

IDEM MPC and MMC Non-Contact Coded Magnetic Safety Switches

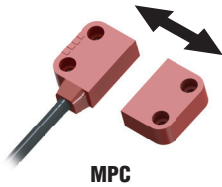


MPC Series Plastic Housing

MMC Series Stainless Housing

- Coded magnetic actuation
 - Compact yet robust fitting suitable for all small guard applications
 - Hygienic screw cap covers ensure suitability for food processing washdown
 - Cost effective interlock solution
 - Can be mounted unobtrusively in channels or behind doors - left or right cable exit
 - High specification polyester housing with backplate
 - LED indication
 - Can be high-pressure hosed at high temperature - IP69K rated
- Sensing distance up to 10 mm
 - Switching capability up to 0.2A
 - Will operate with most safety relays
 - Available with 2m, 5m, or 10m cable or 250mm pigtail with quick-disconnect cable
- MMC 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.**

Actuator Operating Direction



MPC and MMC Non-Contact Coded Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length / Exit Type	Circuits	Contact Rating
Pigtail Versions					
MPC-114105	\$71.00	Plastic	2m / Right	2 NC, 1 NO	0.2A
MPC-114106	\$81.00		5m / Right		
MPC-114107	\$93.00		10m / Right		
MPC-114113	\$71.00		2m / Left		
MPC-114114	\$81.00		5m / Left		
MPC-114115	\$93.00		10m / Left		
MMC-H-131105	\$131.00	Stainless Steel	2m / Right		
MMC-H-131106	\$138.00		5m / Right		
MMC-H-131107	\$150.00		10m / Right		
MMC-H-131117	\$131.00		2m / Left		
MMC-H-131118	\$138.00		5m / Left		
MMC-H-131119	\$150.00		10m / Left		
Quick Disconnect Versions (M12 8-pin)					
MPC-114108	\$102.50	Plastic	250mm / Right	2 NC, 1 NO	0.2A
MPC-114116	\$102.50		250mm / Left		
MMC-H-131108	\$155.00	Stainless Steel	250mm / Right		
MMC-H-131120	\$155.00		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



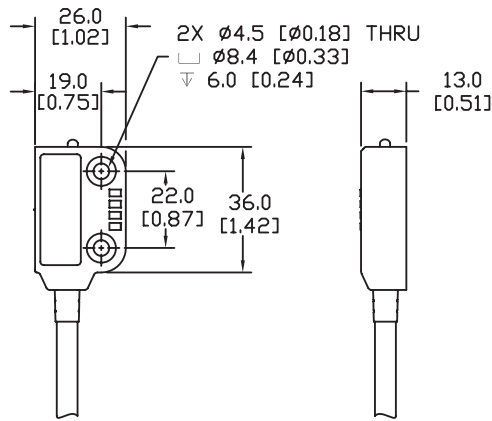
IDEM MPC and MMC Non-Contact Coded Magnetic Safety Switches

Dimensions

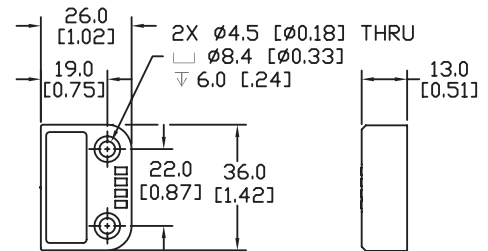
mm [inch]

MPC Series

Right Pigtail

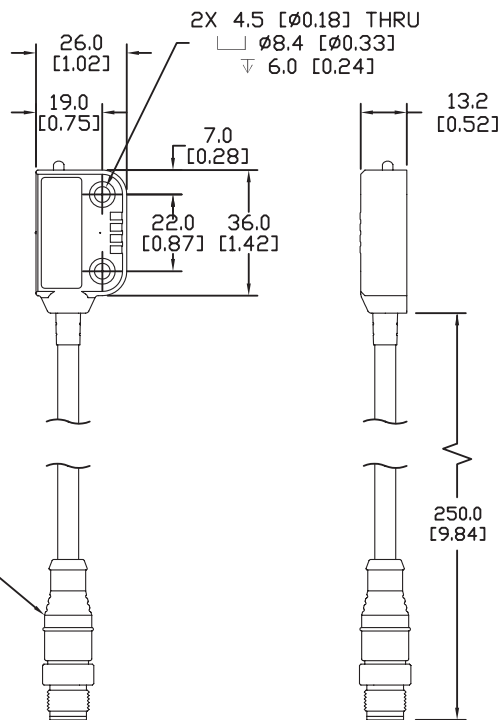


SWITCH

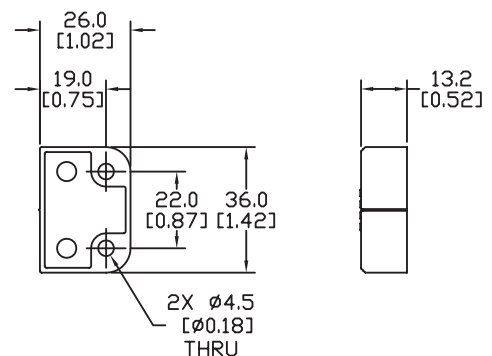


ACTUATOR

Right Quick Disconnect



SWITCH



ACTUATOR

8 PIN, M12
QUICK DISCONNECT

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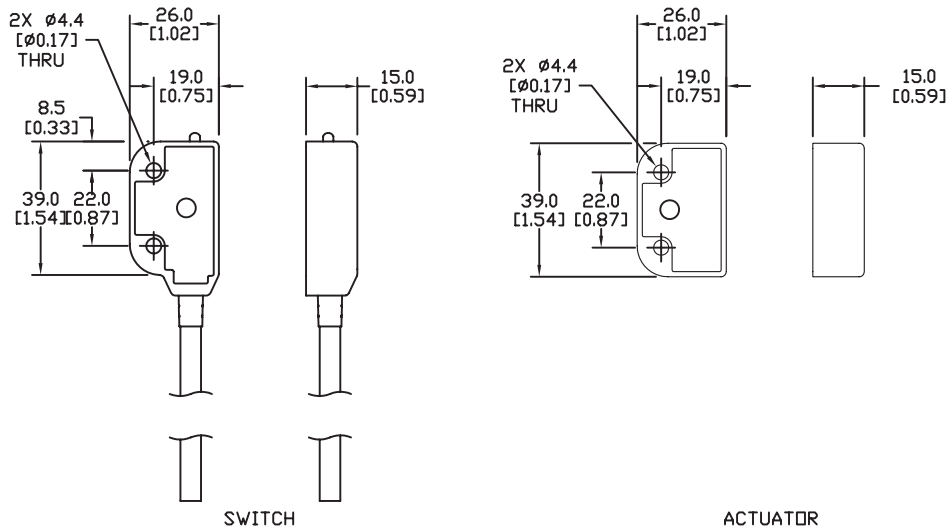
IDEM MPC and MMC Non-Contact Coded Magnetic Safety Switches

