

# DW Series Analog Inductive Proximity Sensors

## M30 (30mm) Metal – Analog Output



- Voltage or current analog output
- Metal housing
- M12 quick-disconnect model
- IP67 rated
- Purchase cable separately (for quick-disconnect model)
- Lifetime warranty



### DW Series M30 Analog Inductive Proximity Selection Chart

| Part Number                              | Price    | Sensing Range           | Mounting   | Output                 | Connection                  | Wiring    | Dimensions |
|--|----------|-------------------------|------------|------------------------|-----------------------------|-----------|------------|
| <a href="#"><u>DW-AS-509-M30-120</u></a> | \$121.00 | 0-20 mm<br>[0-0.787 in] | Semi-flush | 0-5 VDC<br>or 1-5 mA   | M12 [12mm] quick-disconnect | Diagram 1 | 1          |
| <a href="#"><u>DW-AS-509-M30-320</u></a> | \$121.00 | 0-20 mm<br>[0-0.787 in] | Semi-flush | 0-10 VDC<br>or 4-20 mA | M12 [12mm] quick-disconnect | Diagram 1 | 1          |

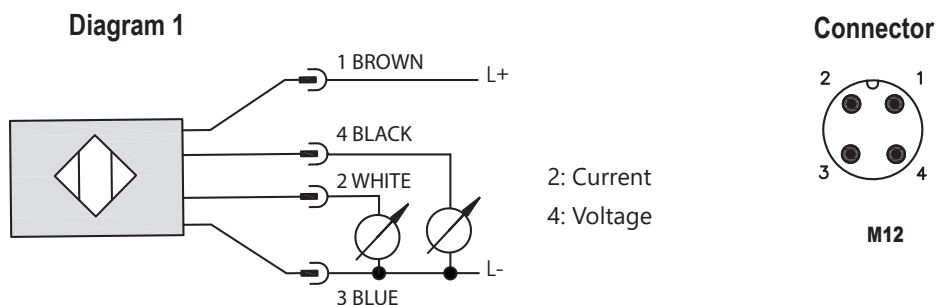
### DW Series M30 Analog Inductive Proximity Specifications

| Specification                               | <a href="#"><u>DW-AS-509-M30-120</u></a>           | <a href="#"><u>DW-AS-509-M30-320</u></a>           |
|---|--|--|
| Mounting Type                               | Semi-flush   | Semi-flush   |
| Nominal Distance                            | 0-20 mm [0-0.79 in]                                | 0-20 mm [0-0.79 in]                                |
| Operating Distance                          | NA   | NA   |
| Material Correction Factors                 | See the <a href="#">Material influence table</a>   | See the <a href="#">Material influence table</a>   |
| Output Type                                 | 0-5 VDC or 1-5 mA                                  | 0-10 VDC or 4-20 mA                                |
| Current Output Max. Load / Power Supply     | 1 kΩ / 10VDC; 5 k / 30VDC                          | 0.5 kΩ / 15VDC; 1 kΩ / 30VDC                       |
| Voltage Output Min. Load                    | 500Ω   | 1kΩ  |
| Operating Voltage                           | 10 to 30 VDC                                       | 15 to 30 VDC                                       |
| No-load Supply Current                      | ≤10mA  | ≤12mA  |
| Operating (Load) Current                    | ≤ 10mA   | ≤10mA  |
| Off-state (Leakage) Current                 | NA   | NA   |
| Voltage Drop                                | ≤ 2.0 V  | ≤ 2.0 V  |
| Switching Frequency                         | NA   | NA   |
| Differential Travel (% of Nominal Distance) | NA   | NA   |
| Repeat Accuracy                             | ± 0.05 mm  | ± 0.05 mm  |
| Ripple                                      | ≤ 20%  | ≤ 20%  |
| Response Time                               | 5ms  | 5ms  |
| Time Delay Before Availability (tv)         | ≤ 50ms   | ≤50ms  |
| Reverse Polarity Protection                 | Yes  | Yes  |
| Short-Circuit Protection                    | Yes (switch auto-resets after overload is removed) | Yes (switch auto-resets after overload is removed) |
| Operating Temperature                       | -25 to +70°C [-13 to 158°F]                        | -25 to +70°C [-13 to 158°F]                        |
| Protection Degree (DIN 40050)               | IEC IP67   | IEC IP67   |
| Indication/Switch Status                    | NA   | NA   |
| Housing Material                            | Chrome-plated brass                                | Chrome-plated brass                                |
| Sensing Face Material                       | Polybutylene Terephthalate [PBT]                   | Polybutylene Terephthalate [PBT]                   |
| Shock/Vibration                             | IEC 60947-5-2                                      | IEC 60947-5-2                                      |
| Tightening Torque                           | 60 N•m [44 lb•ft]                                  | 60 N•m (44 lb•ft)                                  |
| Weight (M12 connector)                      | 135g [4.76 oz]                                     | 135g [4.76 oz]                                     |
| Connection                                  | M12 [12mm] connector                               | M12 [12mm] connector                               |
| Agency Approvals                            | UL file E239373                                    | UL file E239373                                    |

