



# PxW2 Series Metal Face Inductive Proximity Sensors

## 316L Stainless Steel – DC



- 8mm, 12mm, 18mm, 30mm
- Complete overload protection
- IP65, IP66, IP67, IP68, IP69K rated
- Lock nuts included
- 316L Stainless Steel body
- Metal sensing face provides durable protection
- LED Status indicator
- Lifetime warranty



### Metal Face Inductive Proximity Sensors PxW2 Series Selection Chart

| Part Number                | Price   | Sensing Range    | Real Sensing Range (Sr) | Mounting   | Switching Frequency | Output State | Logic | Connection                 | Wiring    | Operating Temperature (UL)    | Weight g [oz]   | Drawing Link        |
|----------------------------|---------|------------------|-------------------------|------------|---------------------|--------------|-------|----------------------------|-----------|-------------------------------|-----------------|---------------------|
| M8 Proximity Sensors       |         |                  |                         |            |                     |              |       |                            |           |                               |                 |                     |
| <a href="#">PEW2-AP-3F</a> | \$33.50 | 3mm<br>[0.12in]  | 3 ± 10%                 | Semi-flush | 250 Hz              | N.O.         | PNP   | 3-pin M8 quick-disconnect  | Diagram 1 | -25 to 85°C<br>[-13 to 185°F] | 15.8<br>[0.56]  | <a href="#">PDF</a> |
| <a href="#">PEW2-AN-3F</a> | \$32.00 |                  |                         | Semi-flush |                     | N.O.         | NPN   |                            | Diagram 2 |                               |                 | <a href="#">PDF</a> |
| <a href="#">PEW2-AP-4F</a> | \$33.50 | 5mm<br>[0.20in]  | 5 ± 10%                 | Non-flush  | 500 Hz              | N.O.         | PNP   |                            | Diagram 1 |                               | 15.3<br>[0.54]  | <a href="#">PDF</a> |
| <a href="#">PEW2-AN-4F</a> | \$32.00 |                  |                         | Non-flush  |                     | N.O.         | NPN   |                            | Diagram 2 |                               |                 | <a href="#">PDF</a> |
| M12 Proximity Sensors      |         |                  |                         |            |                     |              |       |                            |           |                               |                 |                     |
| <a href="#">PMW2-AP-3H</a> | \$34.00 | 4mm<br>[0.16in]  | 4 ± 10%                 | Flush      | 100 Hz              | N.O.         | PNP   | 4-pin M12 quick-disconnect | Diagram 1 | -25 to 70°C<br>[-13 to 158°F] | 25.8<br>[0.91]  | <a href="#">PDF</a> |
| <a href="#">PMW2-AP-4H</a> | \$34.00 | 6mm<br>[0.24in]  | 6 ± 10%                 | Non-flush  | 250 Hz              | N.O.         | PNP   |                            | Diagram 1 | 0 to 70°C<br>[32 to 158°F]    | 23.9<br>[0.84]  | <a href="#">PDF</a> |
| M18 Proximity Sensors      |         |                  |                         |            |                     |              |       |                            |           |                               |                 |                     |
| <a href="#">PKW2-AP-3H</a> | \$36.00 | 8mm<br>[0.31in]  | 8 ± 10%                 | Flush      | 100 Hz              | N.O.         | PNP   | 4-pin M12 quick-disconnect | Diagram 1 | -25 to 70°C<br>[-13 to 158°F] | 44<br>[1.55]    | <a href="#">PDF</a> |
| <a href="#">PKW2-AP-4H</a> | \$36.00 | 12mm<br>[0.47in] | 12 ± 10%                | Non-flush  | 250 Hz              | N.O.         | PNP   |                            | Diagram 1 | 0 to 70°C<br>[32 to 158°F]    | 38.6<br>[1.36]  | <a href="#">PDF</a> |
| M30 Proximity Sensors      |         |                  |                         |            |                     |              |       |                            |           |                               |                 |                     |
| <a href="#">PTW2-AP-3H</a> | \$44.50 | 15mm<br>[0.59in] | 15 ± 10%                | Flush      | 50 Hz               | N.O.         | PNP   | 4-pin M12 quick-disconnect | Diagram 1 | -25 to 70°C<br>[-13 to 158°F] | 115<br>[4.05]   | <a href="#">PDF</a> |
| <a href="#">PTW2-AP-4H</a> | \$44.50 | 25mm<br>[0.98in] | 25 ± 10%                | Non-flush  | 100 Hz              | N.O.         | PNP   |                            | Diagram 1 | 0 to 70°C<br>[32 to 158°F]    | 106.8<br>[3.77] | <a href="#">PDF</a> |

