



PQ-M-713

PQ-M

MINIATURE 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

- ⓘ Please keep this sheet for review before use of unit.
- ⓘ 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

- This is not a safety product and is not to be used with machinery that requires use of safety control.
- 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

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

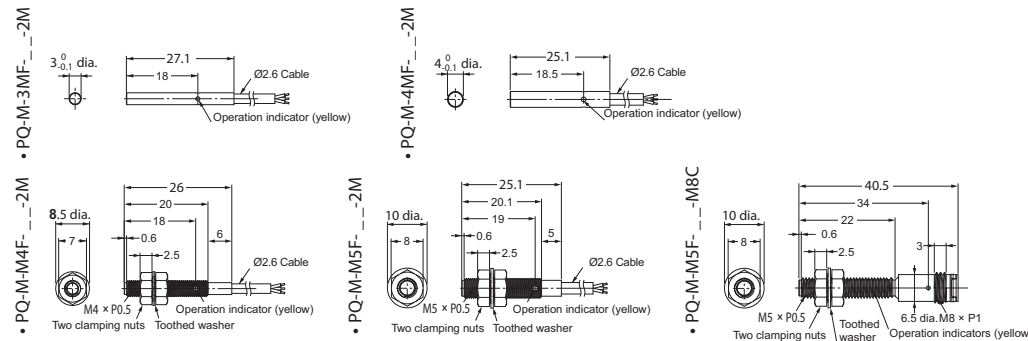
For more information visit www.inno.sg

SPECIFICATIONS

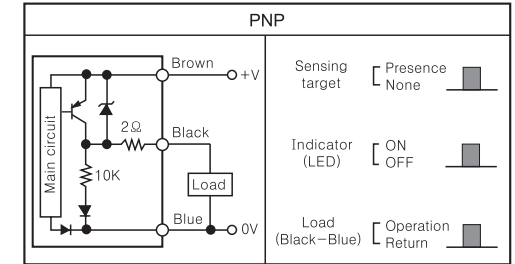
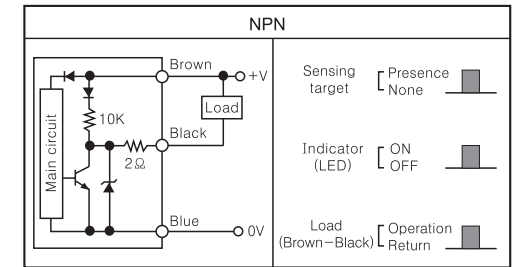
*For details on Customized/ Special Models contact Seller

Size		3mm	4mm	M4	M5	
*Model	Cable Type	NPN - NO	PQ-M-3MF-__NO-2M	PQ-M-4MF-__NO-2M	PQ-M-M4F-__NO-2M	PQ-M-M5F-__NO-2M
		NPN - NC	PQ-M-3MF-__NC-2M	PQ-M-4MF-__NC-2M	PQ-M-M4F-__NC-2M	PQ-M-M5F-__NC-2M
		PNP - NO	PQ-M-3MF-__PO-2M	PQ-M-4MF-__PO-2M	PQ-M-M4F-__PO-2M	PQ-M-M5F-__PO-2M
		PNP - NC	PQ-M-3MF-__PC-2M	PQ-M-4MF-__PC-2M	PQ-M-M4F-__PC-2M	PQ-M-M5F-__PC-2M
	M8 Connector Type	NPN - NO	-	-	-	PQ-M-M5F-__NO-M8C
	NPN - NC	-	-	-	PQ-M-M5F-__NC-M8C	
	PNP - NO	-	-	-	PQ-M-M5F-__PO-M8C	
	PNP - NC	-	-	-	PQ-M-M5F-__PC-M8C	
Sensing Distance	Normal Sensing	0.6mm	1mm	0.6mm	1mm	
	Double Sensing	-	1.5mm	-	1.5mm	
Standard Sensing Target		Iron, Ø5x1mm	Iron, Ø6x1mm	Iron, Ø6x1mm	Iron, Ø8x1mm	
Hysteresis		15%				
Response Frequency/ Time	Normal Sensing	2000 Hz/ 0.1ms	2000 Hz/ 0.1ms	2000 Hz/ 0.1ms	2000 Hz/ 0.1ms	
	Double Sensing	-	2000 Hz/ 0.1ms	-	2000 Hz/ 0.1ms	
Supply Voltage		10-30VDC (ripple included)				
Current Consumption		< 10mA				
Output	Type	NPN or PNP - NO/ NC depending on the model				
	Switching Capacity	100mA; Overload trip: 120mA				
	Leakage Current	< 0.01mA				
	Voltage Drop	< 1.5VDC				
Indication		Operation: Red LED (Cable type)/ 4 Red LED (Connector type)				
Protection Circuits		Reverse power supply polarity; reversed output polarity; Short circuit 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		± 10% 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		IP-67				
Weight	Prewired	approx. 25g	approx. 25g	approx. 25g	approx. 30g	
	Connector	-	-	-	approx. 25g	
Cable		2M, 2.6 Ø 3*0.15				
Material		Head: POM; Tube: Stainless Steel; Nuts: Chrome plated MS				
Tightening Torque		-			1.5 Nm (max.)	

DIMENSIONS



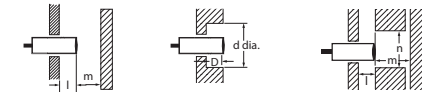
CONTROL OUTPUT DIAGRAM



MOUNTING AND ADJUSTMENTS

• Mounting metal influence

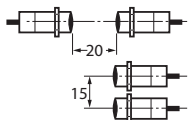
When the proximity sensor is embedded in metal, make sure that the clearances given below are maintained.



Size	Material	l	m	d	D	n
dia. 3	Flush	0	3	3	0	8
dia. 4	Flush	0	5	4	0	10
M4	Flush	0	3	4	0	8
M5	Flush	0	5	5	0	10

• Mutual Interference

When installing sensors face-to-face or side-by-side, ensure that the minimum distance given in the diagram is maintained.



• Tightening Torque

Do not tighten the nut with excessive force. Self washered nut, use of a washer is appreciated but not essential.

Size	Torque
M4	1.5 Nm
M5	1.5 Nm

Represented by:

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