# DW Series 18mm Stainless Steel Triple Sensing Proximity Sensors

## M18 (18mm) stainless steel – DC

- Eight models available
- 18mm threaded triple distance proximity sensor
- 20mm sensing
- Complete overload protection
- IP68/IP69k rated

- Two M18 lock nuts included
- Stainless steel construction
- One-piece for harsh duty applications
- LED status indicator
- Lifetime warranty

**NEED CABLES?**

**CONTRINEX**
SENSORS   SAFETY   RFID

| DW Series 18mm Stainless Steel Triple Distance Inductive Prox Selection Chart | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Part Number** | **Price** | **Size** | **Sensing Range** | **Mounting** | **Output State** | **Logic** | **Connection** | **Wiring** | **Dimensions** |
| *Triple Distance* | | | | | | | | | |
| DW-AD-711-M18 | | M18 | 20mm (0.787 in) | Non-flush | N.O. | NPN | 2m (6.5 ft) axial cable | Diagram 1 | Figure 1 |
| DW-AD-713-M18 * | | M18 | 20mm (0.787 in) | Non-flush | N.O. | PNP | 2m (6.5 ft) axial cable | Diagram 2 | Figure 1 |
| DW-AS-711-M18-002 | | M18 | 20mm (0.787 in) | Non-flush | N.O. | NPN | M12 quick-disconnect | Diagram 3 | Figure 2 |
| DW-AS-713-M18-002 * | | M18 | 20mm (0.787 in) | Non-flush | N.O. | PNP | M12 quick-disconnect | Diagram 4 | Figure 2 |
| DW-AD-712-M18 | | M18 | 20mm (0.787 in) | Non-flush | N.C. | NPN | 2m (6.5 ft) axial cable | Diagram 1 | Figure 1 |
| DW-AD-714-M18 | | M18 | 20mm (0.787 in) | Non-flush | N.C. | PNP | 2m (6.5 ft) axial cable | Diagram 2 | Figure 1 |
| DW-AS-712-M18-002 | | M18 | 20mm (0.787 in) | Non-flush | N.C. | NPN | M12 quick-disconnect | Diagram 3 | Figure 2 |
| DW-AS-714-M18-002 | | M18 | 20mm (0.787 in) | Non-flush | N.C. | PNP | M12 quick-disconnect | Diagram 4 | Figure 2 |

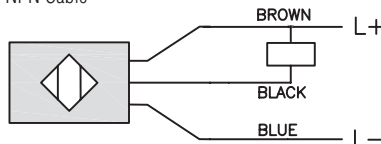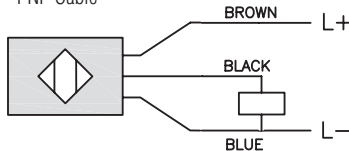*IO-Link model

## Wiring diagrams

**Diagram 1**

NPN Cable



**Diagram 2**

PNP Cable



**Connectors**

M12 connector



**Diagram 3**

NPN Connector



2 N.C. WHITE / 4 N.O. BLACK (M12)
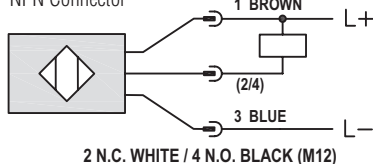
**Diagram 4**

PNP Connector



2 N.C. WHITE / 4 N.O. BLACK (M12)
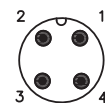
# DW Series 18mm Stainless Steel Triple Sensing Proximity Sensors