## Wiring Diagrams

**Diagram 1**  
PNP Output

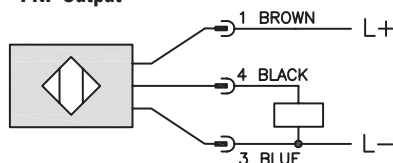
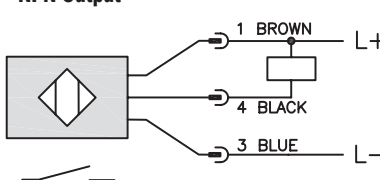
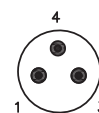


**Diagram 2**  
NPN Output

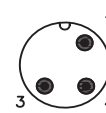


### Connectors

**M8 connector**



**M12 connector**

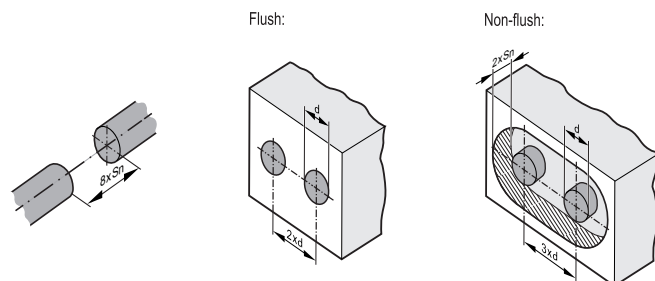


**Warning:** These products are not safety sensors and are not suitable for use in personal safety applications.

# PxW2 Series Metal Face Inductive Proximity Specifications

| Metal Face Inductive Proximity Sensors PxW2 Series Specifications |                                                  |                            |        |        |
|-------------------------------------------------------------------|--------------------------------------------------|----------------------------|--------|--------|
| Sensor                                                            | PEW2                                             | PMW2                       | PKW2   | PTW2   |
| Output Type                                                       | PNP or NPN, N.O.                                 |                            |        |        |
| Operating Voltage                                                 | 10-30 VDC                                        |                            |        |        |
| No-load Supply Current                                            | ≤ 20 mA                                          |                            |        |        |
| Operating (Load) Current                                          | ≤100 mA                                          |                            |        |        |
| Off-state (Leakage) Current                                       | ≤ 0.1 mA                                         |                            |        |        |
| Voltage Drop                                                      | 2.5V                                             |                            |        |        |
| Hysteresis (% of Sr)                                              | 3 to 15                                          |                            |        |        |
| Switch-point Drift (% of Sr)                                      | -10 to 10                                        |                            |        |        |
| Pressure Rating (bar)                                             | 50 [725.19 psi]                                  | 100 [1450 psi]             |        |        |
| Protection Class                                                  | III                                              |                            |        |        |
| Reverse Polarity Protection                                       | Yes                                              |                            |        |        |
| Short-Circuit Protection                                          | Yes                                              |                            |        |        |
| Protection Degree (DIN 40050)                                     | IP65, IP66, IP67, IP68, IP69K (With IP69K Cable) |                            |        |        |
| Indication/Switch Status                                          | Yellow LED, switching status, 4 x 90°            |                            |        |        |
| Housing Material                                                  | 316L stainless steel                             |                            |        |        |
| Sensing Face Material                                             | 316L stainless steel                             |                            |        |        |
| Material Correction Factors                                       | <a href="#">See Material Influence Table</a>     |                            |        |        |
| Shock/Vibration                                                   | Shock EN 60068-2-27, Vibration EN 60068-2-6      |                            |        |        |
| Tightening Torque                                                 | 5 N•m                                            | 15 N•m                     | 50 N•m | 80 N•m |
| Connection                                                        | 3-pin M8 quick-disconnect                        | 4-pin M12 quick-disconnect |        |        |
| IO-Link                                                           | NA                                               |                            |        |        |
| Agency Approvals                                                  | CE, cULus E328811                                |                            |        |        |