Dimensions

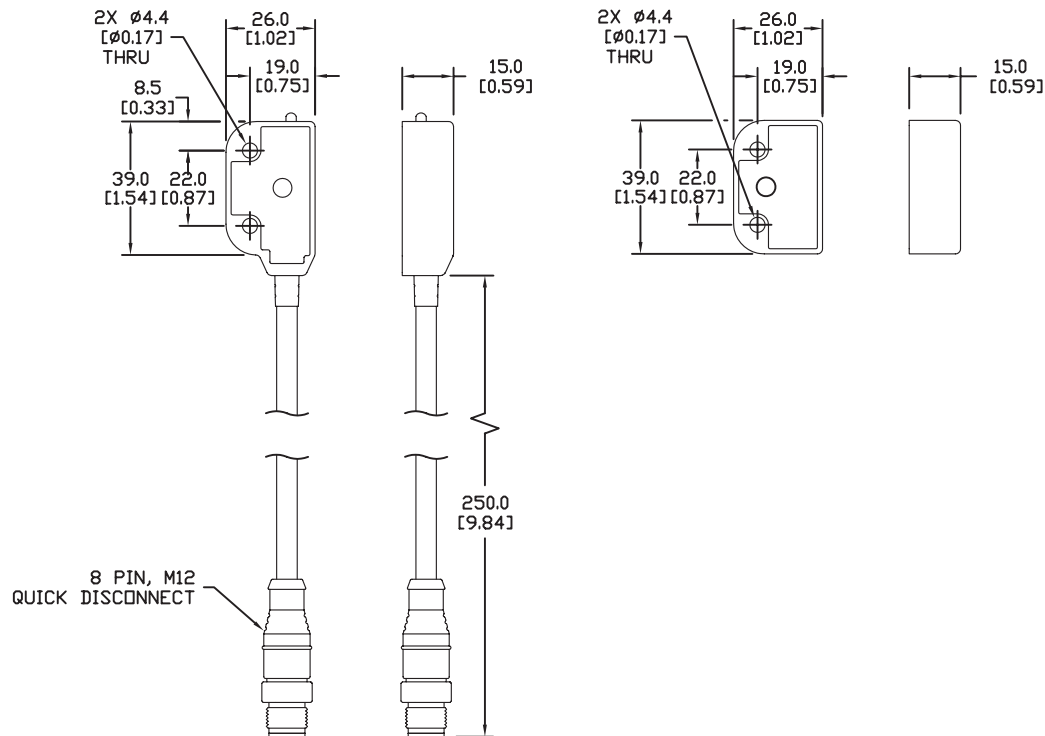
mm [inch]

MMC Series

Right Pigtail



Right Quick Disconnect



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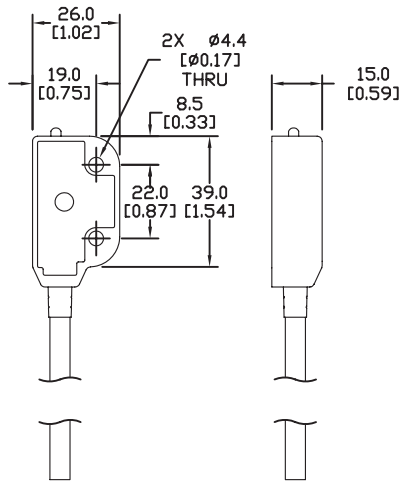
IDEM MPC and MMC Non-Contact Coded Magnetic Safety Switches

Dimensions

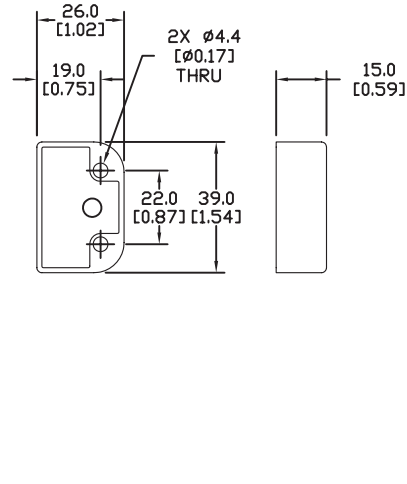
mm [inch]

MMC Series

Left Pigtail

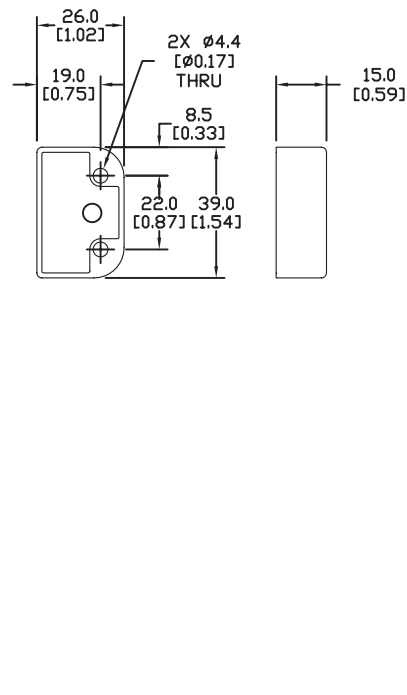
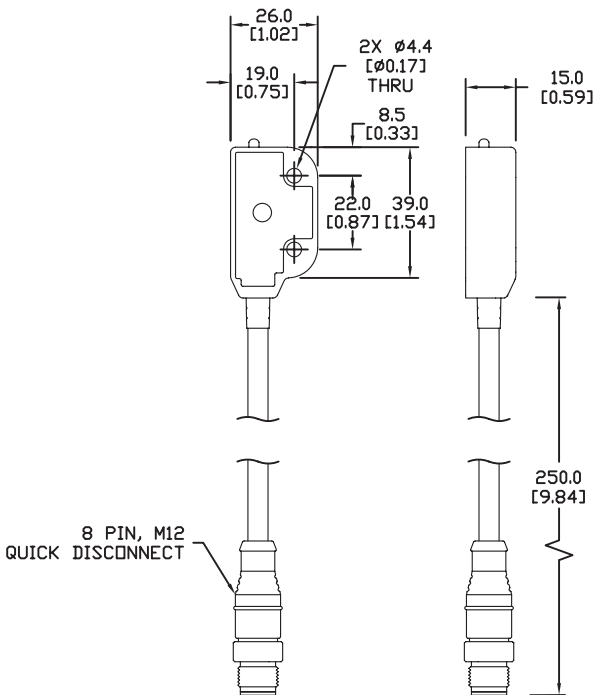


SWITCH



ACTUATOR

Left Quick Disconnect



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IDEM LPC and LMC Duty Non-Contact Coded Magnetic Safety Switches



LPC Series Plastic Housing

LMC Series Stainless Steel Housing

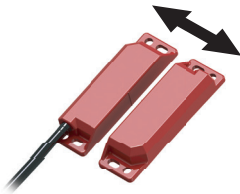
- Coded magnetic actuation
- Narrow housing can be fitted into narrow channels
- Can be high-pressure hosed at high temperature - IP69K rated
- LED indication
- Wide 14 mm sensing distance, high tolerance to misalignment
- Long life switching capability - up to 0.2A
- Will operate with most safety relays
- Available with 2m, 5m, or 10m cable or 250mm pigtail with quick-disconnect cable

LMC 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.

