

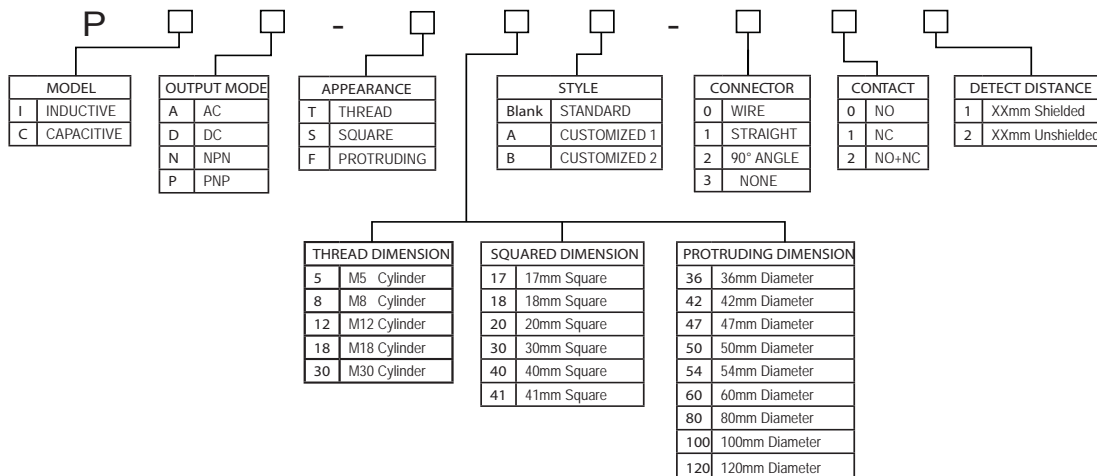
## F54 - Protruding Plastic Housing - Capacitive Sensor



### Features:

- Capacitive sensor, style: circular shape, Dim: 54dia x 35mm
- DC 2-wire (10-30V DC), DC 3-wire (10-30V DC), DC 4-wire (10-30V DC) AC-2 (90-250V AC)
- Mounting distance: 25mm unshielded
- With LED operation indicate lamp, easily identifiable
- Standard sensing object: ferrous metals
- Protection rate: IP67, water resistant
- Over-current and short circuit protection; against polarity reversal.
- Widely applied in measuring, Counting, Rpm measuring in mechanism, chemical, paper manufacture light industry, etc.

### ORDERING CODE INFORMATION



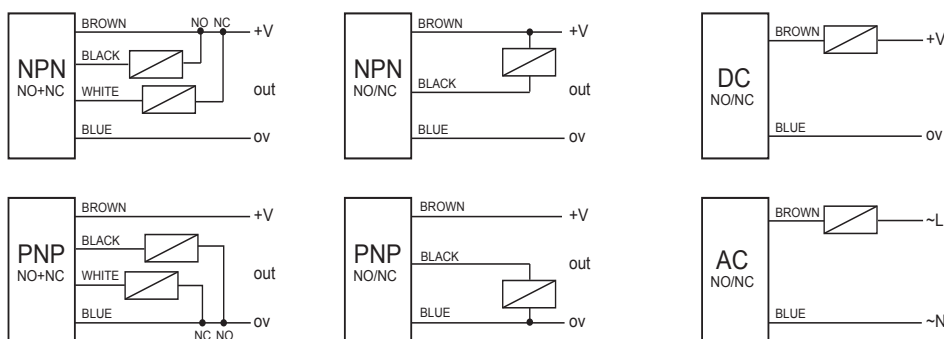
### ORDERING CODES

Model and Type	Output Type	Mounting Distance	Current Output	Rated Supply	Connector Model
PCP-F54-002	PNP NO	20mm UNSHIELDED	≤ 200mA	24V DC	3 WIRE
PCP-F54-012	PNP NC	20mm UNSHIELDED	≤ 200mA	24V DC	3 WIRE
PCP-F54-022	PNP NO + NC	20mm UNSHIELDED	≤ 200mA	24V DC	4 WIRE
PCN-F54-002	NPN NO	20mm UNSHIELDED	≤ 200mA	24V DC	3 WIRE
PCN-F54-012	NPN NC	20mm UNSHIELDED	≤ 200mA	24V DC	3 WIRE
PCN-F54-022	NPN NO + NC	20mm UNSHIELDED	≤ 200mA	24V DC	4 WIRE
PCA-F54-012	NO	20mm UNSHIELDED	≤ 300mA	220V AC	2 WIRE
PCA-F54-022	NC	20mm UNSHIELDED	≤ 300mA	220V AC	2 WIRE

