## 1-800-633-0405 **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	\$110.00	Plastic	2m	2 NC, 1 NO	0.2A
WPC-112018	\$119.00	Plaslic	5m		
Quick Disconnect Versions (M12 8-pin)					
WPC-112020	\$141.00	Plastic	250mm	2 NC, 1 NO	0.2A

Female Quick Disconnect Lead					
Part Number Price D		Description	on Exit Type/Cable Length		
<u>140101</u>	\$59.00		M12 Female 5m, 8-pin		
<u>140102</u>	\$88.00	Female QD Lead	M12 Female 10m, 8-pin		



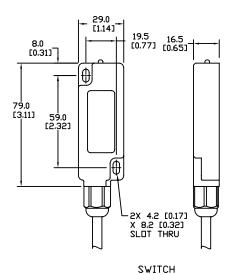
## 1-800-633-0405 **IDEM WPC Non-Contact Coded Magnetic Safety Switches**

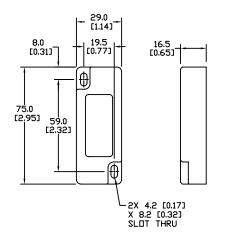
#### **Dimensions**

mm [in]

WPC Series

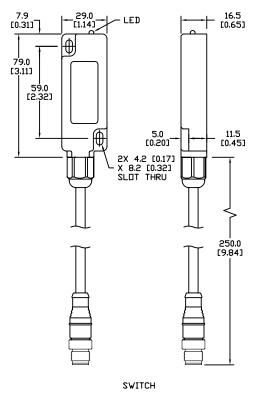
Pigtail

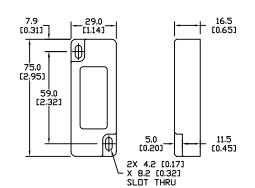




ACTUATOR

**Quick Disconnect** 





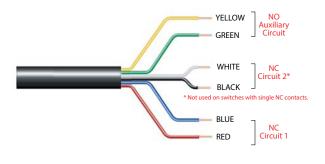
ACTUATOR

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

# IDEM Non-Contact Safety Switches Electrical Connections and Dimensions

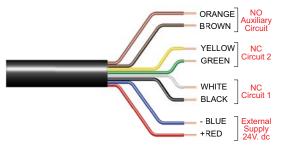
### **Electrical Connections**

#### **Magnetic Switches**



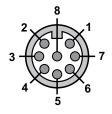
Magnetic Switches - Electrical Connections			
Quick Disconnect Connector Pin Out	Lead Color	Type of Circuit (Actuator Present)	
4	Yellow	Auxiliary (NO)	
6	Green	Auxiliary (NO)	
7	Black	NC2	
1	White	NC2	
2	Red	NC1	
3	Blue	NC1	

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)	200 MA Max. 24 VDC	
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**

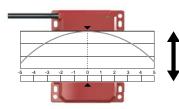


Pin View from Switch M12 Male

## 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 <sup>6</sup> 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 <sup>-10</sup>	2.6 x 10 <sup>-10</sup>	4.77 x 10 <sup>-10</sup>
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 t	•	t Range drawing on this page)
Switching Frequency	5mm [0.20 in] in any direction from 5mm [0.20 in] setting gap (See Misalignment Range drawing on this page) 1.0 Hz Max.		
Approach Speed	200 <del>n</del>	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
	2 x M4; Tightening torque: 1.0 N•m [0.74 lb•ft]		

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.

AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.