| DW Series 18mm Stainless Steel Specifications | |
|---|---|
| | *DW-Ax-71x-M18* |
| **Mounting Type** | Non-flush |
| **Nominal Sensing Distance** | 20mm |
| **Operating Distance** | – |
| **Material Correction Factors** | See the Material influence table |
| **Output Type** | NPN or PNP, N.O. or N.C. |
| **Operating Voltage** | 10 to 30 VDC |
| **No-load Supply Current** | ≤ 10mA |
| **Operating (Load) Current** | ≤ 200mA |
| **Off-state (Leakage) Current** | ≤ 0.1 mA |
| **Voltage Drop** | ≤ 2 V |
| **Switching Frequency** | ≤ 200 Hz |
| **Differential Travel** (% of Nominal Distance) | ≤ 10% |
| **Repeat Accuracy** | 0.60 mm |
| **Ripple** | ≤ 20% |
| **Time Delay Before Availability (tv)** | ≤ 15ms |
| **Reverse Polarity Protection** | Yes |
| **Short-Circuit Protection** | Yes |
| **Operating Temperature** | -25 to 85°C (-13 to 185°F) |
| **Protection Degree (DIN 40050)** | IP68, IP69K |
| **Indication/Switch Status** | Yellow LED |
| **Housing Material** | Stainless steel |
| **Sensing Face Material** | Stainless steel |
| **Shock/Vibration** | IEC 60947-5-2/7.4 |
| **Tightening Torque** | – |
| **Weight** | 112g (3.95 oz), 51g (1.80 oz) |
| **Connection** | 2m cable, M12 connection |
| **IO-Link** | PNP/N.O. version only |
| **Agency Approvals** | CE, cULus E239373 |

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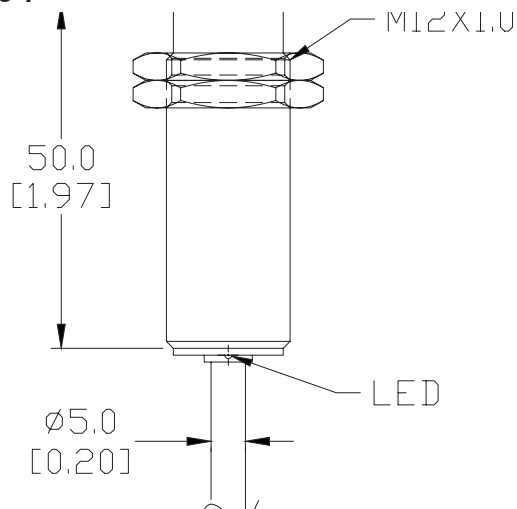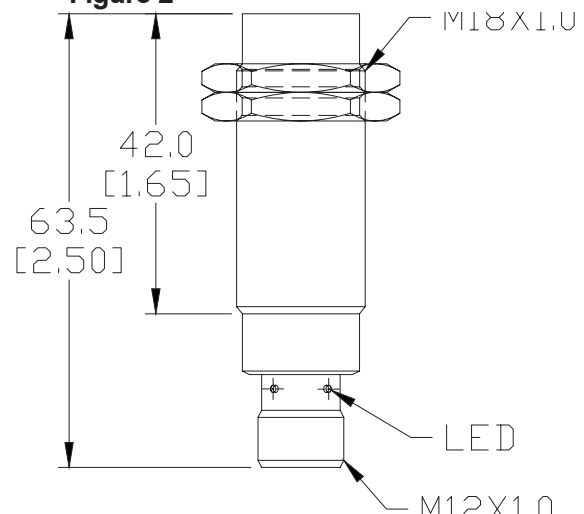
## Dimensions

mm [inches]

**Figure 1**

M12X1.0

50.0
[1.97]

LED

Ø5.0
[0.20]

**Figure 2**

M18X1.0

42.0
[1.65]

63.5
[2.50]

LED

M12X1.0

*See our website for complete engineering drawings.*
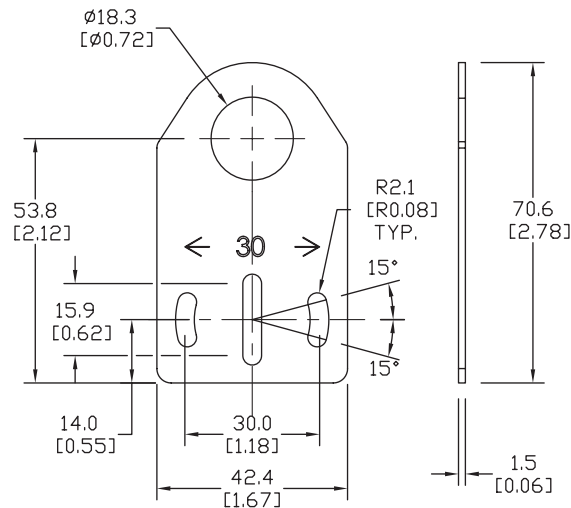
# Accessories for 18mm Sensors

## Axial Mounting Bracket

Axial mounting bracket available in zinc plated steel or 316L stainless steel. Has two mounting holes (use 4mm screws) and allows for rotation of an optical axis for right-beam-angle-adapter sensors. Hexagonal nuts not included. For use with 18mm sensors.

