

# Stainless Steel Proximity Sensor

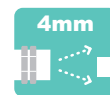
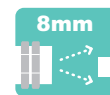
Double Sensing UNI-Body

# PQS-D



## SALIENT FEATURES

- ◆ SS- 303, IP- 67
- ◆ Resistant to chemicals
- ◆ Double Sensing Distance
- ◆ Impact and Abrasion Resistant
- ◆ M8, M12 , M18 & M30 Models
- ◆ Stainless Steel UNI-Body Construction



## Model Number Legend

**PQS-D** □ □ - □ □ □ - □ □ □ - □ □

1    2 3    4 5    6 7    8

### 1. Series

PQS

### 2. Type

D: Double Sensing

### 3. Body

S: Standard Length

L: Long Body

### 4. Housing

M8: M8, Threaded

M12: M12, Threaded

M18: M18, Threaded

M30: M30, Threaded

### 5. Shield

F: Flush/ Shielded

### 6. Sensing Distance

2: 2 mm

4: 4 mm

8: 8 mm

16: 16 mm

### 7. Output

NO: NPN - NO

PO: PNP - NO

### 8. Connection

2M: 2m Cable

M8C: M8 Connector

M12C: M12 Connector

### #. Accessories included

Check Nut: 1 Pair

### Example:

PQS-DS-M18F-8PO-M12C

PQS Series, Stainless Steel Unibody Housing - Double Sensing - M18, Flush - 8mm Sensing Distance, PNP NO - M12 Connector

### NOTE:

Contact us for models not shown in catalogue.

Connector cables are sold separately; look in CC series catalogue for the same ([www.inno.sg/cc](http://www.inno.sg/cc)).

## Product Highlights

### ◆ Double Sensing

Double the sensing of regular Inductive sensors is enabled; sensing distance of 8mm in M18 flush.

### ◆ Uni-body Stainless Steel

The PQS-D is made of Uni-Body SS303, ensuring zero surface contamination & making it ideal for use in Food & Pharma industries.

### ◆ Chemical Resistant

The PQS-D sensor's one-piece SS body can withstand continuous exposure to chemicals and detergent. It can better withstand chemicals like Petroleum & based derivatives, Diluted Sodium Hydroxide, Diluted Hydrochloric Acid, Mineral Oils, Sodium Chloride, Barium Hydroxide and many others.

## Ratings and Specifications

Size		M8	M12	M18	M30	
Model	NPN - NO	PQS-D_-M8F-2NO_-	PQS-D_-M12F-4NO_-	PQS-D_-M18F-8NO_-	PQS-D_-M30F-16NO_-	
	PNP - NO	PQS-D_-M8F-2PO_-	PQS-D_-M12F-4PO_-	PQS-D_-M18F-8PO_-	PQS-D_-M30F-16PO_-	
Sensing Distance		2mm	4mm	8mm	16mm	
Standard Sensing Target		Iron, 12x12x1mm	Iron, 12x12x1mm	Iron, 30x30x1mm	Iron, 54x54x1mm	
Hysteresis		± 15%				
Response Frequency/ Time		2000 Hz/ 0.1ms	1000 Hz/ 0.2ms	500 Hz/ 0.5ms	150 Hz/ 1ms	
Supply Voltage		10-30VDC (ripple included)				
Current Consumption		< 10mA				
Connection		PQS-D_-_-_-_- 2M - 2 meter pre-wired; PQS-D_-_-_-_- M8C - M8 Connector; PQS-D_-_-_-_- M12C - M12 Connector				
Output	Type	NPN or PNP - NO depending on the model				
	Switching Capacity	200mA; Overload trip: 220mA				
	Leakage Current	< 0.01mA				
	Voltage Drop	< 1.5VDC				
Indication		Operation: Yellow LED (Cable type)/ 4 Yellow LED (Connector type)				
Protection Circuits		Reverse power supply polarity; reversed output polarity; Short circuit; Overload 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	Standard Length	Prewired	approx. 40g	approx. 65g	approx. 135g	approx. 185g
		Connector	approx. 15g	approx. 28g	approx. 65g	approx. 130g
	Long Body	Prewired	approx. 53g	approx. 70g	approx. 150g	approx. 220g
		Connector	approx. 18g	approx. 35g	approx. 100g	approx. 190g
Cable		2M, 2.9∅ 3*0.15	2M, 4∅ 3*0.25	2M, 5∅ 3*0.34	2M, 5∅ 3*0.34	
Material		Unibody SS303 with 0.2mm head thickness				
Tightening Torque		10 Nm (max.)	15 Nm (max.)	40 Nm (max.)	40 Nm (max.)	

