

NAMUR Inductive Proximity Sensor

Intrinsically Safe

PQN

Proximity Sensors



SALIENT FEATURES

- ◆ NAMUR Output
- ◆ Intrinsically Safe
- ◆ IP67, Brass Housing
- ◆ Shielded & Non Shielded
- ◆ M8, M12, M18, M30 Models

Control

Weighing

Automation

Model Number Legend



PQN- - -
 1 2 3 4 5 6

1. Series

PQN

2. Housing

M8: M8, Threaded

M12: M12, Threaded

M18: M18, Threaded

M30: M30, Threaded

3. Shield

F: Flush/ Shielded

N: Non-Flush/ Unshielded

4. Sensing Distance

1: 1 mm

2: 2 mm

4: 4 mm

5: 5 mm

8: 8 mm

10: 10 mm

15: 15 mm

5. Output

EX: NAMUR 6-12VDC

6. Connection

2M: 2m Cable

#. Accessories included

Check Nut: 1 Pair

Example:

PQN-M18F-5EX-2M

PQN Series - M18, Flush - 5mm Sensing Distance, NAMUR Output - 2 meter Prewired

NOTE: Contact us for models not shown in catalogue.

Power Supplies

Switching

Tower Lamps

Cables & Electrodes

Accessories

Product Highlights

◆ Intrinsically Safe

The PQN is suitable for safe operation in areas with dangerous concentrations of flammable gases or dust as in petrochemical refineries and mines. The NAMUR circuitry used in the sensor uses very low power; the sensor is specifically designed to be incapable of producing heat or spark sufficient to ignite an explosive atmosphere. The use of intrinsically safe sensors simplifies the circuits, does not need special wiring and is an economical option over other protection mechanisms while not compromising on safety.

Ratings and Specifications

Size		M8	M12	M18	M30
Model	Flush	PQN-M8F-1EX- _	PQN-M12F-2EX- _	PQN-M18F-5EX- _	PQN-M30F-10EX- _
	Non-Flush	PQN-M8N-2EX- _	PQN-M12N-4EX- _	PQN-M18N-8EX- _	PQN-M30N-15EX- _
Sensing Distance	Flush	1mm	2mm	5mm	10mm
	Non-Flush	2mm	4mm	8mm	15mm
Standard Sensing Target		Iron, Ø8x1mm	Iron, Ø12x1mm	Iron, Ø18x1mm	Iron, Ø30x1mm
Hysteresis		± 15%			
Response Frequency/ Time	Flush	2000 Hz/ 0.05ms	1000 Hz/ 0.1ms	2000 Hz/ 0.2ms	2000 Hz/ 0.5ms
	Non-Flush	1000 Hz/ 0.1ms	500 Hz/ 0.2ms	1000 Hz/ 0.5ms	1000 Hz/ 1ms
Supply Voltage		6-12VDC (ripple included)			
Time Delay before Availability		max. 14ms			
Connection		2 meter Prewired			
Output	Type	6-12VDC NAMUR Output (Amplifier reqd. for conversion to Open Collector/ Relay Output)			
	No Load Current	>2.2mA (off); <1.1mA (on)			
Indication		-NA- (due to low power availability for NAMUR)			
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)			
EMC		RFI >3V/m / EFT >1KV / ESD >4KV (contact)			
Protection Class		IP-67			
Weight		approx. 38g	approx. 70g	approx. 150g	approx. 215g
Cable		2M, 2.9Ø 2*0.15	2M, 4Ø 3*0.34	2M, 5Ø 2*0.5	2M, 5Ø 2*0.5
Material		Head: POM; Tube: Nickel plated Brass			
Tightening Torque		10 Nm (max.)	15 Nm (max.)	40 Nm (max.)	

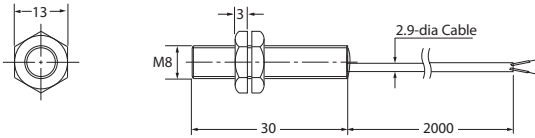
Note: Sensing Distance is calculated on the basis of the maximum sensing capacity when tested with a standard test object. Output is 6-12VDC variable voltage output and is readable only when a NAMUR amplifier is used.

