

# PFT Series IP69K-rated Proximity Sensors



**PFT1-AP-3H**  
**PFT1-AP-4H**

## 30 mm Stainless Steel - DC

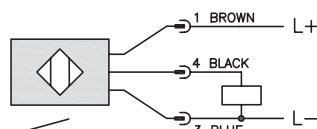
- PFT1 series – short-body length, PFT2 series – regular body length
- 30 mm diameter
- 316L stainless steel housing
- M12 quick-disconnect plug with gold-plated pins (purchase cable separately)
- Complete overload protection
- IP69K rated for food and beverage applications
- M30 mounting hex nuts included
- Lifetime warranty



| PFT Series Food and Beverage DC Inductive Proximity Selection Chart |         |                               |           |              |       |                      |           |            |
|---------------------------------------------------------------------|---------|-------------------------------|-----------|--------------|-------|----------------------|-----------|------------|
| Part Number                                                         | Price   | Sensing Range                 | Mounting  | Output State | Logic | Connection           | Wiring    | Dimensions |
| <a href="#"><u>PFT1-AP-3H</u></a>                                   | \$55.00 | 0 to 14 mm<br>[0 to 0.551 in] | Flush     | N.O.         | PNP   | M12 [12mm] connector | Diagram 1 | Figure 1   |
| <a href="#"><u>PFT2-AP-3H</u></a>                                   | Retired | 0 to 15 mm<br>[0 to 0.590 in] |           |              | PNP   | M12 [12mm] connector | Diagram 1 | Figure 2   |
| <a href="#"><u>PFT1-AP-4H</u></a>                                   | Retired | 0 to 22 mm<br>[0 to 0.866 in] | Non-flush | N.O.         | PNP   | M12 [12mm] connector | Diagram 1 | Figure 1   |
| <a href="#"><u>PFT2-AP-4H</u></a>                                   | \$55.00 |                               |           |              | PNP   | M12 [12mm] connector | Diagram 1 | Figure 2   |

## Wiring Diagram

**Diagram 1**  
**PNP output**



**Connector**  
**M12 connector**



*Note: Class 2 power supply required*

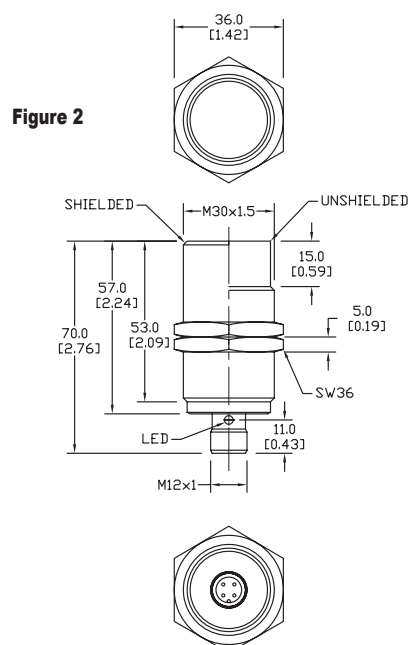
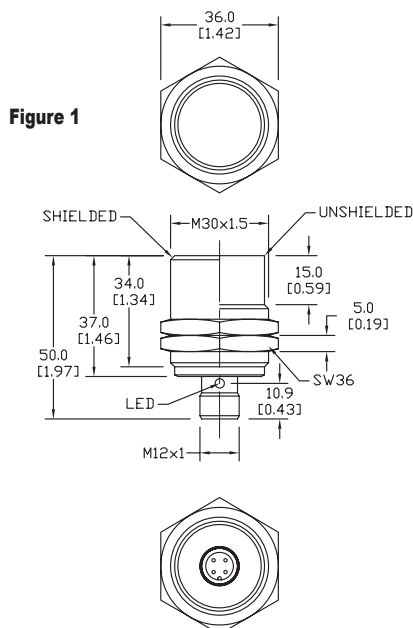
# PFT Series IP69K-rated Proximity Sensors