Actuator Operating Direction



LPC, LMC

LPC and LMC Non-Contact Coded Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length	Circuits	Contact Rating
Pigtail Versions					
LPC-110005	\$77.00	Plastic	2m	2 NC, 1 NO	0.2A
LPC-110006	\$81.00		5m		
LPC-110007	\$93.00		10m		
LMC-133005	\$123.00	Stainless steel	2m		
LMC-133006	\$133.00		5m		
LMC-133007	\$145.00		10m		
Quick Disconnect Versions (M12 8-pin)					
LPC-110008	\$104.50	Plastic	250mm	2 NC, 1 NO	0.2A
LMC-133008	\$155.00	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



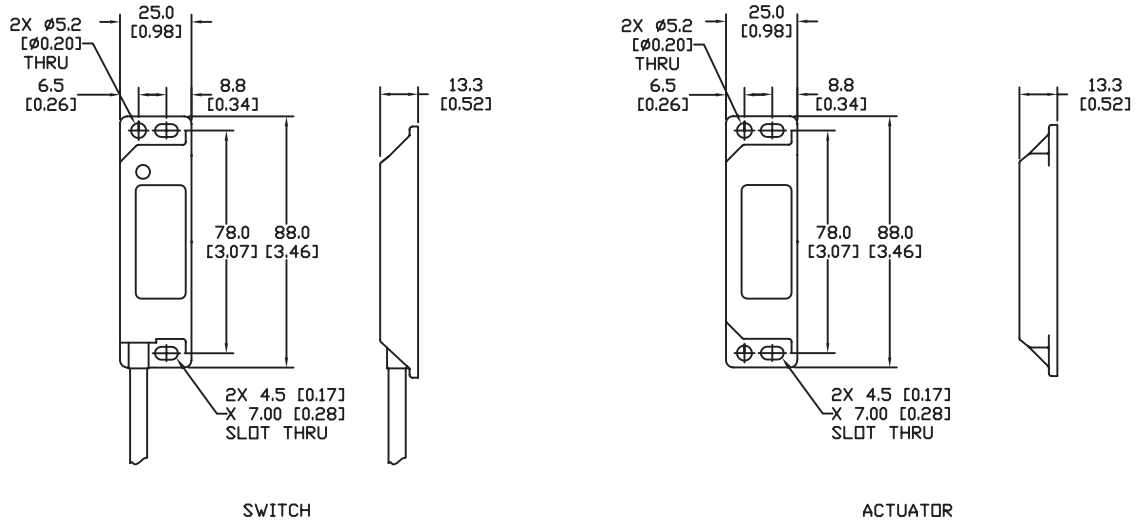
IDEM LPC and LMC Duty Non-Contact Coded Magnetic Safety Switches

Dimensions

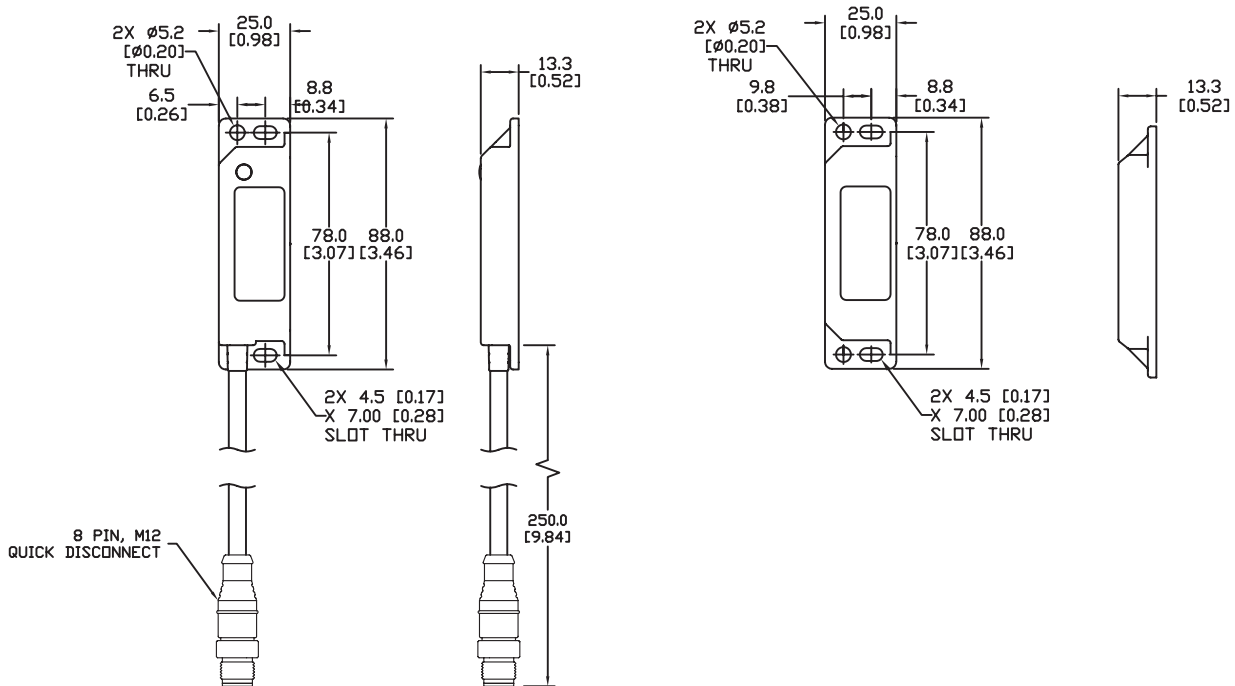
mm [inch]