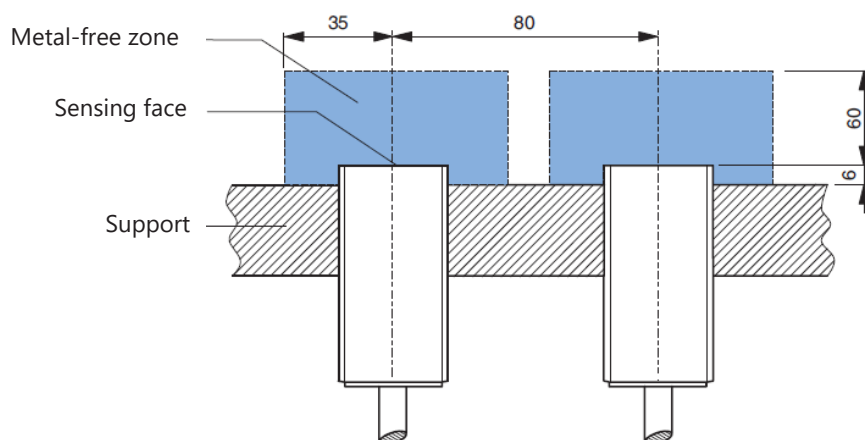
To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

# DW Series Analog Inductive Proximity Sensors

## Wiring Diagram



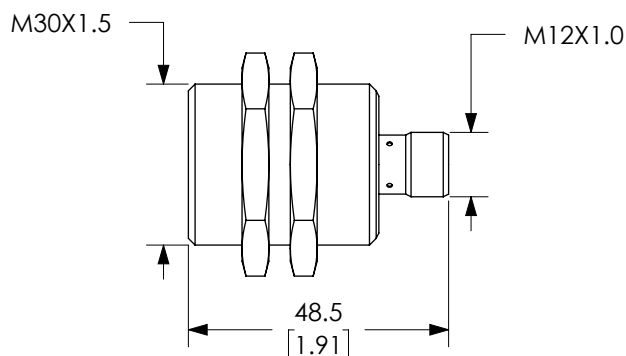
## Installation



## Dimensions

mm [inches]

Figure 1



# Accessories for 30mm Sensors

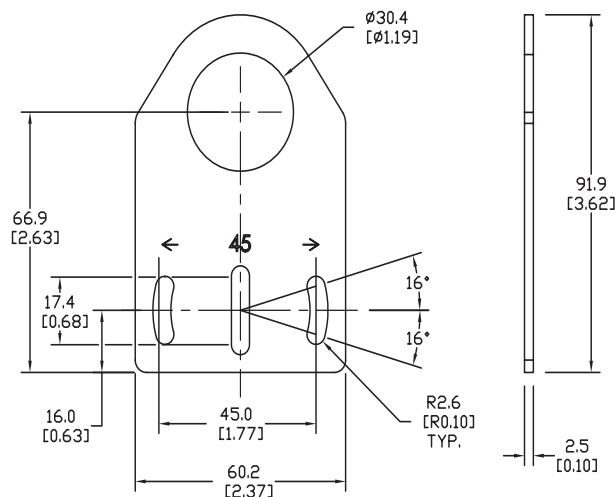
## Axial Mounting Bracket

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**

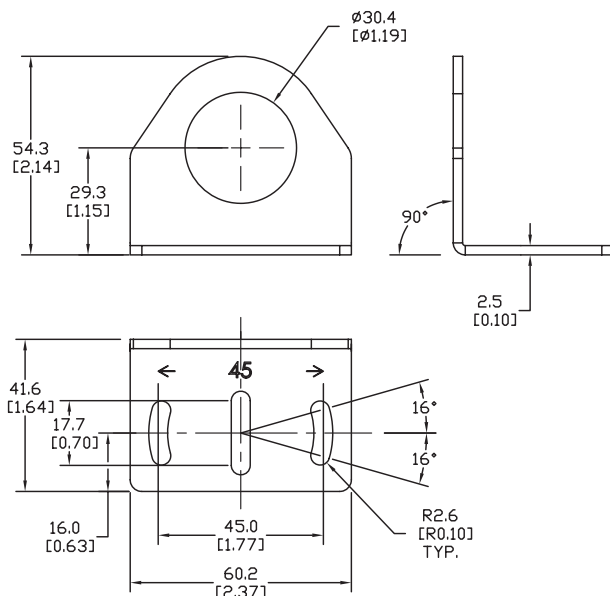
## Right-angle Mounting Bracket

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

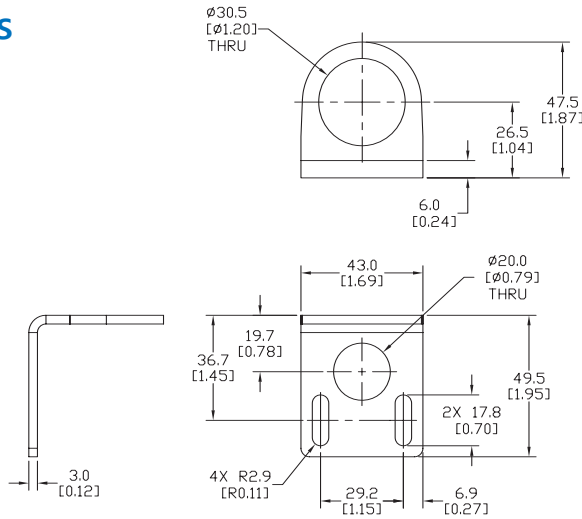
## Right-angle Mounting Bracket

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] |