Sensor Dimension Drawing

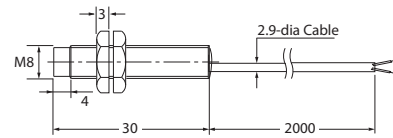
PQN

All dimensions are in mm

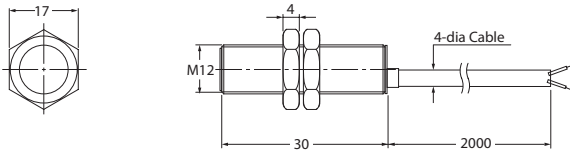
◆ PQN-M8F-1EX-2M



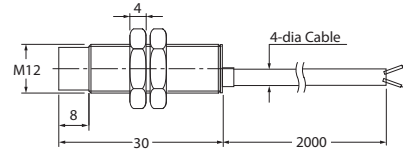
◆ PQN-M8N-2EX-2M



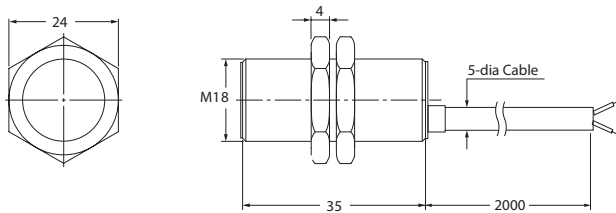
◆ PQN-M12F-2EX-2M



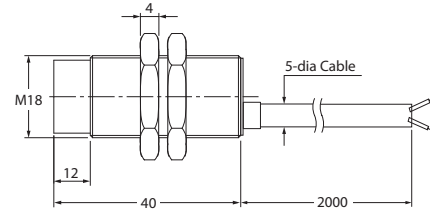
◆ PQN-M12N-4EX-2M



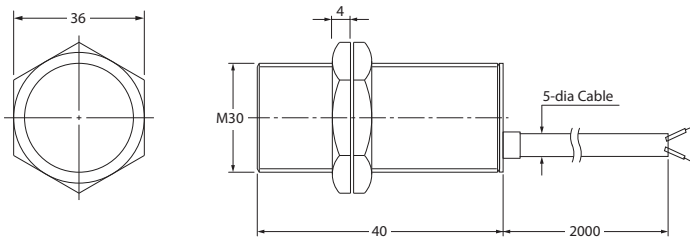
◆ PQN-M18F-5EX-2M



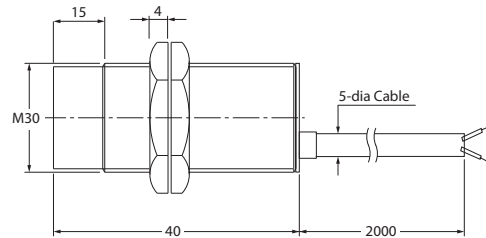
◆ PQN-M18N-8EX-2M



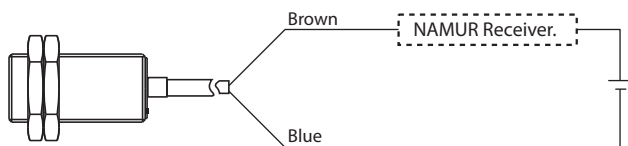
◆ PQN-M30F-10EX-2M



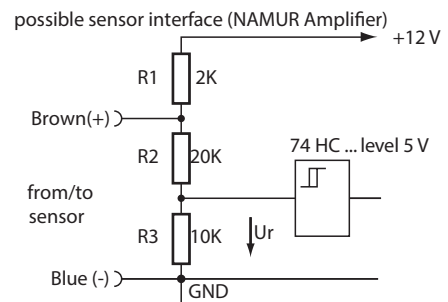
◆ PQN-M30N-15EX-2M



Connection



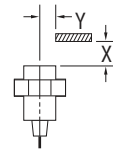
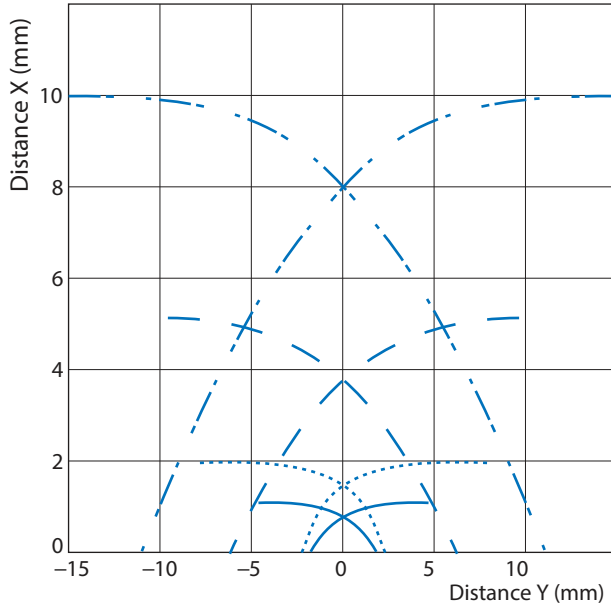
PQN sensor works with all NAMUR sensor amplifiers.
 For EX rated system:
 Inno recommends Phoenix Contact's Namur Amplifier with Relay output
 Amplifier Model No.: MINI MCR-SL-NAM-2RNO
 Ordering Code from Inno: PQN-2864105



- Proximity Sensors
- Control
- Weighing
- Automation
- Power Supplies
- Switching
- Tower Lamps
- Cables & Electrodes
- Accessories

Operational Range

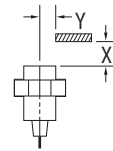
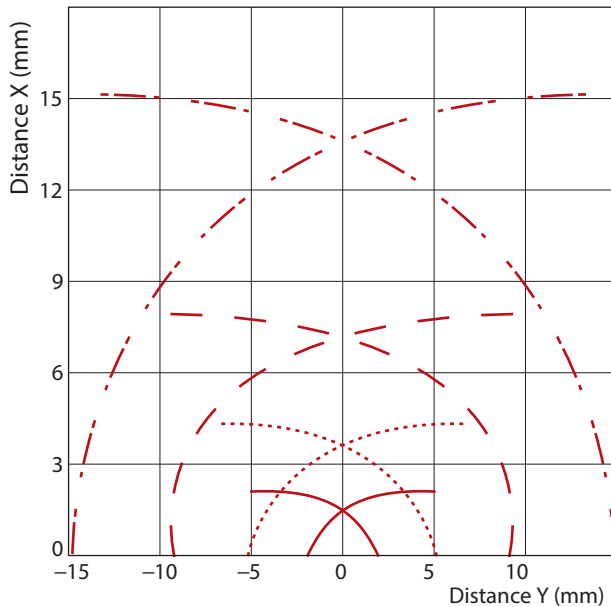
• Flush Type



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

- PQN-M8F-1EX-2M →
- PQN-M12F-2EX-2M →
- PQN-M18F-5EX-2M →
- PQN-M30F-10EX-2M →

• Non-Flush Type



- PQN-M8N-2EX-2M →
- PQN-M12N-4EX-2M →
- PQN-M18N-8EX-2M →
- PQN-M30N-15EX-2M →

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