDC, 0.2A Max.	
Recommended Fuses (NC Circuits)	MPR: Fuse externally 0.4A (F) LPR, LMR, SPR, SMR, SMR-F, CMR, CMR-F: Fuse externally 0.8A (F) CPR, WPR: Fuse externally 1.6A (F)	NA	
Contact Release Time	<2ms	NA	
Initial Contact Resistance	<500 milliohm	NA	
Minimum Switched Current	10 VDC, 1mA		
Dielectric Withstand	250 VAC		
Insulation Resistance	100 Megohms		
Recommended Setting Gap	5mm		
NC Switching Distance	Sao (assured ON) 8mm close; Sar (assured OFF) 20 mm open		
NO Switching Operation	Opens before NC circuits close		
Tolerance to Misalignment	5mm in any direction from 5mm setting gap (See Misalignment Range drawing on this page)		
Switching Frequency	1.0 Hz Max.		
Approach Speed	200 mm per minute to 1000 mm per second		
Body Material - Polyester	CPR, LPR, MPR, SPR, WPR	CPC, LPC, MPC, SPC, WPC	LPF, SPF
Body Material - 316 Stainless Steel	CMR, CMR-F, LMR, SMR, SMR-F	CMC, CMC-F, LMC, SMC, SMC-F	NA
Temperature Range	Polyester: -25° to +80°C (-13° to +176° F)		
	316 Stainless Steel: -25° to +105° C (-13° to +221° F)		NA
Enclosure Protection	IP67, IP69K		
Shock Resistance	IEC 68-2-27 11 ms 30g		
Vibration Resistance	IEC 68-2-6 10-55 Hz 1mm		
Cable Type	PVC, 6.5 mm outside diameter max.		PVC, 6mm outer diameter max.
Mounting Bolts (recommended)	2 x M4; Tightening torque: 1.0 Nm		

Note: Always mount onto non-Ferrous materials.