LPC Series

Pigtail



Quick Disconnect



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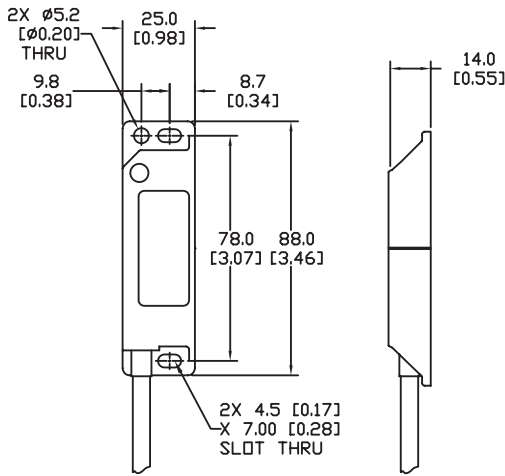
IDEM LPC and LMC Duty Non-Contact Coded Magnetic Safety Switches

Dimensions

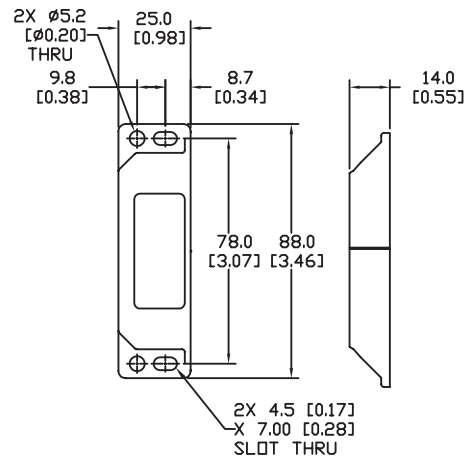
mm [inch]

LMC Series

Pigtail

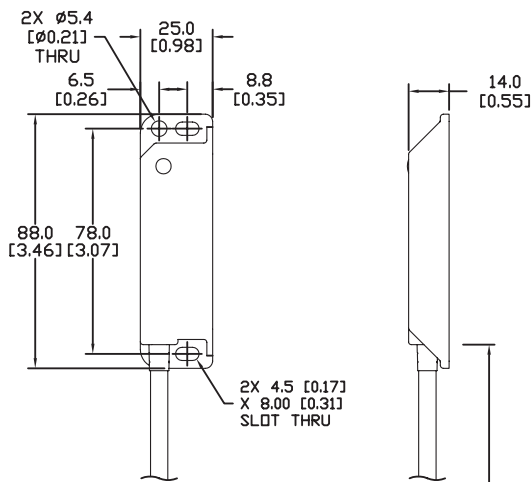


SWITCH

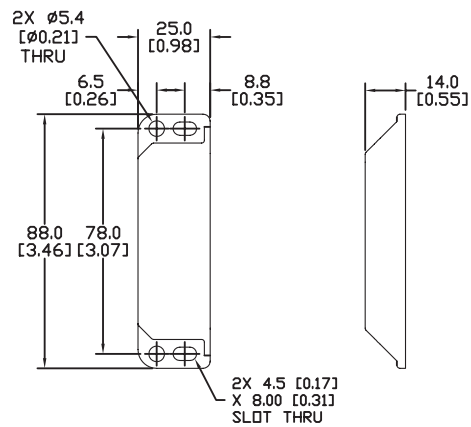


ACTUATOR

Quick Disconnect



SWITCH



ACTUATOR

8 PIN, M12 QUICK DISCONNECT

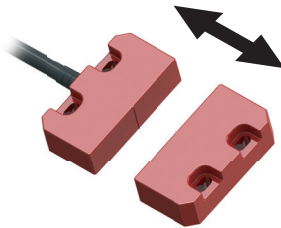
250.0 [9.84]

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IDEM SPC, SMC, and SMC-F Non-Contact Coded Magnetic Safety Switches



Actuator Operating Direction



**SPC, SMC
SMC-F**

SPC Series Plastic Housing

SMC Series Stainless Steel Housing

SMC-F Series Stainless Steel Housing Rear Mount

- Coded magnetic actuation
- Universal housing suitable for most general applications
- Can be high-pressure hosed at high temperature - IP69K rated
- LED indication
- Wide 14 mm sensing distance, high tolerance to misalignment
- Long life switching capability - up to 0.2A
- Will operate with most safety relays
- Available with 2m, 5m, or 10m cable or 250mm pigtail with quick-disconnect cable

SMC 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

SMC-F Only

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

See Dimensions later in this section.

SPC, SMC, and SMC-F Non-Contact Coded Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length	Circuits	Contact Rating
Pigtail Versions					
SPC-111005	\$71.00	Plastic	2m	2 NC, 1 NO	0.2A
SPC-111006	\$81.00		5m		
SPC-111007	\$93.00		10m		
SMC-139005	\$123.00	Stainless steel	2m		
SMC-139006	\$133.00		5m		
SMC-139007	\$145.00		10m		
SMC-F-137006	\$133.00		5m		
Quick Disconnect Versions (M12 8-pin)					
SPC-111008	\$102.00	Plastic	250mm	2 NC, 1 NO	0.2A
SMC-139008	\$155.00	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



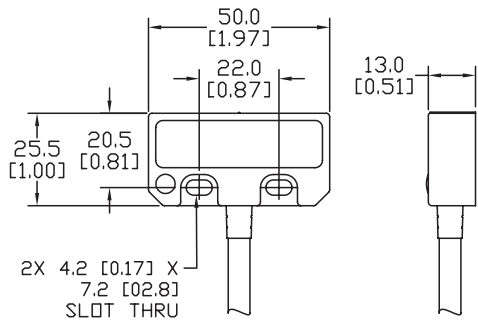
IDEM SPC, SMC, and SMC-F Non-Contact Coded Magnetic Safety Switches

Dimensions

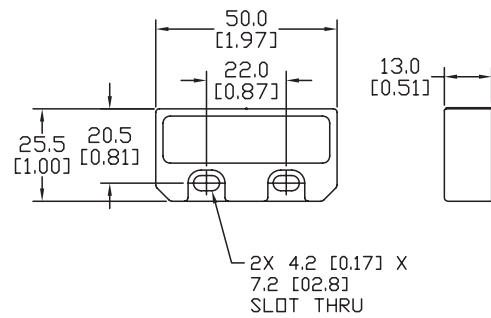
mm [inch]

