

- High resolution
- PNP output model with adjustable sensitivity
- Complete overload protection
- IP67 rated
- LED status indicator on PNP models
- Purchase cable separately
- Lifetime warranty



| Part Number | Price | Sensing Range | Output State | Logic | Connection | Wiring |
|------------------|----------|---------------------------------|--------------|-------|-----------------------|-----------|
| TU1-C0-0E | \$008v1: | 300 to 2500 mm [11.81-98.43 in] | N.O. | PNP | M12 [12 mm] connector | Diagram 1 |

| Part Number | Price | Sensing Range | Output | Connection | Wiring |
|------------------|----------|---------------------------------|-------------|-----------------------|-----------|
| TU1-C1-0E | \$008v2: | 300 to 2500 mm [11.81-98.43 in] | 0 to 10 VDC | M12 [12 mm] connector | Diagram 2 |

mm [inches]

| Mounting Type | <u>TU1-C0-0E</u> | <u>TU1-C1-0E</u> |
|--|--|---------------------------------|
| Nominal Sensing Distance | 300 to 2500 mm [11.81-98.43 in] | 300 to 2500 mm [11.81-98.43 in] |
| Operating Distance | NA | NA |
| Output Type | PNP / N.O. | 0 to 10 VDC |
| Operating Voltage | 19 to 30 VDC | |
| No-load Supply Current | ≤ 35 mA | |
| Operating (Load) Current | ≤ 500 mA | ≤ 5 mA |
| Off-state (Leakage) Current | ≤ 10 µA | |
| Voltage Drop | ≤2.5 volts | NA |
| Switching Frequency | 1Hz | NA |
| Differential Travel | ±2.0% | NA |
| Repeat Accuracy | 0.2% | ±2 mm |
| Linearity Error | - | ≤ 0.3% |
| Ultrasonic Frequency | 130kHz | |
| Ultrasonic Beam Angle | 8° | |
| Max. Response Time | - | 100 ms |
| Time Delay Before Availability (tv) | ≤200 ms | ≤ 1 s |
| Control Input | Hold / Sync | |
| Sensitivity Adjustment | Yes | - |
| Reverse Polarity Protection | Yes | |
| Short-Circuit Protection | Yes (switch auto-resets after overload is removed) | |
| Operating Temperature | -25 to +70°C [-13 to 158°F] | |
| Temperature Compensation | Yes | |
| Protection Degree | IEC IP67 | |
| Indication/Switch Status | Yellow (output energized) | NA |
| Housing Material | Polybutylene Terephthalate [PBT] | |
| Tightening Torque | 3 Nm [2.21 lb-ft] | |
| Weight (connector) | 124g [4.37 oz] | |
| Connection | M12 [12mm] connector | |
| Agency Approvals | CE, UL listed file E187310 | |

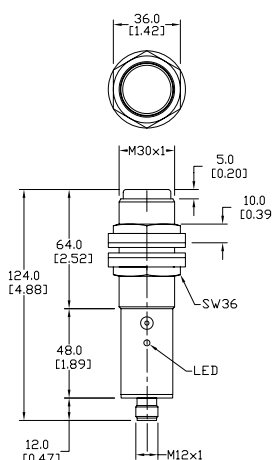


Diagram 1*

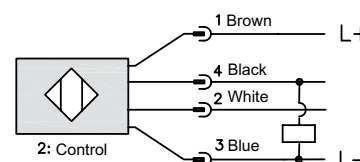
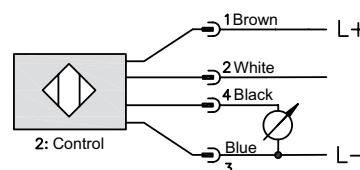


Diagram 2*



***Note: Control wire can be used to inhibit sensor or to synchronize with another sensor.**

Voltage (VDC) vs. Distance (mm)

| Distance (mm) | Voltage (VDC) |
|---------------|---------------|
| 300 | 0 |
| 2500 | 10 |

Detection Area

- Guaranteed detection of 100x100mm target (Grey area)
- Possible detection of large object (Blue area)