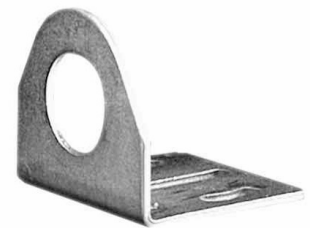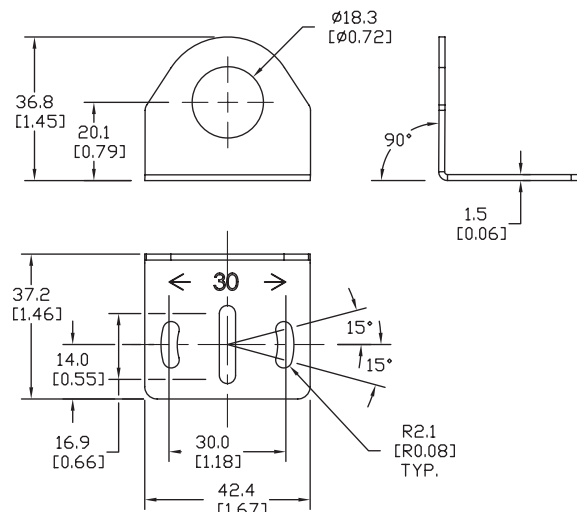| Accessories for 18mm Sensors | | | |
|---|---|---|---|
| Part Number | Price | Description | Weight lb (g) |
| ST18A | | Mounting bracket, axial, zinc plated steel. For use with 18mm sensors. | 0.06 (27.2) |
| ST18A7W | | Mounting bracket, axial, 316L stainless steel. For use with 18mm sensors. | 0.06 (27.2) |

**ST18A**

## Dimensions

mm [inches]

## Right-angle Mounting Bracket

Right-angle mounting bracket for use with 18mm sensors. Has two mounting holes (use 4mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

| Accessories for 18mm Sensors | | | |
|---|---|---|---|
| Part Number | Price | Description | Weight lb (g) |
| ST18C | | Mounting bracket, right-angle, zinc plated steel. For use with 18mm sensors. | 0.06 (27.2) |
| ST18C7W | | Mounting bracket, right-angle, 316L stainless steel. For use with 18mm sensors. | 0.06 (27.2) |

**ST18C**

## Dimensions

mm [inches]

# Accessories for 18mm Sensors

## Right-angle Mounting Brackets

Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors. Available with or without fixed insertion stop.

| Accessories for 18mm Sensors | | | | |
|---|---|---|---|---|
| Part Number | Price | Description | Drawing Link | Weight lb (g) |
| OPT2104 | | Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors. | PDF | 0.06 (27.2) |
| OPT2105 | | Wenglor mounting bracket, right-angle, plastic. For use with 18mm sensors. | PDF | 0.06 (27.2) |

**OPT2104, OPT2105**

## Right-angle Swivel Mounting Systems

Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 18mm sensors. Available in all 304 stainless steel or with an aluminum head and a stainless steel mounting plate.

| Accessories for 18mm Sensors | | | | | | |
|---|---|---|---|---|---|---|
| Part Number | Price | Description | Mounting Head | Mounting Plate | Drawing Link | Weight lb (g) |
| OPT2116 | | Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 18mm sensors. | Aluminum | 304 Stainless steel | PDF | 0.15 (68.0) |
| OPT2117 | | Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 18mm sensors. | 304 Stainless steel | 304 Stainless steel | PDF | 0.28 (127.0) |

**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).**

**OPT2116, OPT2117**

# 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 | | Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel. | PDF | 0.41 (185.97) |
| OPT2110 | | Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel. | PDF | 0.60 (272.16) |
| OPT2111 | | 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 | | Wenglor mounting bracket, right-angle, nickel plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111. | PDF | 0.07 (31.8) |