

# PQ2

## 2 WIRE 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

- ⓘ 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 DC Type 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](http://www.inno.sg)

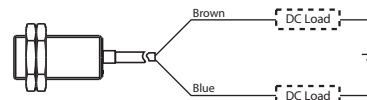
### SPECIFICATIONS

\*For details on Customized/ Special Models contact Seller

Size		M12	M18	M30	
*Model	Flush	DC - NO	PQ2-_-M12F-2DO-_-	PQ2-_-M18F-5DO-_-	PQ2-_-M30F-10DO-_-
		DC - NC	PQ2-_-M12F-2DC-_-	PQ2-_-M18F-5DC-_-	PQ2-_-M30F-10DC-_-
		AC - NO	-	PQ2-_-M18F-5AO-_-	PQ2-_-M30F-10AO-_-
	Non-Flush	AC - NC	-	PQ2-_-M18F-5AC-_-	PQ2-_-M30F-10AC-_-
		DC - NO	PQ2-_-M12N-4DO-_-	PQ2-_-M18N-8DO-_-	PQ2-_-M30N-15DO-_-
		DC - NC	PQ2-_-M12N-4DC-_-	PQ2-_-M18N-8DC-_-	PQ2-_-M30N-15DC-_-
Sensing Dist	Flush	2mm	5mm	10mm	
	Non-Flush	4mm	8mm	15mm	
	Standard Sensing Target	Iron, Ø12x1mm	Iron, Ø18x1mm	Iron, Ø30x1mm	
Hysteresis		± 15%			
Response Frequency	Flush	2000Hz/0.1ms (AC: 25Hz/10ms)	1000Hz/0.2ms (AC: 25Hz/10ms)	300Hz/0.5ms (AC: 25Hz/10ms)	
	Non-Flush	1000Hz/0.2ms (AC: 25Hz/10ms)	500Hz/0.5ms (AC: 25Hz/10ms)	150Hz/1ms (AC: 25Hz/10ms)	
Supply Voltage		DC Type: 10 - 30 VDC; AC Type: 20-250VAC			
Leakage Current		DC Type: < 0.1mA; AC Type: < 1.8mA			
Connection		2 meter Pre-wired Cable/ M12 Male Connector depending on model			
Output	Type	AC/ DC 2 Wire in NO/ NC depending on model			
	Switching Capacity	DC Type: max. 200mA; AC Type: max. 400mA			
	Residual Voltage	DC Type: max. 3 V; AC Type: max. 10V			
	No Load Current	DC Type: < 10mA; AC Type: < 1.8mA			
Indication		Operation: Yellow LED			
Protection Circuits		Short Circuit Protection (DC Type Only)			
Insulation Resistance		min. 50M Ω (at 500VDC)			
Dielectric Strength		500 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		20 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		IP67			
Weight	Standard Length	Prewired (DC/ AC)	approx. 60g / 77g	approx. 135g / 155g	approx. 182g / 210g
	Connector (DC/ AC)		approx. 25g / 32g	approx. 52g / 55g	approx. 120g / 120g
Long Body	Prewired (DC/ AC)		approx. 65g / 77g	approx. 150g / 162g	approx. 215g / 250g
	Connector (DC/ AC)		approx. 35g / 32g	approx. 95g / 70g	approx. 185g / 185g
Material		Head: PBT(flush)/ POM (non-flush); Tube: Nickel plated Brass			
Tightening Torque		15 Nm (max.)	30 Nm (max.)		

