

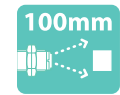
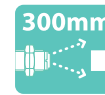
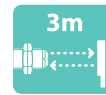
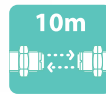
Cylindrical Photoelectric Sensor

F18



SALIENT FEATURES

- ◆ Metal Housing
- ◆ DC 3 Wire- NPN, PNP
- ◆ DC Dual Output - Retro Reflective
- ◆ Upto 10m sensing distance
- ◆ Diffuse, Retro, Through Beam



Model Number Legend

F18- - -
 1 2 3 4 5 6

1. Series

F18

2. Housing

M: Metal Housing

3. Type

T: Through Beam
 R: Retro Reflective
 D: Diffuse Reflective

4. Sensing Distance

100: 100 mm
 300: 300 mm
 3M: 3 Meters
 10M: 10 Meters

5. Output

NO: NPN - NO
 PO: PNP - NO
 PD: PNP - NO, NC
 ND: NPN - NO, NC

6. Connection

2M: 2m Cable
 M12J3: M12 Junction Connector with 0.3m extension

#. Accessories included

Mounting Nut (M18): 1 Set

#. Accessories (Order Separately)

Reflector : 1 No.
 (with F18_ R models only)

Example:

F18-MD-100PO-2M

F18 Series - Metal Housing, Diffuse Type - 100mm Sensing Distance, PNP NO Output - 2m Cable

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).

- Sensing
- Photoelectric Sensors
- Weighing
- Automation
- Power Supplies
- Switching
- Tower Lamps
- Cables & Electrodes
- Accessories

Product Highlights

◆ Impact resistant Metal Housing

The F18 Series realizes the sensor failure rate in certain machines due to accidental impact of parent body or foreign object. F18 series comes with impact resistant brass housing to eliminate the high failure rate in accident prone places.

◆ Vibration & Noise Resistant!

The F18 Series sensors have been designed to withstand vibration, this is done by epoxy coating the components. A moderate level of noise resistance and false positives due to signal interference is ensured by the use of copper shields around the sensor electronics.

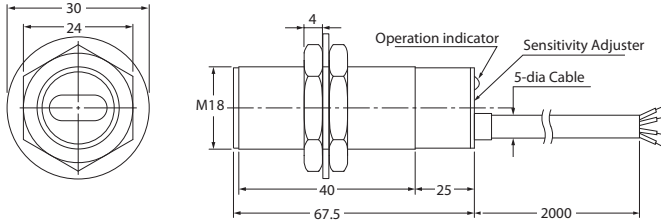
Ratings and Specifications

Sensing Type		Through Beam	Retro-Reflective	Diffuse Reflective	
Models	NPN - NO	F18-MT-10MNO-__	-	F18-MD-300NO-__	F18-MD-100NO-__
	PNP - NO	F18-MT-10MPO-__	-	F18-MD-300PO-__	F18-MD-100PO-__
	NPN - NO+NC	-	F18-MR-3MND-__	-	-
	PNP - NO+NC	-	F18-MR-3MPD-__	-	-
Sensing Distance		10 Meters	3 Meters	300mm	100mm
Light Source		Infrared LED	Red LED	Infrared LED	
Standard Sensing Object		min. Ø15mm opaque object	min. Ø62mm opaque object	100x100mm white matte paper	
Hysteresis		-		20% max.	
Response Time		max. 2ms			
Sensitivity Adjustment		-NA-	Built-in externally adjustable 1 turn pot.		
Operation Mode		Light ON	Dark ON	Light ON	
Supply Voltage		DC Type: 10 - 30 VDC (Ripple Max 10%)			
Current Consumption		max. DC: 46mA	max. DC: 50mA		
Connection		2 meter pre-wired cable or 0.3 meter cable with M12 Junction connector depending on the model			
Output	Type	NO + NC (for Retro Reflective Only) / NPN or PNP			
	Switching Capacity	100mA; overload 150mA			
	Leakage Current	< 0.01mA			
	Voltage Drop	< 1.5VDC			
Operation Indication		Red LED - Operation			
Protection Circuits		Reverse Polarity, Output Short circuit Protection			
Dielectric Strength		1000 VAC, 50/60 Hz for 1 minute between current carry parts and case			
Shock Resistance		20 G - X,Y, Z three directions for 3 times to destruction			
Vibration Resistance		1mm double amplitude for 1 hour each in X, Y, Z directions (10 to 55 Hz)			
Environmental Illuminance		max. Sunlight: 5,000 lux, Lamp: 2,000 lux			
Ambient Temperature		Operation: -20° ~ 50°C; Storage: -30° ~ 70°C (non-freezing; non-condensing)			
Ambient Humidity		Operation: 35 ~ 85% RH; Storage: 35 ~ 90% RH (non-condensing)			
Protection Class		IP66			
Weight		Emitter: 68g, Receiver: 74g	approx. 110g	approx. 77g	approx. 70g
Material		Housing: Nickel plated Brass; Lens: PMMA or Eqv.; Nuts: Chrome plated MS			
Tightening Torque		20 Nm (max.)			