SPC Series

Pigtail

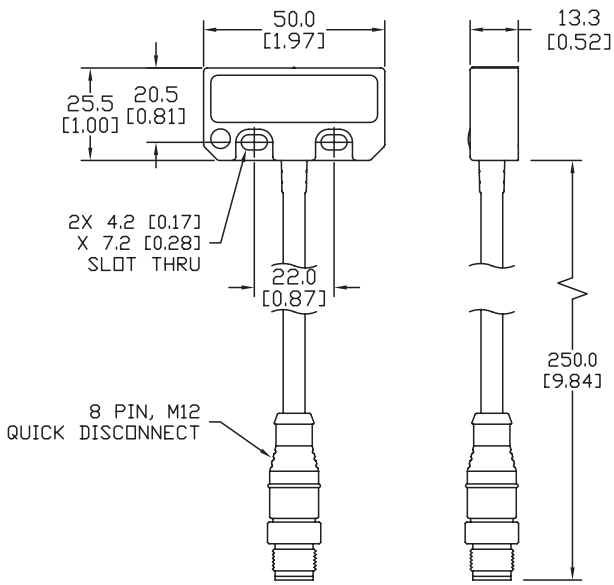


SWITCH

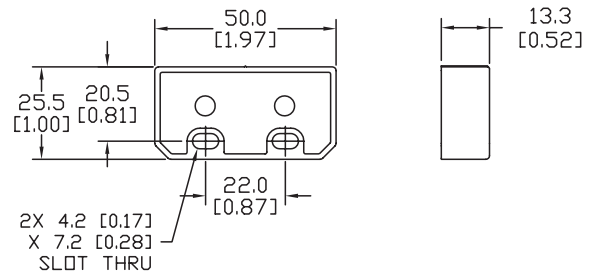


ACTUATOR

Quick Disconnect



SWITCH



ACTUATOR

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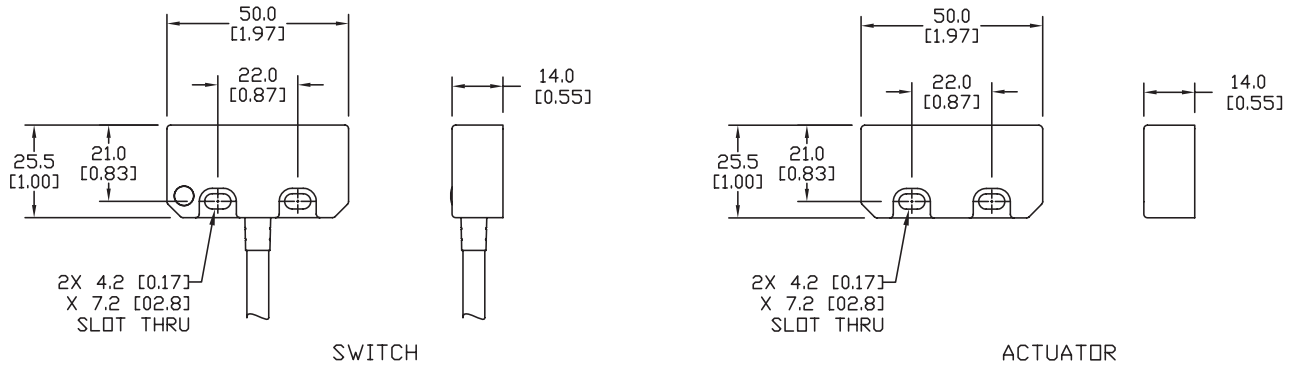
IDEM SPC, SMC, and SMC-F Non-Contact Coded Magnetic Safety Switches

Dimensions

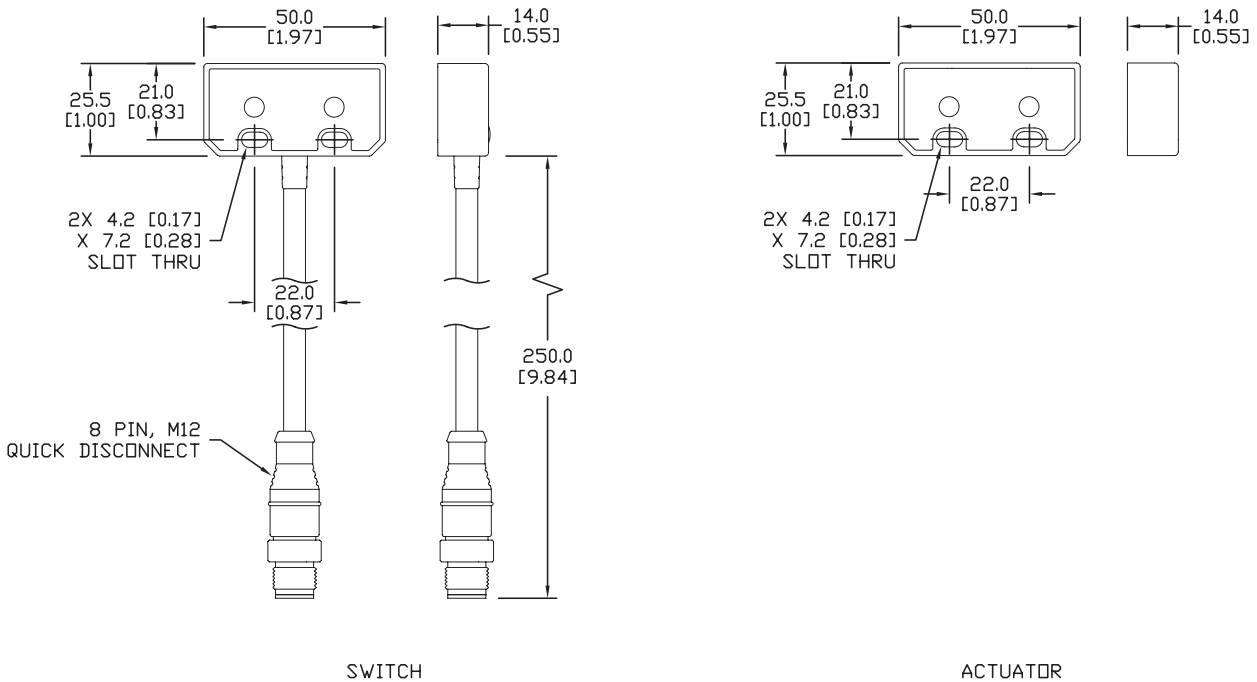
mm [inch]

SMC Series

Pigtail



Quick Disconnect



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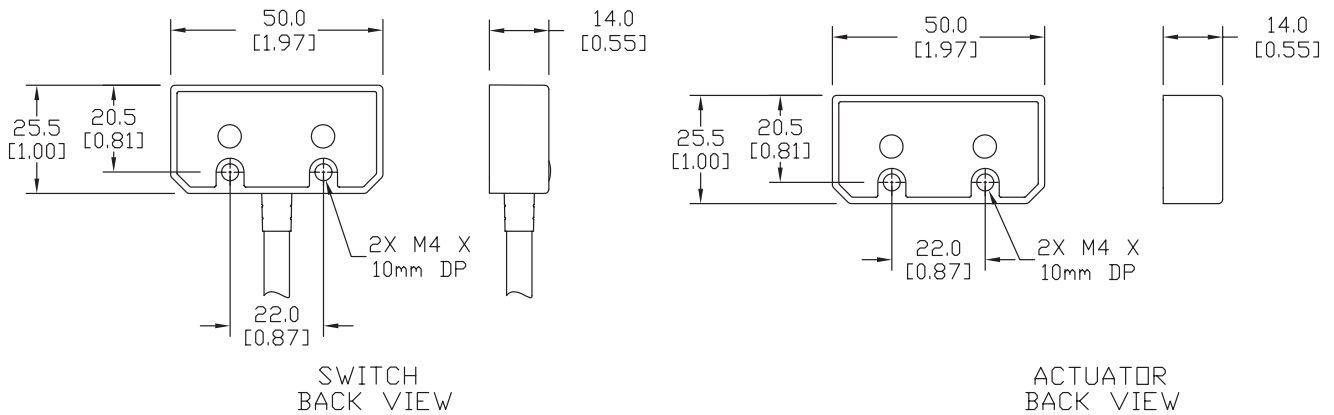
IDEM SPC, SMC, and SMC-F Non-Contact Coded Magnetic Safety Switches