## Product Highlights

## PQS-D

### ◆ Abrasion & Impact resistant

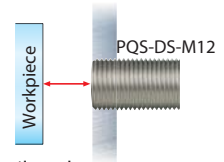
The single piece SS303 used for the sensor body is highly resistant to abrasion and impact.

The stainless steel head means that there is almost no wear to the head even when cleaned with a metal brush.

The PQS-D features a thick top wall (head) of 0.2mm which makes it highly durable and resistant to impacts.

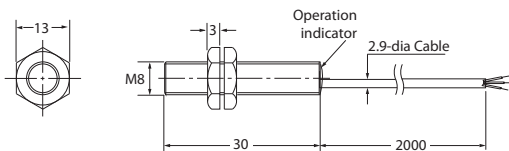
### ◆ Flush mounting

The PQS-D is not influenced by the surrounding environment and the sensing region is focused on the head. This enables the sensor to be mounted flush even on steel surfaces. The built in detection circuit senses the surround mounting object and reduces the sensitivity of the sensor appropriately.

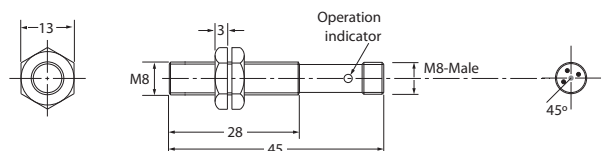


## Sensor Dimension Drawing

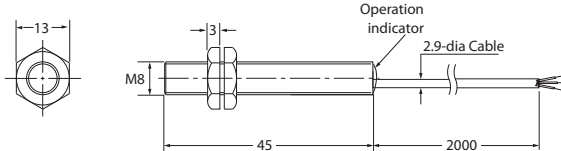
PQS-DS-M8F-2\_-2M



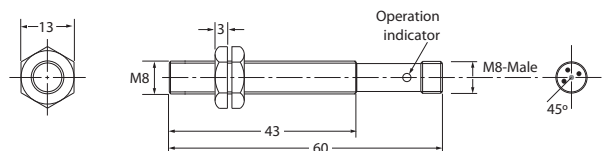
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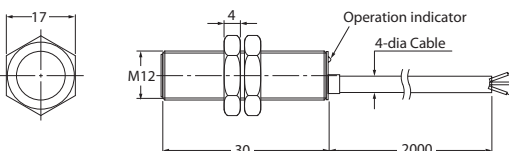
PQS-DL-M8F-2\_-2M



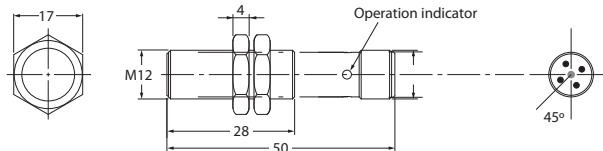
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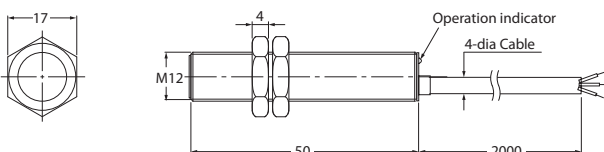
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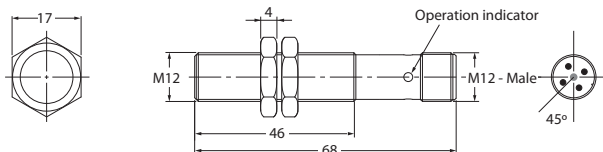
PQS-DS-M12F-4\_-M12C