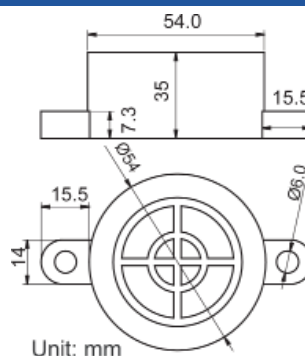
### TECHNICAL SPECIFICATIONS

Property Project	Specific Parameter
Mounting Distance	25mm unshielded
Sensing Distance	0...22.5mm unshielded
Power Supply	DC 10-30V / 90-250V AC
Frequency	30Hz (DC 3/4 wires) 10Hz AC
Current Output (DC/AC)	200mA / 300mA
Ambient Temperature	-15°C...60°C
Against Polarity Reversal	YES
Short Circuit Protected	YES
IP Rating	IP67

### ELECTRICAL CONNECTION

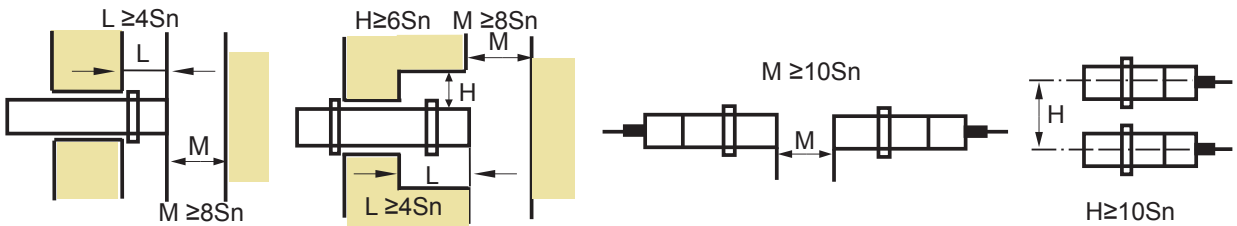


### DIMENSIONS OF PRODUCT



## INSTALLATION

If used in an area surrounded by metal install the proximity sensor as follows. ( $S_n$  = sensing distance)



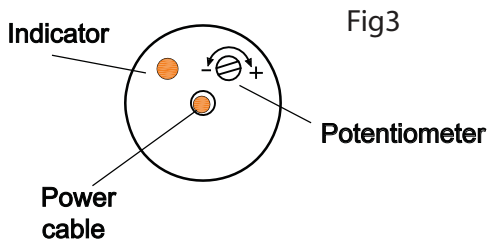
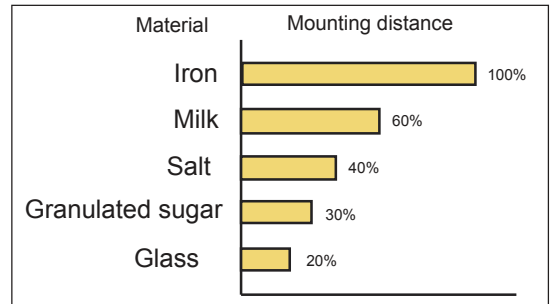
## CAPACITIVE PROXIMITY MATERIAL CORRECTION FACTOR

a. Capacitive proximity sensors can measure both metal and non metal objects such as iron, water, oil, glass, plastic....etc. The mounting distance varies with different objects because of differing object conductivity, permittivity and water absorbtion. If the metal connects with ground (GND) the maximum mounting distance can be obtained.

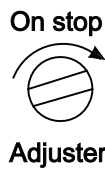
b. The mounting distance of capacitive proximity sensors can be adjusted and the mounting distance must be adjusted before installing, instead of after.

For adjustment please refer to fig 3.

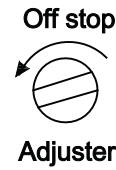
c. During normal operation the sensor should be positioned away from interference such electro magnetic frequency or other sensors mounted too close



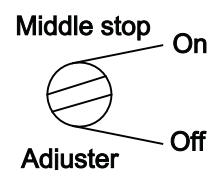
Turning clockwise increases sensitivity,  
 turning anti-clockwise decreases sensitivity  
 Limit on rotation about 10 full turns



For maximum sensing distance  
 turn clockwise



For minimum sensing distance  
 turn anti-clockwise



For medium sensing distance adjust to  
 approx 5 turns

REV. NO.

REVISION NOTE

DATE

SIGNATURE

1

Datasheet

Dec 2011

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As part of the company policy of continued product improvement, specifications may change without notice. Our sales office will be pleased to help you with the latest information on this product range and the details of our full design and manufacturing service. All products are supplied to our standard conditions of sale unless otherwise agreed in writing.

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