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



Minimum clearance for installing units of the same type (side-by-side installation). Applies to cylindrical and rectangular sensors. The minimum distance between units may only be disregarded for units with different oscillator frequencies or different sensing principles.

**Warning:** These products are not safety sensors and are not suitable for use in personal safety applications.

# 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-adaptor sensors. Hexagonal nuts not included. For use with 18mm sensors.

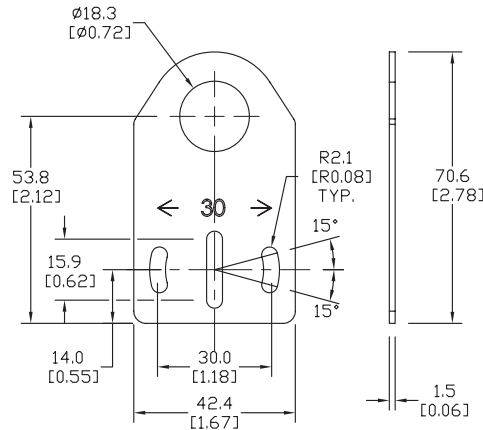
| Accessories for 18mm Sensors   |        |                                                                                           |                  |
|--------------------------------|--------|-------------------------------------------------------------------------------------------|------------------|
| Part Number                    | Price  | Description                                                                               | Weight<br>lb [g] |
| <a href="#"><u>ST18A</u></a>   | \$2.00 | Micro Detectors mounting bracket, axial, zinc plated steel. For use with 18mm sensors.    | 0.06 [27.2]      |
| <a href="#"><u>ST18A7W</u></a> | \$7.25 | Micro Detectors mounting bracket, axial, 316L stainless steel. For use with 18mm sensors. | 0.06 [27.2]      |



**ST18A**

## Dimensions

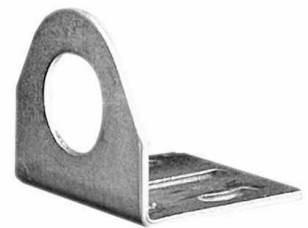
mm [inches]



## 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.

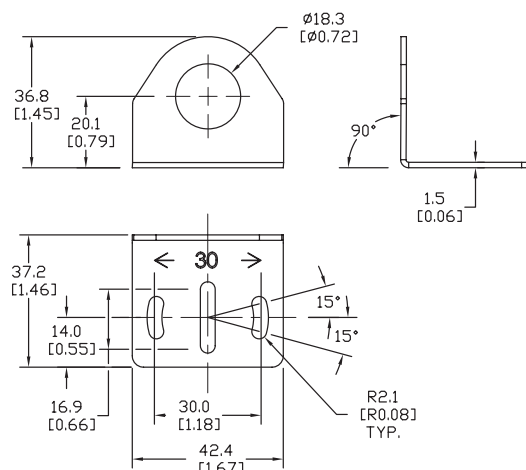
| Accessories for 18mm Sensors   |        |                                                                                                 |                  |
|--------------------------------|--------|-------------------------------------------------------------------------------------------------|------------------|
| Part Number                    | Price  | Description                                                                                     | Weight<br>lb [g] |
| <a href="#"><u>ST18C</u></a>   | \$2.00 | Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 18mm sensors.    | 0.06 [27.2]      |
| <a href="#"><u>ST18C7W</u></a> | \$7.25 | Micro Detectors mounting bracket, right-angle, 316L stainless steel. For use with 18mm sensors. | 0.06 [27.2]      |