PQS-DL-M12F-4\_-2M



PQS-DL-M12F-4\_-M12C



# Sensor Dimension Drawing

PQS-D

Proximity Sensors

Photoelectric Sensors

Measurement Sensors

Vision & Safety Sensors

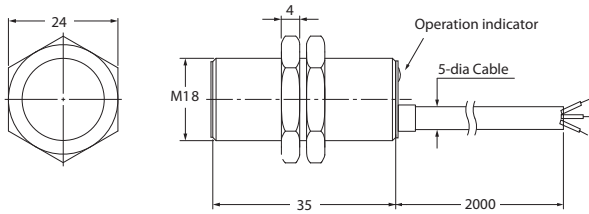
Control

Weighing

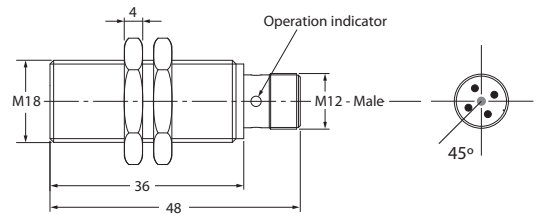
Automation

Components

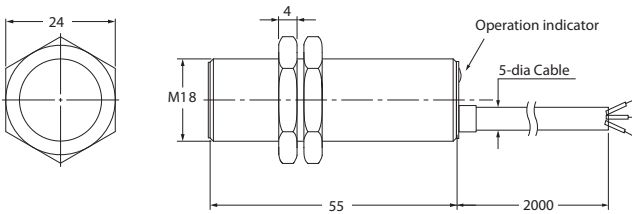
PQS-DS-M18F-8\_-2M



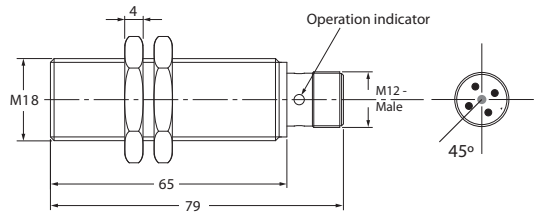
PQS-DS-M18F-8\_-M12C



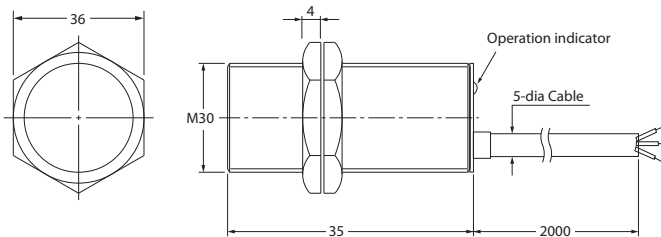
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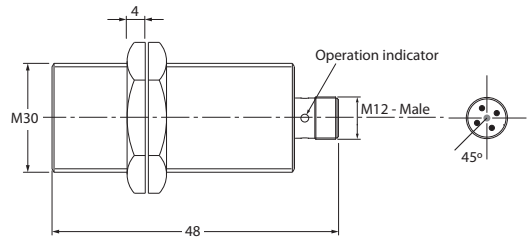
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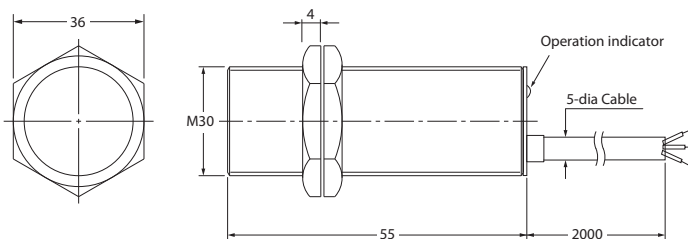
PQS-DS-M30F-16\_-2M



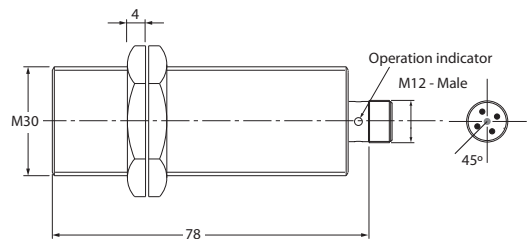
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PQS-DL-M30F-16\_-2M



