

INDUCTIVE PROXIMITY SENSOR



INSTRUCTION SHEET

Thank you for selecting INNO for your requirement.

This sheet describes the procedure and precautions required for installing and operating the product.

Kindly read this sheet before operating or installing the product. Store the sheet for future reference.

CAUTION FOR SAFETY

- ① Please keep this sheet for review before use of unit.
- ① Please observe the following:

⚠ WARNING
 Serious injury may occur if instructions are not followed

⚠ CAUTION
 Product failure or injury can occur if instructions are not followed

- ⚠ WARNING**
1. This is not a safety product and is not to be used with machinery that requires use of safety control.
 2. Do not disassemble or modify this unit. It may lead to electric shock/ fire.

Do not connect sensor to AC power supply.
RISK OF EXPLOSION!

- ⚠ CAUTION**
1. This unit shall not be used outdoors.
 2. Do not use this unit in places where there is flammable or explosive gas.
 3. Please observe the rated specifications in Instruction Sheet.
 4. Do not use this unit beyond rated power and do not supply AC power at DC power type.
 5. Please check the polarity of power and wrong wiring.
 6. Do not use this unit in places where there is vibration or impact.
 7. Do not use water or oil based detergent for cleaning the unit.
 8. Do not use excessive force to tighten the unit to the mounting plate and do not hammer the unit.
 9. Please process it as industrial waste and dispose responsibly.

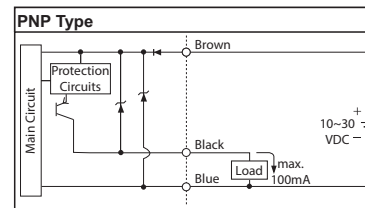
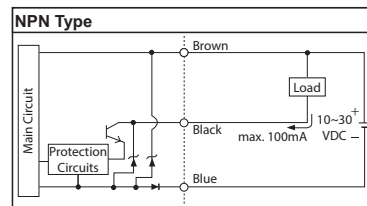
For more information visit www.inno.sg