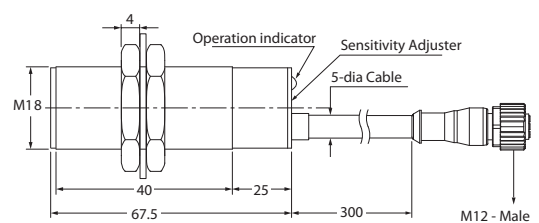
Sensor Dimension Drawing

F18

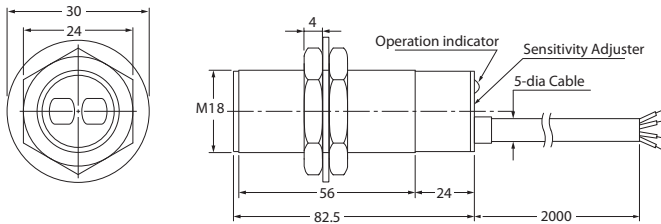
◆ F18-MD-100_-2M



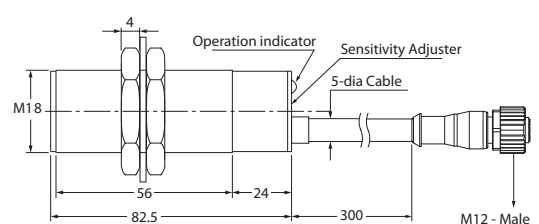
◆ F18-MD-100_-M12J3



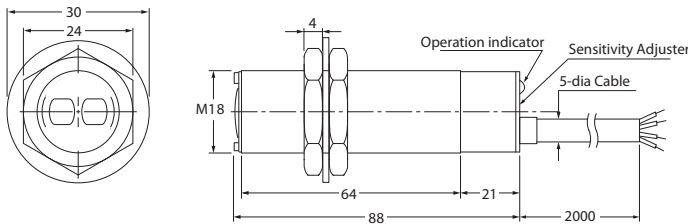
◆ F18-MD-300_-2M



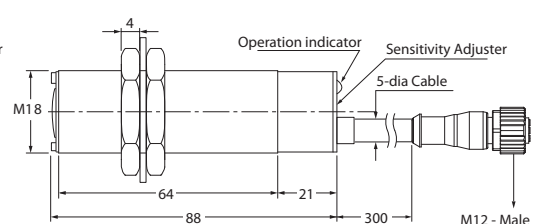
◆ F18-MD-300_-M12J3



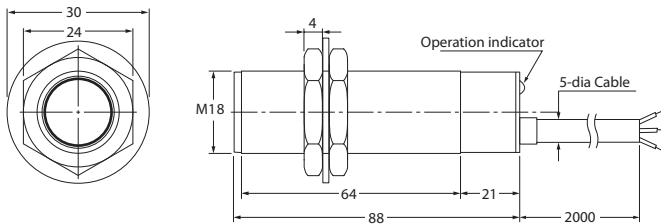
◆ F18-MR-3M_-2M



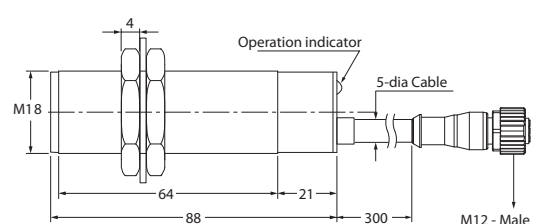
◆ F18-MR-3M_-M12J3



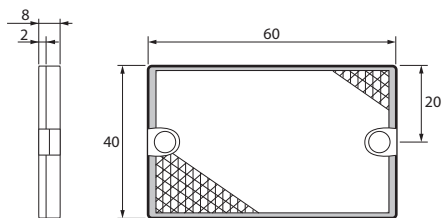
◆ F18-MT-10M_-2M



◆ F18-MT-10M_-M12J3



Reflector

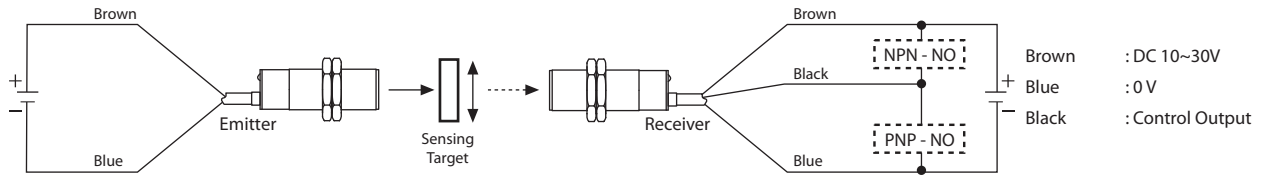


All dimensions are in mm

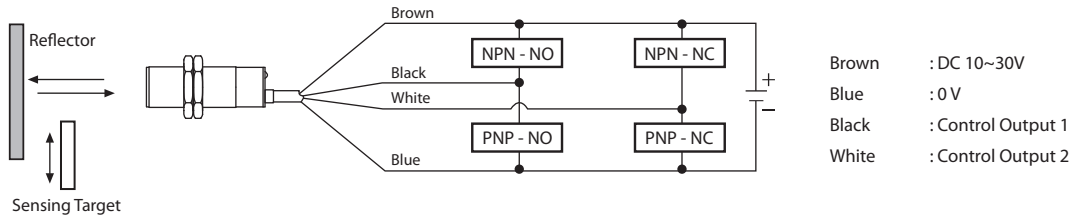
Connection

• Cable Type

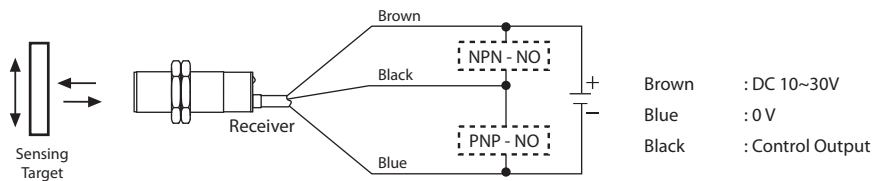
◆ Through Beam - DC 3 Wire Type