| PFT Series Food and Beverage DC Inductive Proximity Specifications |                                                    |                 |                 |                |
|--------------------------------------------------------------------|----------------------------------------------------|-----------------|-----------------|----------------|
| Mounting Type                                                      | Flush                                              |                 | Non-flush       |                |
| Series                                                             | PFT1                                               | PFT2            | PFT1            | PFT2           |
| Nominal Sensing Distance                                           | 14mm [0.551 in]                                    | 15mm [0.590 in] | 22mm [0.866 in] |                |
| Operating Distance                                                 | NA                                                 |                 |                 |                |
| Material Correction Factors                                        | See the <a href="#">Material influence table</a>   |                 |                 |                |
| Output Type                                                        | PNP, N.O. only                                     |                 |                 |                |
| Operating Voltage                                                  | 10 - 36 VDC                                        |                 |                 |                |
| No-load Supply Current                                             | ≤ 10mA                                             |                 |                 |                |
| Operating (Load) Current                                           | ≤ 100mA                                            |                 |                 |                |
| Off-state (Leakage) Current                                        | NA                                                 |                 |                 |                |
| Voltage Drop                                                       | ≤ 2.5 V                                            |                 |                 |                |
| Switching Frequency                                                | 50Hz                                               |                 | 100Hz           |                |
| Differential Travel (% of Nominal Distance)                        | 3 - 15%                                            |                 |                 |                |
| Repeat Accuracy                                                    | 10%                                                |                 |                 |                |
| Ripple                                                             | NA                                                 |                 |                 |                |
| Time Delay Before Availability (tv)                                | 30ms                                               |                 |                 |                |
| Reverse Polarity Protection                                        | Yes                                                |                 |                 |                |
| Short-Circuit Protection                                           | Yes (switch auto-resets after overload is removed) |                 |                 |                |
| Operating Temperature                                              | 0 to 100°C [32 to 212°F]                           |                 |                 |                |
| Protection Degree (DIN 40050)                                      | IEC IP68, IP69K                                    |                 |                 |                |
| Indication/Switch Status                                           | Normally Open output energized - Yellow            |                 |                 |                |
| Housing Material                                                   | 316 L stainless steel                              |                 |                 |                |
| Sensing Face Material                                              | PEEK (Polyether Ether Ketone)                      |                 |                 |                |
| Shock/Vibration                                                    | See <a href="#">Proximity Sensor Terminology</a>   |                 |                 |                |
| Tightening Torque                                                  | 80 Nm [59 lb-ft]                                   |                 |                 |                |
| Weight                                                             | 110g [3.88 oz]                                     | 130g [4.58 oz]  | 107g [3.77 oz]  | 124g [4.37 oz] |
| Connection                                                         | M12 plug with gold-plated pins                     |                 |                 |                |
| Agency Approvals                                                   | UL file E328811, CE ECOLAB, RoHS                   |                 |                 |                |

To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

## Dimensions

mm [inches]



# Accessories for 30mm Sensors

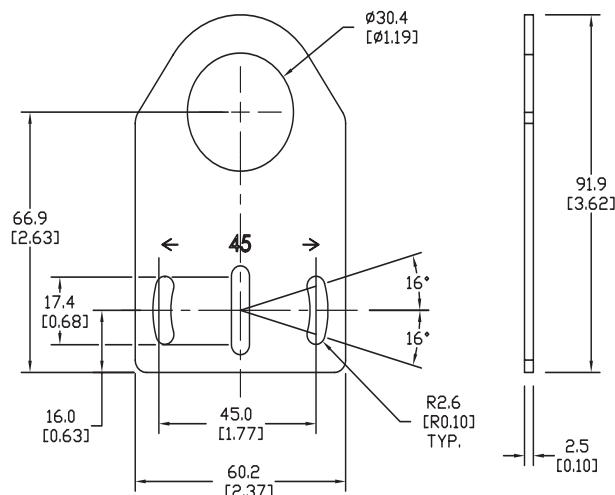
## Axial Mounting Bracket

Mounting bracket, axial, zinc-plated steel. For use with 30mm sensors. Has two mounting holes (use 5mm screws) and allows the rotation of an optical axis for right-beam-angle-adaptor sensors. Hexagonal nuts not included.

| Accessories for 30mm Sensors |        |                                                                                        |               |
|------------------------------|--------|----------------------------------------------------------------------------------------|---------------|
| Part Number                  | Price  | Description                                                                            | Weight lb [g] |
| <b>ST30A</b>                 | \$2.25 | Micro Detectors mounting bracket, axial, zinc plated steel. For use with 30mm sensors. | 0.18 [81.7]   |

### Dimensions

mm [inches]



**ST30A**

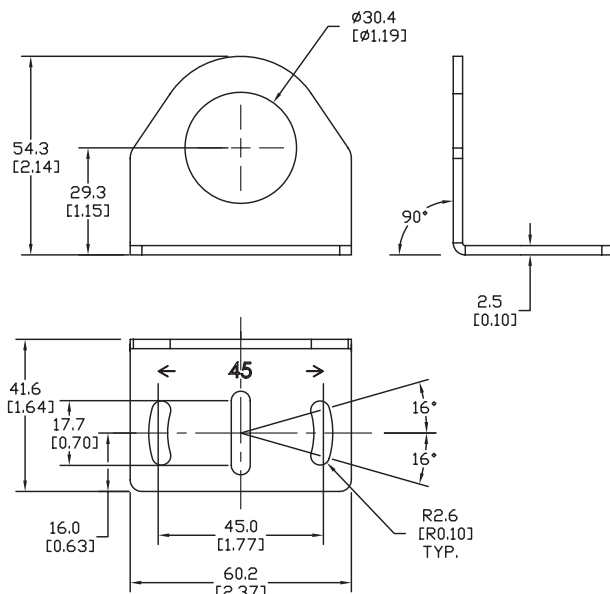
## Right-angle Mounting Bracket

Mounting bracket, right-angle, zinc-plated steel. For use with 30mm sensors. Has two mounting holes (use 5mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

| Accessories for 30mm Sensors |        |                                                                                              |               |
|------------------------------|--------|----------------------------------------------------------------------------------------------|---------------|
| Part Number                  | Price  | Description                                                                                  | Weight lb [g] |
| <b>ST30C</b>                 | \$2.25 | Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 30mm sensors. | 0.18 [81.7]   |