**ST18C**

## Dimensions

mm [inches]

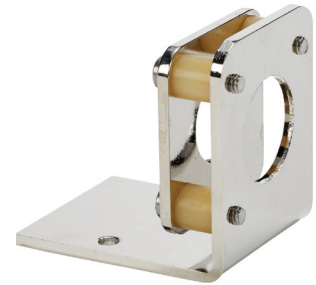


# Accessories for 18mm Sensors

## Right-angle Fine Tune Mounting Bracket

Mounting bracket, right-angle, fine tune vertical and horizontal adjustment, nickel-plated steel. For use with 18mm sensors. Allows for fine tuning vertical and horizontal placement.

| Accessories for 18mm Sensors   |         |                                                                                                                                      |                            |             |
|--------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------|
| Part Number                    | Price   | Description                                                                                                                          | Drawing Link               | Weight [lb] |
| <a href="#"><u>OPT2036</u></a> | \$38.50 | Wenglor mounting bracket, right-angle, fine tune vertical and horizontal adjustment, nickel plated steel. For use with 18mm sensors. | <a href="#"><u>PDF</u></a> | 0.02        |

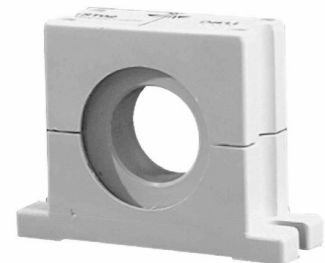


[OPT2036](#)

## Swivel Mounting Bracket

Mounting bracket, ball swivel, plastic. For use with 18mm sensors. Has a ball-joint and set screws to adjust sensor orientation. Allows angular orientation up to 15 degrees (from center) in all directions for photoelectric sensors (Will not work with C18 series).

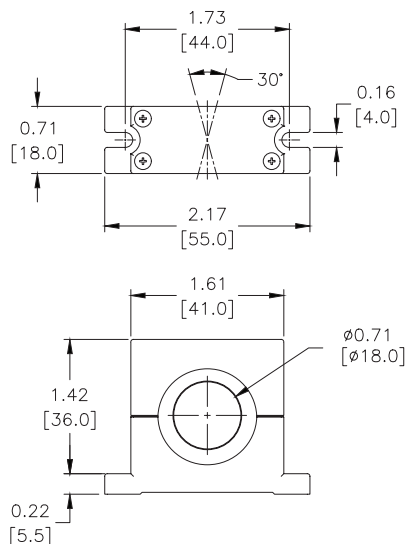
| Accessories for 18mm Sensors |        |                                                                                    |             |
|------------------------------|--------|------------------------------------------------------------------------------------|-------------|
| Part Number                  | Price  | Description                                                                        | Weight [lb] |
| <a href="#"><u>ST02</u></a>  | \$9.50 | Micro Detectors mounting bracket, ball swivel, plastic. For use with 18mm sensors. | 0.06        |



[ST02](#)

## 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] |
| <a href="#">OPT2104</a>      | \$10.50 | Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors. | <a href="#">PDF</a> | 0.06 [27.2]   |
| <a href="#">OPT2105</a>      | \$10.50 | Wenglor mounting bracket, right-angle, plastic. For use with 18mm sensors.                                  | <a href="#">PDF</a> | 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] |
| <a href="#">OPT2116</a>      | \$11.50 | 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 | <a href="#">PDF</a> | 0.15 [68.0]   |
| <a href="#">OPT2117</a>      | \$21.00 | 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 | <a href="#">PDF</a> | 0.28 [127.0]  |



[OPT2116](#), [OPT2117](#)

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).