Dimensions

mm [inch]

SMC-F Series

Pigtail



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IDEM CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches



CPC Series Plastic Housing

CMC Series Stainless Steel Housing

CMC-F Series Stainless Steel Housing Rear Mount

- Coded magnetic actuation
- Universal housing suitable for most general applications
- Can be high-pressure hosed at high temperature - IP69K rated
- LED indication
- Wide 14 mm sensing distance, high tolerance to misalignment
- Long life switching capability - up to 0.2A
- Will operate with most safety relays
- Available with 2m, 5m, or 10m cable or 250mm pigtail with quick-disconnect cable

CMC 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

CMC-F Only

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

See Dimensions later in this section.

Actuator Operating Direction



CPC, CMC
CMC-F

CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length	Circuits	Contact Rating
Pigtail Versions					
CPC-115005	\$81.00	Plastic	2m	2 NC, 1 NO	0.2A
CPC-115006	\$89.00		5m		
CPC-115007	\$103.00		10m		
CMC-138005	\$123.00	Stainless steel	2m		
CMC-138006	\$133.00		5m		
CMC-F-135006	\$133.00		5m		
Quick Disconnect Versions (M12 8-pin)					
CPC-115008	\$110.00	Plastic	250mm	2 NC, 1 NO	0.2A
CMC-138008	\$165.00		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



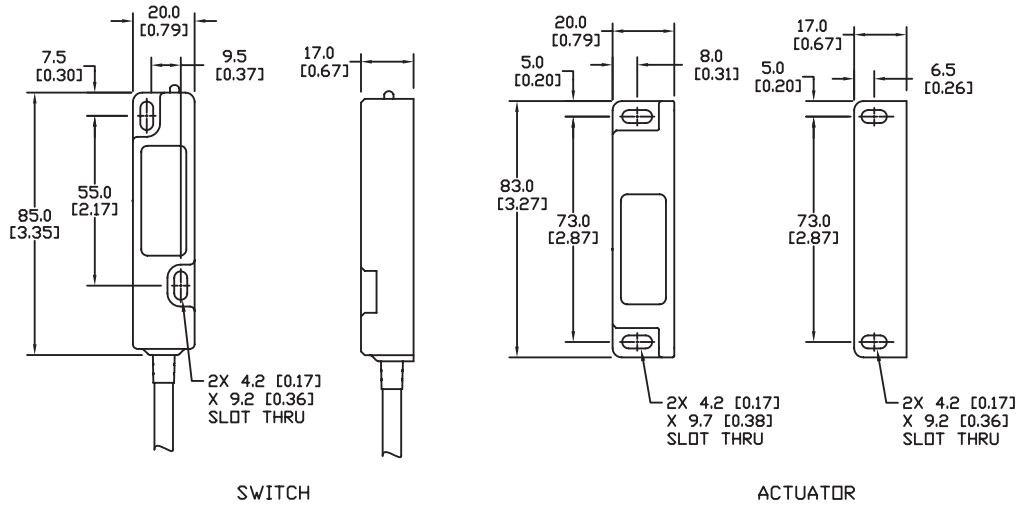
IDEM CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches

Dimensions

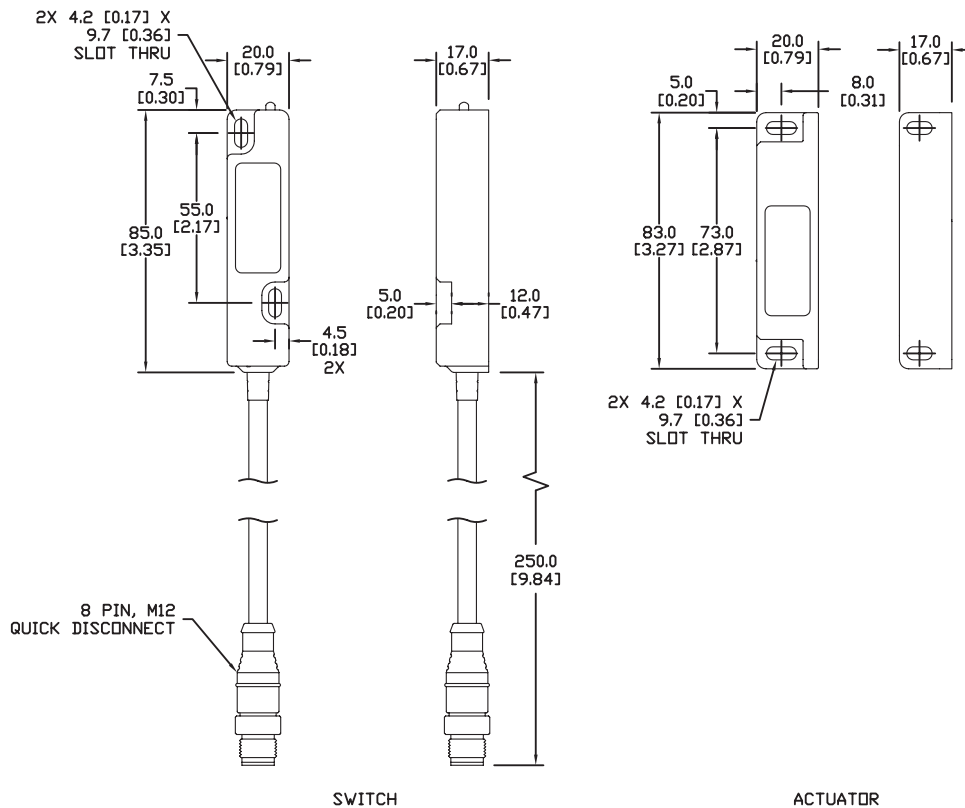
mm [inch]