M12 connector



Must be used with 2M or 7M cable

Accessories for 30mm Sensors

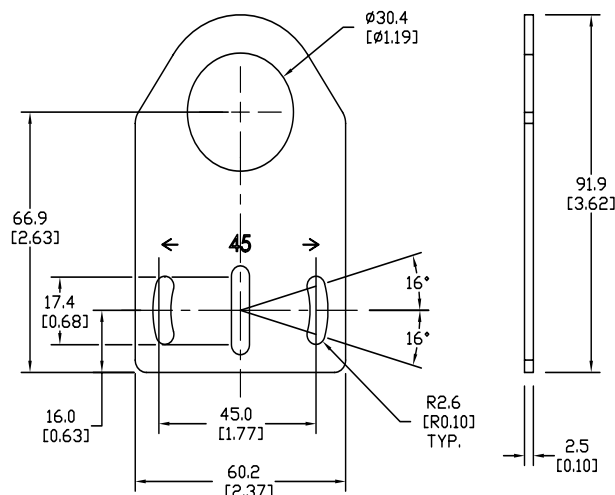
Axial Mounting Bracket

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] |
| ST30A | \$983: | Micro Detectors mounting bracket, axial, zinc plated steel. For use with 30mm sensors. | 0.18 [81.7] |

Dimensions

mm [inches]



ST30A

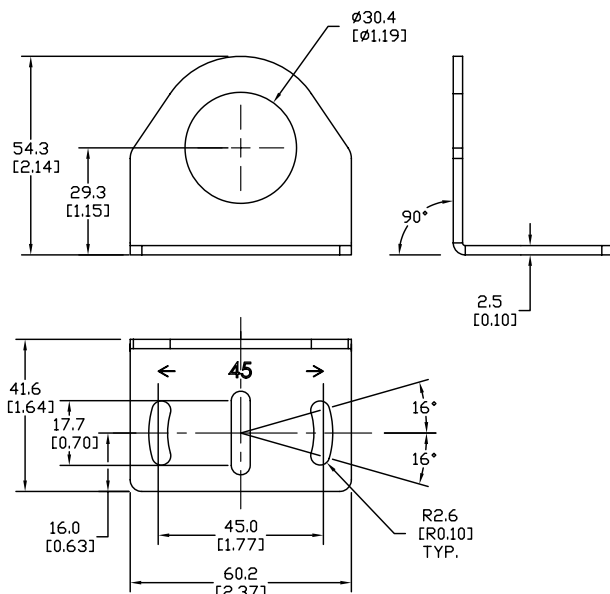
Right-angle Mounting Bracket

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] |
| ST30C | \$984: | 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

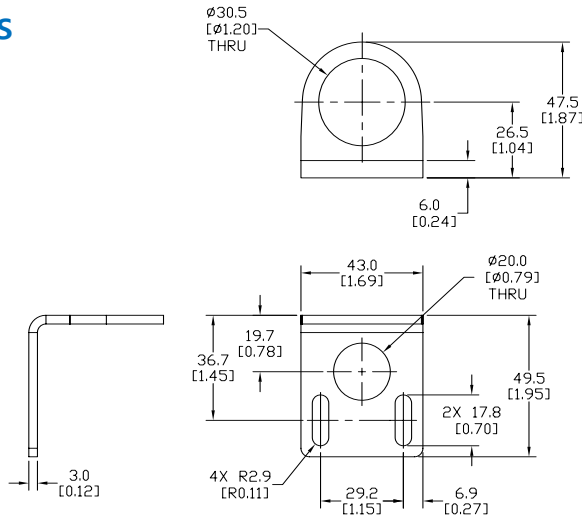
Right-angle Mounting Bracket

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

| Accessories for FW Series Sensors | | | |
|-----------------------------------|--------|---|----------------|
| Part Number | Price | Description | Weight lb [g] |
| ST30C6W | \$-51: | 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] |
| OPT2118 | \$-1nl?: | 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 | PDF | 0.18 [81.7] |
| OPT2119 | \$;-1nl,: | 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 | PDF | 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) |
| OPT2109 | \$1nn9: | Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel. | PDF | 0.41 [185.97] |
| OPT2110 | \$1nna: | Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel. | PDF | 0.60 [272.16] |
| OPT2111 | \$1nnb: | Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel. | PDF | 0.98 [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] |
| OPT2108 | \$-1nly: | Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111. | PDF | 0.07 [31.8] |