### Dimensions

mm [inches]



**ST30C**

# Accessories for 30mm Sensors

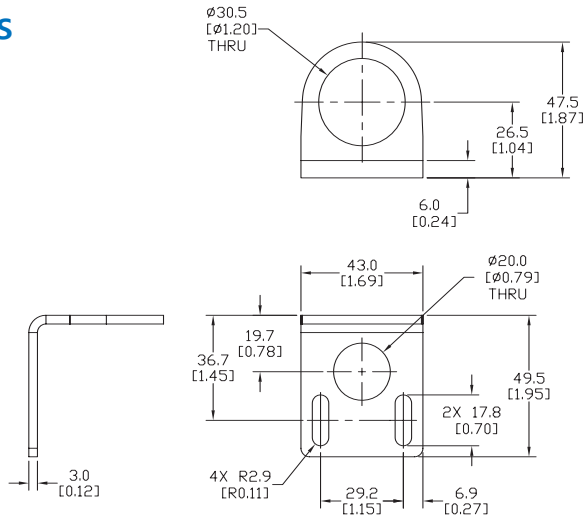
## Right-angle Mounting Bracket

Mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.

| Accessories for FW Series Sensors |        |                                                                                                 |               |
|-----------------------------------|--------|-------------------------------------------------------------------------------------------------|---------------|
| Part Number                       | Price  | Description                                                                                     | Weight lb [g] |
| <a href="#"><u>ST30C6W</u></a>    | \$5.50 | AutomationDirect mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors. | 0.15 (68.0)   |

## Dimensions

mm [inches]



[ST30C6W](#)

## Right-angle Swivel Mounting Systems

Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 30mm sensors. Available in all 304 stainless steel or with an aluminum head with a 304 stainless steel mounting plate.

| Accessories for 30mm Sensors   |         |                                                                                                                                                              |                     |                     |                            |               |
|--------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|----------------------------|---------------|
| Part Number                    | Price   | Description                                                                                                                                                  | Mounting Head       | Mounting Plate      | Drawing Link               | Weight lb [g] |
| <a href="#"><u>OPT2118</u></a> | \$11.50 | Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 30mm sensors.            | Aluminum            | 304 Stainless steel | <a href="#"><u>PDF</u></a> | 0.18 [81.7]   |
| <a href="#"><u>OPT2119</u></a> | \$21.00 | Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 30mm sensors. | 304 Stainless Steel | 304 Stainless steel | <a href="#"><u>PDF</u></a> | 0.18 [81.7]   |

Note: 304 Stainless steel mounting rods sold separately: [OPT2109](#) (200mm [7.87 in] length), [OPT2110](#) (300mm [11.81 in] length), and [OPT2111](#) (500mm [19.69 in] length).



[OPT2118, OPT2119](#)

# Mounting Rods and Brackets

## Mounting Rods

304 Stainless steel rods for mounting swivel brackets [OPT2112](#) - [OPT2127](#). Available in three lengths: 200mm, 300mm, and 500mm. 12mm diameter.

| Mounting Rods for OPT2112-2127 Swivel Mounting Brackets |         |                                                                         |                     |                  |
|---------------------------------------------------------|---------|-------------------------------------------------------------------------|---------------------|------------------|
| Part Number                                             | Price   | Description                                                             | Drawing Link        | Weight lb (g)    |
| <a href="#">OPT2109</a>                                 | \$13.00 | Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel. | <a href="#">PDF</a> | 0.41<br>[185.97] |
| <a href="#">OPT2110</a>                                 | \$16.00 | Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel. | <a href="#">PDF</a> | 0.60<br>[272.16] |
| <a href="#">OPT2111</a>                                 | \$21.00 | Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel. | <a href="#">PDF</a> | 0.98<br>[444.52] |



## Right-angle Mounting Bracket

Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods [OPT2109](#), [OPT2110](#) & [OPT2111](#).

| Right-angle Mounting Brackets for 12mm Sensors |         |                                                                                                                         |                     |                |
|------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------|---------------------|----------------|
| Part Number                                    | Price   | Description                                                                                                             | Drawing Link        | Weight lb [g]  |
| <a href="#">OPT2108</a>                        | \$16.00 | Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111. | <a href="#">PDF</a> | 0.07<br>[31.8] |