CPC Series

Pigtail



Quick Disconnect



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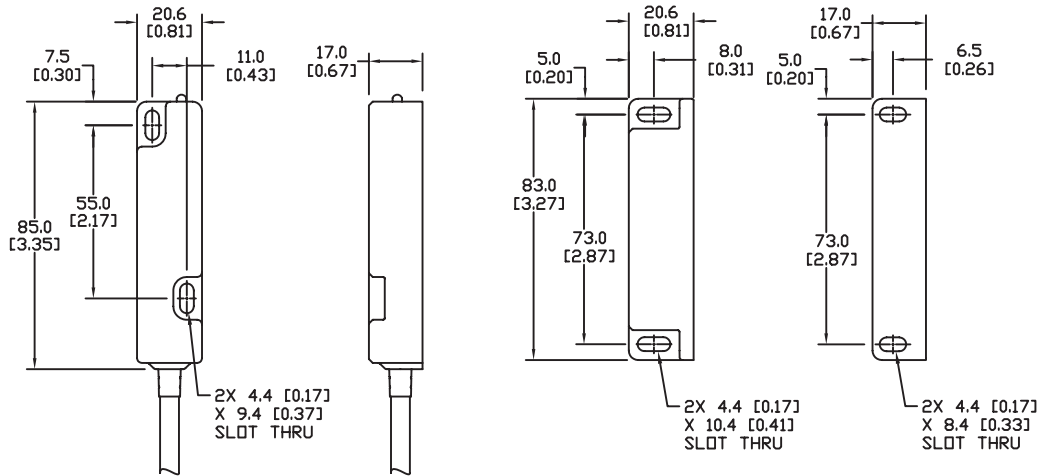
IDEM CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches

Dimensions

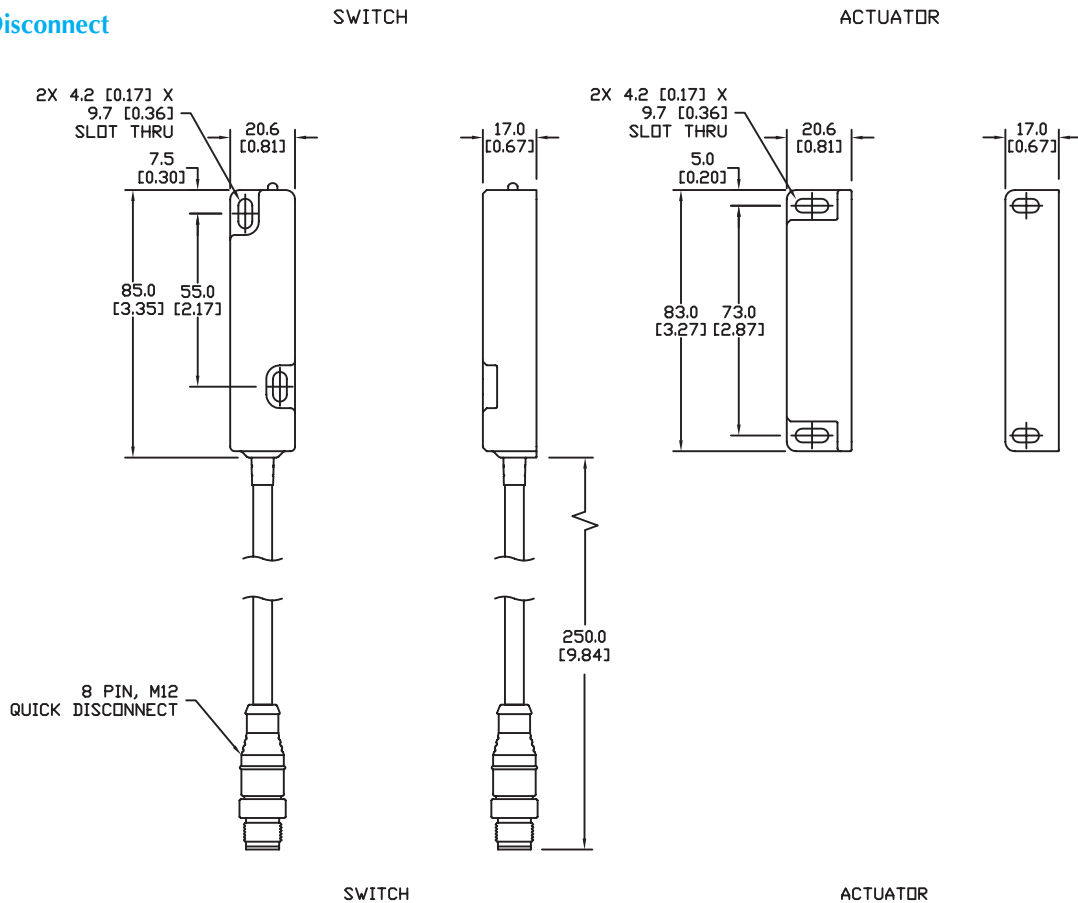
mm [inch]

CMC Series

Pigtail



Quick Disconnect



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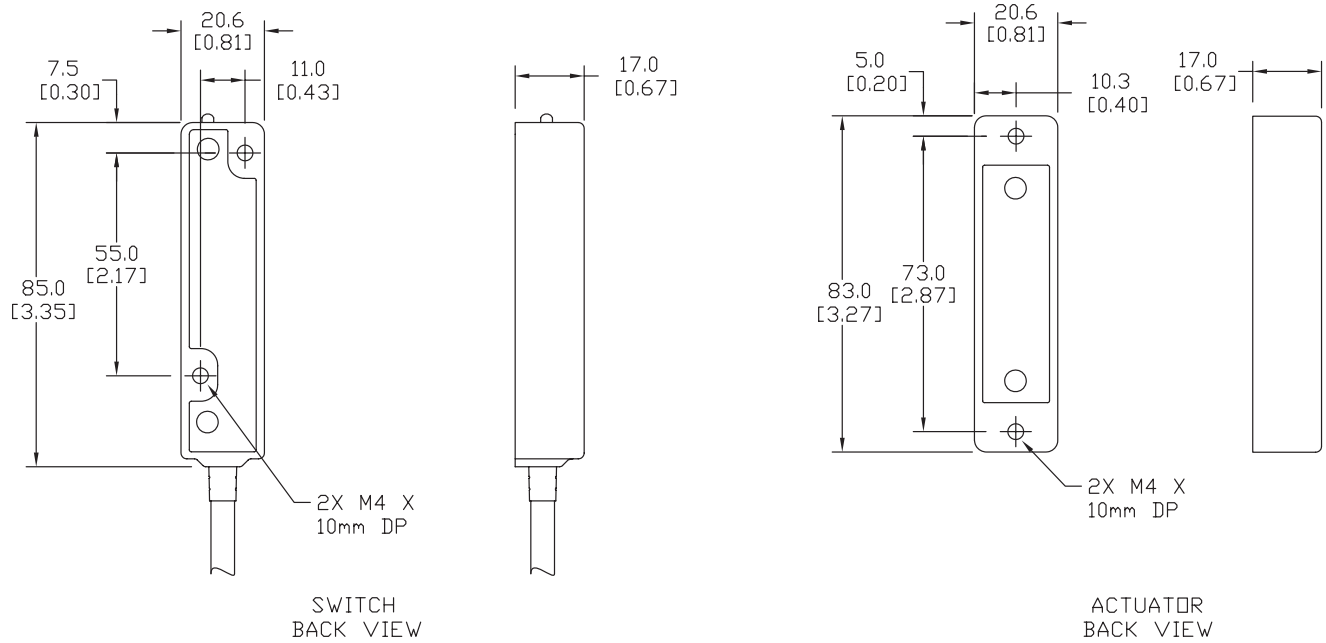
IDEM CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches

