

Inductive Proximity Sensor M12 / M18 Series

Sensing magnetic substance for positioning, counting, and object existence, applicable to all industries

- ▶ Nickel coated brass
- ▶ Standard sensors for detecting ferrous metals
- ▶ IP67
- ▶ CE certification
- ▶ Electrical circuit protection



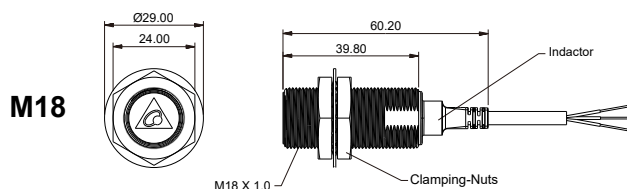
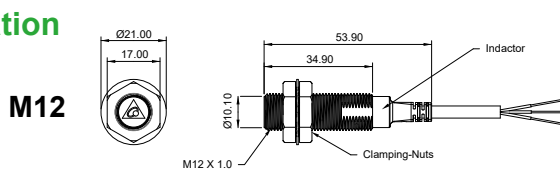
Appearance	Sensing Distance	NPN		PNP	
		NO	NC	NO	NC
M12 Isolation	2 mm	IS-E1202-BNOB□	IS-E1202-BNCB□	IS-E1202-BPOB□	IS-E1202-BPCB□
	4 mm	IS-E1204-BNOB□	IS-E1204-BNCB□	IS-E1204-BPOB□	IS-E1204-BPCB□
M12 Non-isolation	4 mm	IS-N1204-BNOB□	IS-N1204-BNCB□	IS-N1204-BPOB□	IS-N1204-BPCB□
	8 mm	IS-N1208-BNOB□	IS-N1208-BNCB□	IS-N1208-BPOB□	IS-N1208-BPCB□
M18 Isolation	5 mm	IS-E1805-BNOB□	IS-E1805-BNCB□	IS-E1805-BPOB□	IS-E1805-BPCB□
	8 mm	IS-E1808-BNOB□	IS-E1808-BNCB□	IS-E1808-BPOB□	IS-E1808-BPCB□
M18 Non-isolation	8 mm	IS-N1808-BNOB□	IS-N1808-BNCB□	IS-N1808-BPOB□	IS-N1808-BPCB□
	12 mm	IS-N1812-BNOB□	IS-N1812-BNCB□	IS-N1812-BPOB□	IS-N1812-BPCB□

* □ : 2 = 2 m cable, 3 = 3 m cable, 5 = 5 m cable

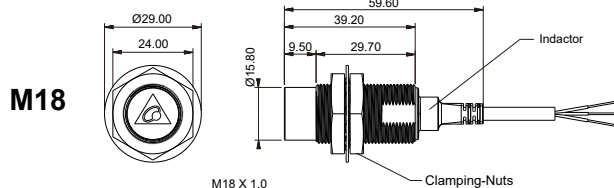
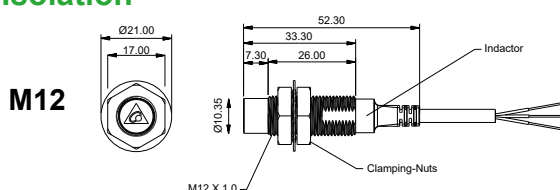
Dimensions

Unit : mm

• Isolation



• Non-Isolation



Specifications

Appearance		M12				M18			
Type		Isolation		Non-Isolation		Isolation		Non-Isolation	
Model		IS-E1202	IS-E1204	IS-N1204	IS-N1208	IS-E1805	IS-E1808	IS-N1808	IS-N1812
Sensing Distance		2 mm ± 10%	4 mm ± 10%	4 mm ± 10%	8 mm ± 10%	5 mm ± 10%	8 mm ± 10%	8 mm ± 10%	12 mm ± 10%
Min. Sensing Capability		Iron, 12 × 12 × 1 mm			Iron, 24 × 24 × 1 mm	Iron, 18 × 18 × 1 mm	Iron, 24 × 24 × 1 mm		Iron, 36 × 36 × 1 mm
Response Frequency		1.0kHz	1.0kHz	1.0kHz	1.0kHz	1.0kHz	1.0kHz	1.0kHz	1.0kHz
Weight		65 g				85 g			
Appearance		M12 / M18 Common Specifications							
Voltage Range		12 ~ 24 V _{DC} ± 10%							
Different Travel		10% max. of sensing distance			Detectable Object		Ferrous metal (the sensing distance decreases with no-ferrous metal)		
Current Consumption		Max. 15 mA			Vibration Resistance		10 ~ 55 Hz, 1.5mm, 3 axes for 2 hours		
Control Output	Load Current	Max. 200 mA			Shock Resistance		Max. 1000 m/s ² , 3 axes, 6 directions and 3 times in each		
	Residual Voltage	2 V max. (load current: 200 mA, cable length: 2m)			Insulating Resistance		50 MΩ or more (500V _{DC}) between current-carrying parts and case		
Indicators		Operation indicator (red)			Withstand Voltage		1,000 V _{AC} 50 / 60 Hz 1 min		
Operation Mode		NPN: NO / NC; PNP: NO / NC			Cables		3 Wires 2 m / 3 m / 5 m PVC cable		
Protection Circuits		Protection against reverse power connection, output overcurrent, power supply surge, output surge			Materails	Case	Nickel coated brass		
Ambient Temperature		Operating: -25 ~ 70 °C / Storage: -40 ~ 85 °C (with no icing or condensation)				Sensing Surface	PBT		
Ambient Humidity		≤ 50% RH (at 70 °C)				Clamping Nuts	Nickel coated brass		
Temperature Influence		±10% max. of sensing distance at + 23 °C in the temperature range of -25 ~ +70 °C							
Enclosure Rating		IP67			Certifications		CE		

Influence of Sensing Material

Material	Iron	Stainless Steel	Aluminum	Red Brass	Brass
Decrement Value	1	Approx. 0.8	Approx. 0.45	Approx. 0.4	Approx. 0.4

Mutual Interference

	Isolation	Non-Isolation
A	≥ 3d	≥ 5d
B	≥ 3d	≥ 5d

- When installing sensors face to face or in parallel, be sure to maintain the minimum distances in the following table to avoid mutual interference. **d: Outside DIM. Units: mm**