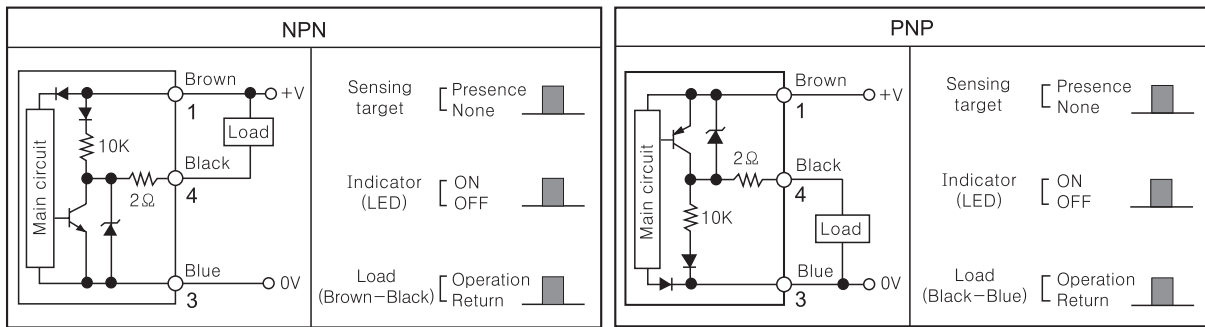
PQS-DL-M30F-16\_-M12C



All dimensions are in mm

# Control Output Diagram

PQS-D

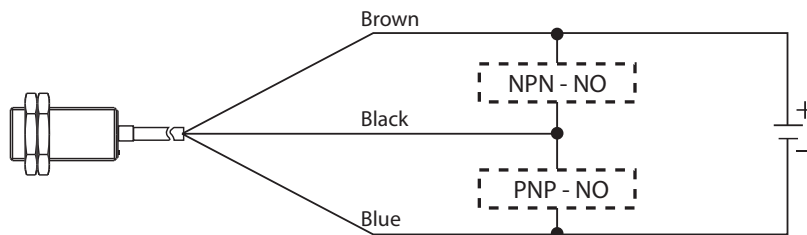


Brown : DC 10~30V  
 Blue : 0V  
 Black : Control Output

Note: 1, 3, 4 are the Pin numbers for the M12 Connector Models;  
 (1), (2), (3) are the Pin numbers for the M8 Connector Models.

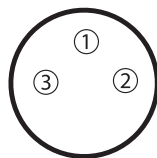
## Connection

### ◆ Cable Type



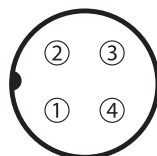
### ◆ Connector Type

#### ◆ M8 Connector



1: DC 10~30V  
 2: 0V  
 3: Control Output

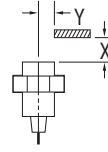
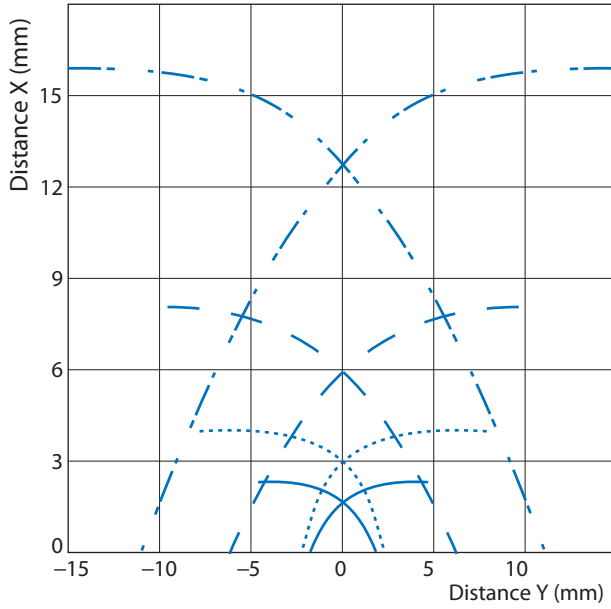
#### ◆ M12 Connector



1: DC 10~30V  
 2: No Connection  
 3: 0V  
 4: Control Output NO

# Operational Range

# PQS-D



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

- PQS-D\_-M8F-2\_ →
- PQS-D\_-M12F-4\_ →
- PQS-D\_-M18F-8\_ →
- PQS-D\_-M30F-16\_ →

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