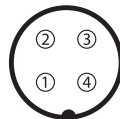
### CONNECTIONS

#### ◆ NO & NC - DC 2 Wire Type



#### ◆ Connector Type

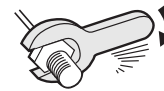
- 1: Connection
- 2:-
- 3: Connection
- 4:-



### MOUNTING AND ADJUSTMENTS

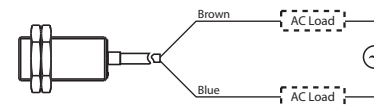
#### • Tightening Torque

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

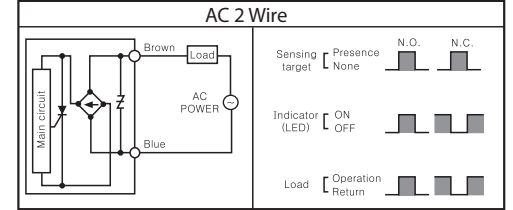
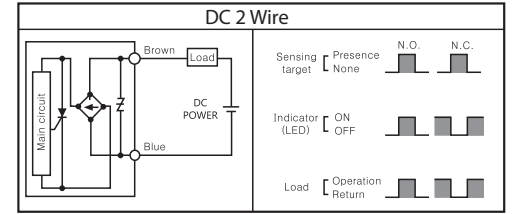


Size	Torque
M12	15 Nm
M18	30 Nm
M30	30 Nm

#### ◆ NO & NC - AC 2 Wire Type



### CONTROL OUTPUT DIAGRAM



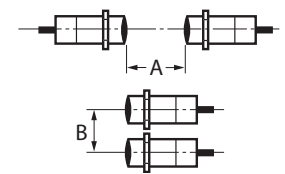
### ⚠ CAUTION

Do not connect in Parallel or without load to Power Supply. Connect only in SERIES TO LOAD.

### MOUNTING AND ADJUSTMENTS (Contd.)

#### • Mutual Interference

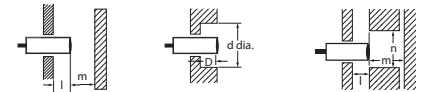
When installing sensors face-to-face or side-by-side, ensure that a minimum distance as given in the table below is maintained.



Size	Material	A	B
M12	Flush	30	20
	Non-flush	120	100
M18	Flush	50	35
	Non-flush	200	110
M30	Flush	100	70
	Non-flush	300	200

#### • 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
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

### Represented by:

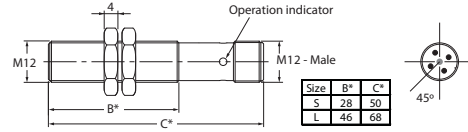
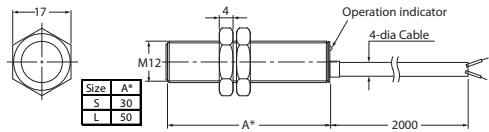
Intech Systems Chennai Pvt. Ltd.  
S-2, Guindy Industrial Estate  
Chennai - 32. Ph: 044 4353 8888  
Email: [info@intechchennai.com](mailto:info@intechchennai.com)

## ■ DIMENSIONS

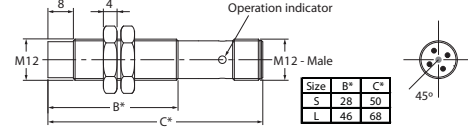
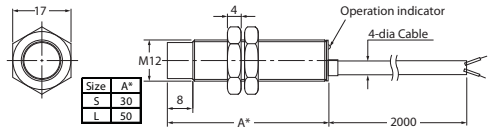
S - Standard Length; L - Long Body

All units are in mm

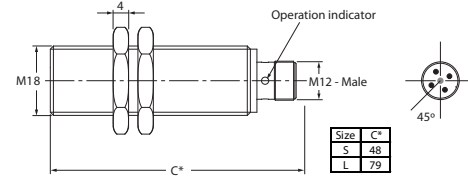
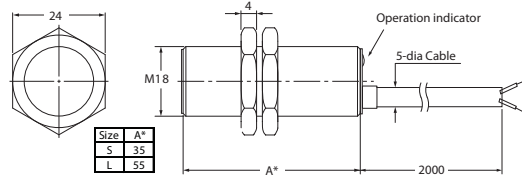
### ◆ PQ2-\_-M12F-2-\_-