SPECIFICATIONS

*For details on Customized/ Special Models contact Seller

Size		M5	M8	M12	M18	M30	
*Model	Flush	NPN - NO	PI-M5F-1NO-__	PI-M8F-1.5NO-__	PI-M12F-2NO-__	PI-M18F-5NO-__	PI-M30F-10NO-__
		NPN - NC	-	-	PI-M12F-2NC-__	PI-M18F-5NC-__	PI-M30F-10NC-__
		PNP - NO	PI-M5F-1PO-__	PI-M8F-1.5PO-__	PI-M12F-2PO-__	PI-M18F-5PO-__	PI-M30F-10PO-__
		PNP - NC	-	-	PI-M12F-2PC-__	PI-M18F-5PC-__	PI-M30F-10PC-__
	Non-Flush	NPN - NO	-	PI-M8N-2NO-__	PI-M12N-5NO-__	PI-M18N-10NO-__	PI-M30N-18NO-__
		NPN - NC	-	-	PI-M12N-5NC-__	PI-M18N-10NC-__	PI-M30N-18NC-__
		PNP - NO	-	PI-M8N-2PO-__	PI-M12N-5PO-__	PI-M18N-10PO-__	PI-M30N-18PO-__
		PNP - NC	-	-	PI-M12N-5PC-__	PI-M18N-10PC-__	PI-M30N-18PC-__
Sensing Distance	Flush	1mm	1.5mm	2mm	5mm	10mm	
	Non-Flush	-	2mm	5mm	10mm	18mm	
Standard Sensing Target		Iron, 5x5x1mm	Iron, 12x12x1mm	Iron, 15x15x1mm	Iron, 30x30x1mm	Iron, 54x54x1mm	
Hysteresis		± 20%		± 10%			
Response Frequency	Flush	2000 Hz	2000 Hz	1500 Hz	600 Hz	400 Hz	
	Non-Flush	-	800 Hz	400 Hz	200 Hz	100 Hz	
Supply Voltage		6 - 36 VDC					
Current Consumption		max. 17mA	max. 20mA				
Connection		PI-__-__-2M - 2meter pre wired; PI-__-__-M12J3 - M12 junction connector with 0.3m cable extension					
Output	Type	NPN or PNP - NO /NC depending on the model					
	Switching Capacity	100mA				200mA	
	Residual Voltage	max. 3 V					
Indication		Operation: Red LED					
Protection Circuits		Reverse power supply polarity protection, reversed output polarity protection					
Dielectric Strength		1000 VAC, 50/60 Hz for 1 minute between current carry parts and case					
Voltage Influence		± 5% max. of sensing distance (ref. sensing distance taken at 24VDC)					
Temperature Influence		± 20% max. of sensing distance (ref. sensing distance taken at 25°C)					
Vibration Resistance		10 - 55Hz, 1mm for 2 hours in X, Y, Z directions (destruction)					
Shock Resistance		50 G (10 times) in X, Y, Z direction for 3 times (destruction)					
Ambient Temperature		Operation: -25° ~ 70° C; Storage: -30° ~ 80° C (non-freezing; non-condensing)					
Ambient Humidity		Operation: 40 ~ 85% RH; Storage: 35 ~ 95% RH (non- condensing)					
Protection Class		Pre- Wired Type: IP67; Junction Connector Type: IP65					
Weight	Prewired	approx. 30g	approx. 42g	approx. 70g	approx. 150g	approx. 200g	
	Jn. Connector	approx. 15g	approx. 35g	approx. 45g	approx. 70g	approx. 120g	
Material		Head: PBT; Tube: Nickel plated Brass; Nuts: Chrome plated Copper Alloy; Washer: Zinc-plated Iron					
Tightening Torque		10 Nm (max.)					

CONTROL OUTPUT DIAGRAM



Note: 1, 3, 4 are the Pin numbers for the Connector and Junction Connector Models; Connector Cable is not supplied along with unit.

Represented by:

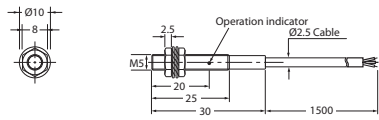
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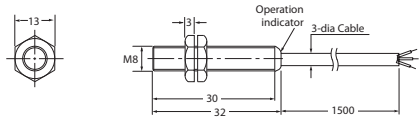
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■ DIMENSIONS

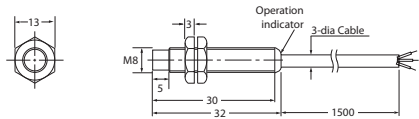
• PI-M5F- _ _ _



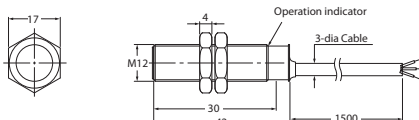
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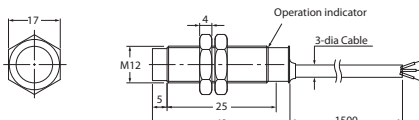
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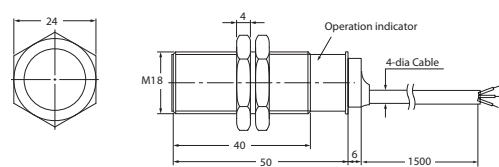
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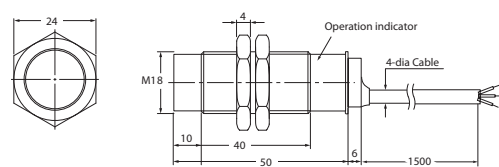
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• PI-M18F- _ _ _