Dimensions

mm [inch]

CMC-F Series

Pigtail



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IDEM WPC Non-Contact Coded Magnetic Safety Switches

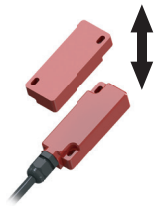
WPC Series Plastic Housing



- Coded magnetic actuation
- Slim fitting suitable for all industry applications
- LED indication
- Can be high-pressure hosed at high temperature - IP69K rated
- Wide 14 mm sensing, high tolerance to misalignment
- Switching capability up to 0.2A
- Will operate with most safety relays
- Available with 2m or 5m cable or 250mm pigtail with quick-disconnect cable

See Dimensions later in this section.

Actuator Operating Direction



WPC

WPC Non-Contact Coded Magnetic Safety Switches					
Part Number	Price	Body Material	Cable Length	Circuits	Contact Rating
Pigtail Versions					
WPC-112017	\$81.00	Plastic	2m	2 NC, 1 NO	0.2A
WPC-112018	\$89.00		5m		
Quick Disconnect Versions (M12 8-pin)					
WPC-112020	\$110.00	Plastic	250mm	2 NC, 1 NO	0.2A

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



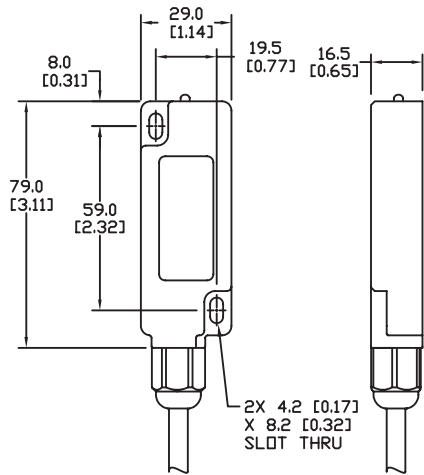
IDEM WPC Non-Contact Coded Magnetic Safety Switches

Dimensions

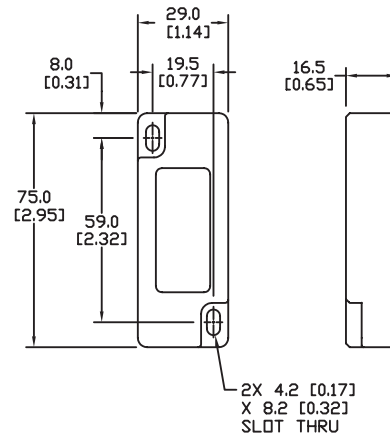
mm [inch]

WPC Series

Pigtail

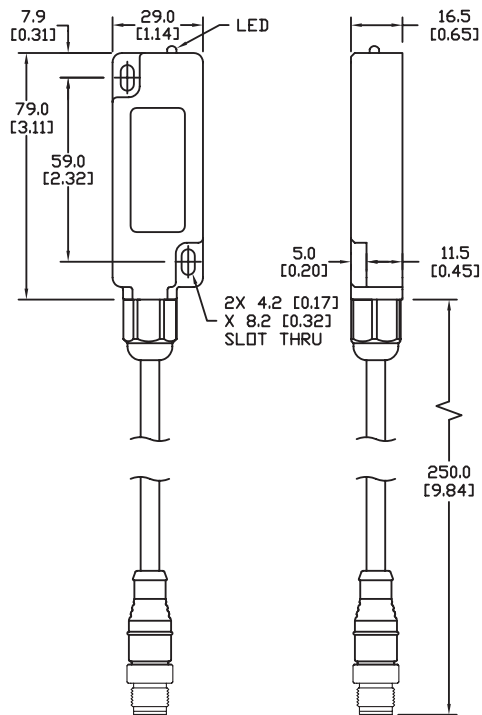


SWITCH

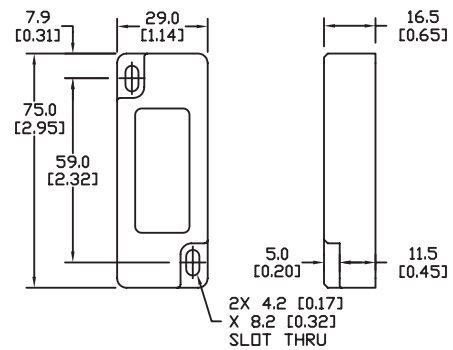


ACTUATOR

Quick Disconnect



SWITCH



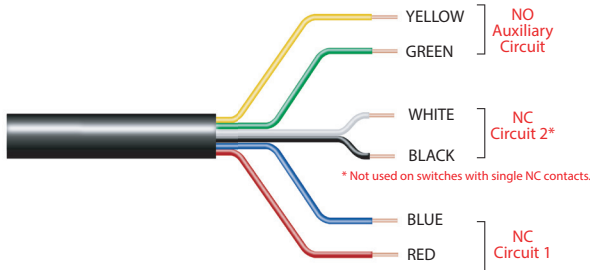
ACTUATOR

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IDEM Non-Contact Safety Switches Electrical Connections and Dimensions

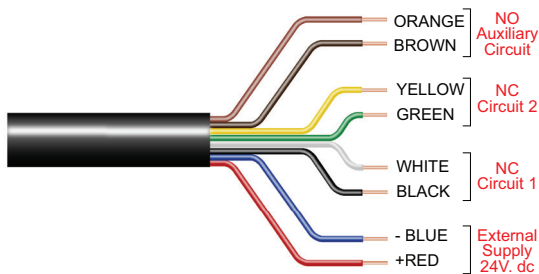
Electrical Connections

Magnetic Switches



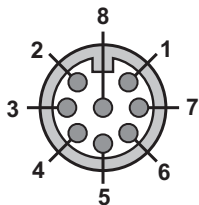
Magnetic Switches - Electrical Connections		
Quick Disconnect Connector Pin Out	Lead Color	Type of Circuit (Actuator Present)
4	Yellow	NO
6	Green	NO
7	Black	NC2
1	White	NC2
2	Red	NC1
3	Blue	NC1

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)		
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.