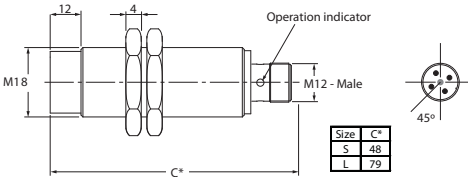
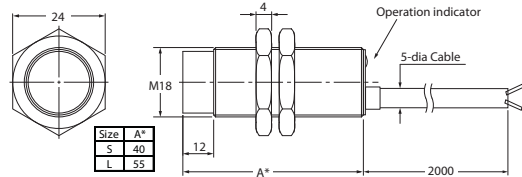
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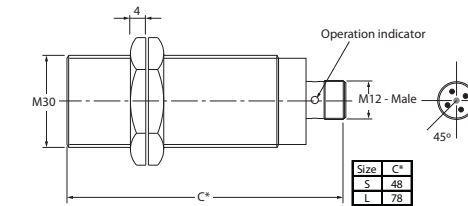
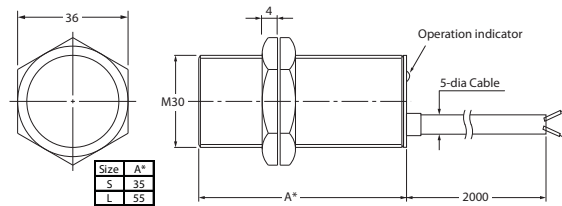
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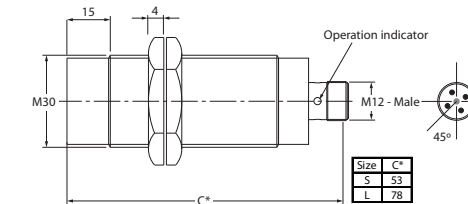
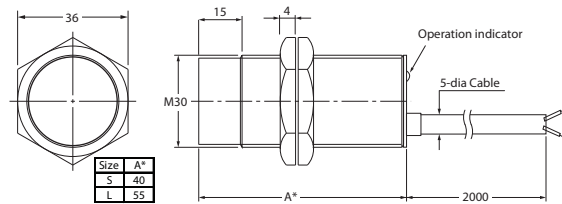
### ◆ PQ2-\_-M18N-8-\_-



### ◆ PQ2-\_-M30F-10-\_-

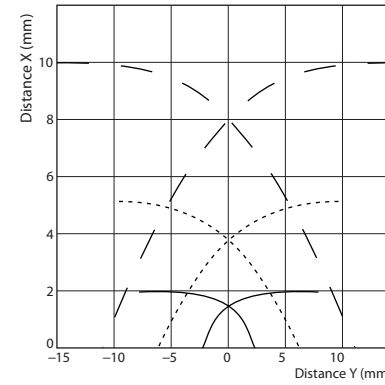


### ◆ PQ2-\_-M30N-15-\_-

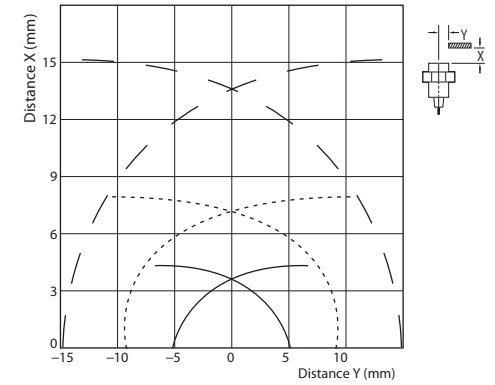


## ■ OPERATIONAL RANGE

### • Flush Type



### • Non-Flush Type



Note: Operational Range testing carried out at room temperature using standard Test Object.

INTENTIONALLY LEFT EMPTY

Represented by:

Intech Systems Chennai Pvt. Ltd.  
S-2, Guindy Industrial Estate  
Chennai - 32. Ph: 044 4353 8888  
Email: info@intechchennai.com

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www.inno.sg

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