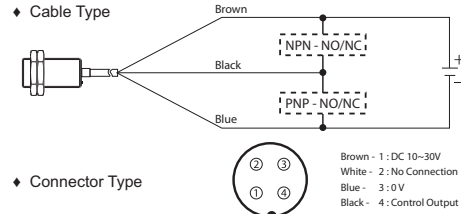


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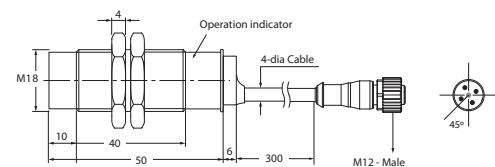
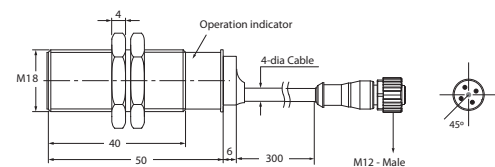
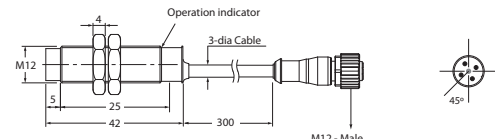
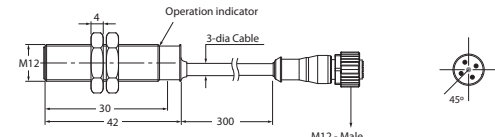
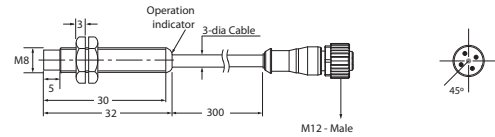
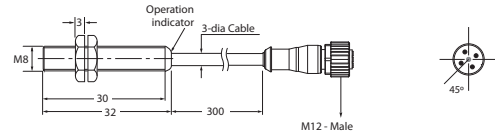


■ CONNECTIONS

◆ Cable Type

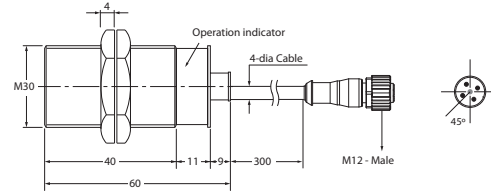
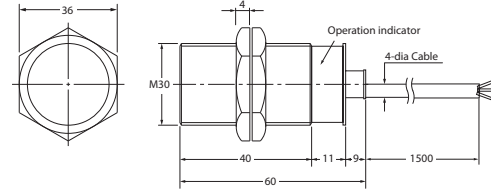


◆ Connector Type

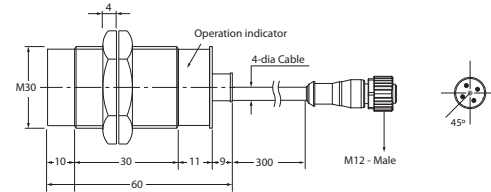
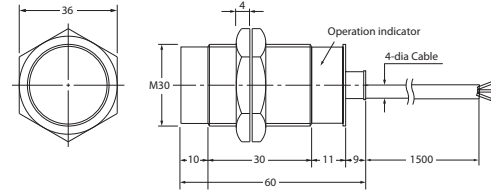


All units are in mm

• PI-M30F- _ _ _



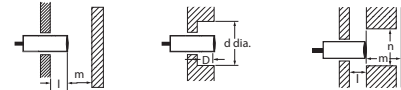
• PI-M30N- _ _ _



■ MOUNTING AND ADJUSTMENTS

• Mounting metal influence

When the proximity sensor is embedded in metal, make sure that the clearances given below are maintained.



Size	Material	l	d	D	m	n
M5	Flush	0	5	0	3	8
	Non-flush	-	-	-	-	-
M8	Flush	0	8	0	4.5	12
	Non-flush	6	24	6	8	24
M12	Flush	0	12	0	8	40
	Non-flush	16	70	16	8	70
M18	Flush	0	18	0	20	60
	Non-flush	16	80	16	20	80
M30	Flush	0	30	0	40	90
	Non-flush	30	100	30	90	110