



# Model IPH Installation, Operation & Maintenance Instructions (AC Versions Only)

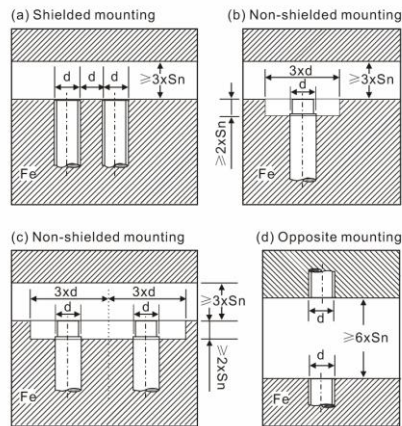


### WARNINGS:

The sensor does not have serviceable parts. Do not attempt to open the sensor case. Do not over-tighten cable connected to the sensor. Do not touch non-insulated cables unless they are disconnected upstream. Do not install the sensor during storms with lightning.

### MECHANICAL INSTALLATION:

Avoid contact between sensor and actuator (target material). If the cable is subjected to flexing, a coiled section should be used with a bending radius that prevents 90° bends. The correct mounting methods and distances are shown in figures (a), (b), (c) and (d). For side by side mounting see figures (a) and (c). For stand-alone mounting see figures (a) and (b). For opposite mounting see figure (d).



Note: d = sensor diameter; Sn = operating distance

### ELECTRICAL CONNECTION:

Do NOT install power wiring/cables with the cables/wiring used to connect the Model IPH sensor. Refer Table 1 and select the figure related to the sensor that needs to be installed. Make the wiring connections following the schematic shown in figures.

Part Number	Output	Fig.
48-2111-112	2-Wire AC, NO	BConn
48-2121-112	2-Wire AC, NC	BConn
48-1111-113	2-Wire AC, NO	BPrew

### B Connector face view (M12)

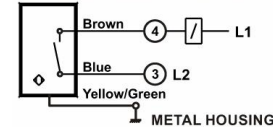


- 1 = YLW/GRN
- 2 = BLK
- 3 = BLU

### WITH PREWIRED CABLE

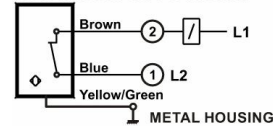
#### B

AC or AC/DC 20-250V 2-wire N.O.



#### D

AC or AC/DC 20-250V 2-wire N.C.

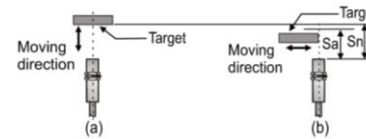


### SPECIFICATIONS:

Operating Parameter	Spec
Power Supply	20-250VAC
Maximum Load	400mA
Maximum Sensing Dis	5mm
Operating Temp	-13° to +158° F
Protection Degree	IP67
Housing Material	Chrome Plated Brass

### SETTING DISTANCE:

- The detecting distance can vary based upon the shape, size or material of the target. Therefore please check the detection distance as shown in (a) below, then pass the target within range of the setting distance (Sa).
- Setting Distance (Sa) = Detecting Distance (Sn) x 70%



{ Sn: Detecting distance  
Sa: Setting distance (70% of Sn)

### CAUTIONS FOR USING:

This equipment shall not be used beyond specified operating ranges or specifications as shown. Do not overload the tensile strength of the cable connected to the sensor. Do not use the same conduit for cable connected to sensor as electric power. Do not over tighten the mounting nut. Use the provided washer for tightening. Please check voltage of the power source to ensure you are not in excess of power input of sensor. Do not use this sensor during transient time (80ms) after applying power as this may result in damage to the sensor. Please use insulated transformer in power supply. Please make cable as short as possible in order to avoid noise. If the target is plated, the operating distance can be changed by the plating material and may result in sensor malfunction. If there are machines (motor, welding machinery), which result in large surges around the Model IPH sensor, please install a varistor or other electrical noise absorber to the source of the power surge. If the sensor is connected to a load with a large inrush current to the sensor, the proximity sensor may be damaged by the inrush current.

### WARRANTY:

Each Model IPH inductive proximity sensor is backed by our five-year limited warranty. Should you experience a problem with one of our products deemed by our factory to be a product failure covered by our warranty, we will repair the unit at our factory or provide you with a replacement unit or sub-assembly at our discretion. A return authorization number must be obtained from a BlueLevel Technologies customer service technician BEFORE returning any unit. Refer to the following details for more information.

We warrant BlueLevel Technologies products to be free from defects in workmanship and materials when operated under normal conditions and in accordance with nameplate characteristic limits for

a period of five (5) years from the date of shipment. Products must be installed and maintained in accordance with BlueLevel Technologies installation, operation and maintenance instructions. Users are responsible for the suitability of the products to their application. There is no warranty against damage resulting from misapplication, improper specifications, or other operating conditions beyond our control. Claims against carriers for damage in transit must be filed by the buyer.

THIS WARRANTY SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

BlueLevel Technologies will repair or replace, at its option, any product which has been found to be defective and is within the warranty period, provided that the product is shipped, with previous factory authorization, freight prepaid, to the factory in Rock Falls, IL, USA, or the nearest service station. BlueLevel Technologies is not responsible for the removal, installation, or any other incidental expenses incurred in shipping the products to or from BlueLevel Technologies.

BlueLevel Technologies' liability under this warranty shall be solely limited to repair or replacement of the products within the warranty period, and BlueLevel Technologies shall not be liable, under any circumstances, for consequential or incidental damages, including, but not limited to, personal injury or labor costs.

Under no circumstances will BlueLevel Technologies be responsible for any expense in connection with any repairs made by anyone other than the factory of an authorized service station, unless such repairs have been specifically authorized in writing.



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