◆ Retro Reflective - DC 4 Wire Type

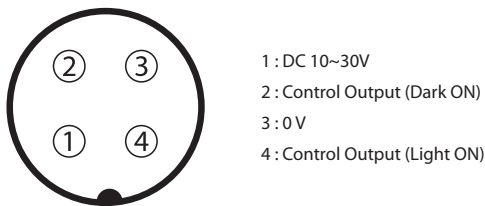


◆ Diffuse Reflective - DC 3 Wire Type



◆ M12 Junction Connector*

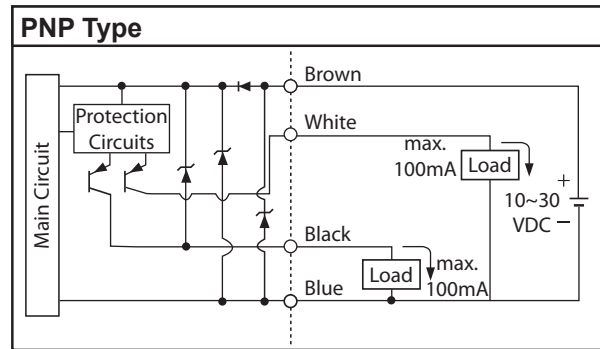
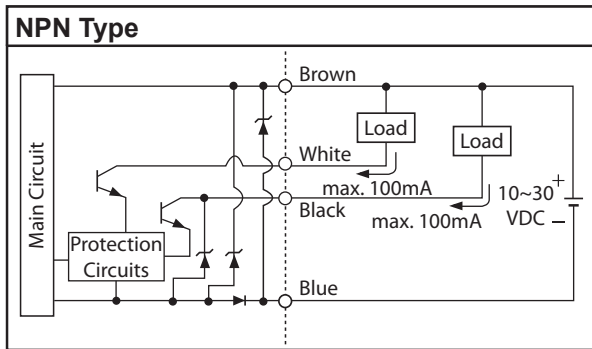
◆ All Types



Note: * - Connector Cable is not supplied along with unit

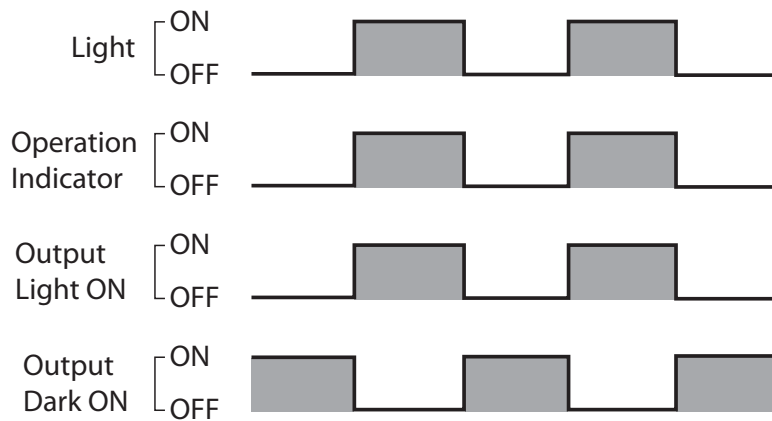
Control Output Diagram

F18



- Brown : DC 10~30V
- Blue : 0V
- Black : Control Output (Light ON)
- White : Control Output (Dark ON)

Operation Type



Proximity Sensors

Photoelectric Sensors

Measurement Sensors

Vision & Safety Sensors

Control

Weighing

Automation

Components

Cat. No. F18-317

Exclusively Represented by:

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 specifications are subject to change without notice