



# DW Series High Pressure Proximity Sensors



## M3, M8 and M12 – DC

- High pressure resistant up to 500 bar
- IP68 rated
- Stainless steel construction with ceramic sensing face
- 10-30 VDC
- LED status indicator
- Lifetime warranty
- IO-Link v1.1 PNP models



**DW-AD-621-03E-961**

**DW-AS-503-P12-624**



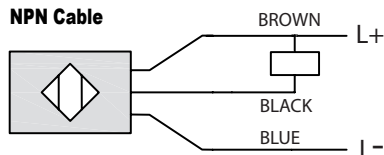
| DW Series High Pressure Proximity Sensors  |          |      |                     |          |              |       |                                    |           |                     |
|--------------------------------------------|----------|------|---------------------|----------|--------------|-------|------------------------------------|-----------|---------------------|
| Part Number                                | Price    | Size | Sensing Distance    | Mounting | Output State | Logic | Connection                         | Wiring    | Drawing Link        |
| <a href="#"><b>DW-AD-621-03E-961</b></a>   | \$163.00 | M3   | 0.8 mm<br>[0.03 in] | Flush    | N.O.         | NPN   | 3-wire, pigtail, 6.5 ft [2m]       | Diagram 1 | <a href="#">PDF</a> |
| <a href="#"><b>DW-AD-623-03E-961</b></a>   | \$163.00 |      |                     | Flush    | N.O.         | PNP   | 3-wire, pigtail, 6.5 ft [2m]       | Diagram 2 | <a href="#">PDF</a> |
| <a href="#"><b>DW-AD-503-P8</b></a>        | \$163.00 | M8   | 1.5 mm<br>[0.05 in] | Flush    | N.O.         | PNP   | 3-wire, pigtail, 6.5 ft [2m]       | Diagram 2 | <a href="#">PDF</a> |
| <a href="#"><b>DW-AS-503-P12-630</b></a> * | \$175.00 | M12  |                     | Flush    | N.O.         | PNP   | 3-wire, 4-pin M12 quick-disconnect | Diagram 3 | <a href="#">PDF</a> |
| <a href="#"><b>DW-AS-503-P12-624</b></a> * | \$175.00 |      |                     | Flush    | N.O.         | PNP   | 3-wire, 4-pin M12 quick-disconnect | Diagram 3 | <a href="#">PDF</a> |
| <a href="#"><b>DW-LS-703-P12G</b></a>      | \$225.00 |      |                     | Flush    | N.O.         | PNP   | 3-wire, 4-pin M12 quick-disconnect | Diagram 3 | <a href="#">PDF</a> |

\* Mounting hardware included.

## Wiring Diagrams

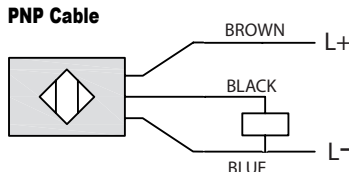
**Diagram 1**

**NPN Cable**



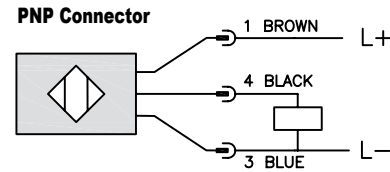
**Diagram 2**

**PNP Cable**



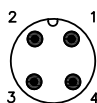
**Diagram 3**

**PNP Connector**



**Connector**

**M12 connector**





# DW Series High Pressure Proximity Sensors Specifications

| DW Series High Pressure Proximity Sensors Specifications |                                                  |                                               |                                       |                                          |
|----------------------------------------------------------|--------------------------------------------------|-----------------------------------------------|---------------------------------------|------------------------------------------|
| Sensor                                                   | DW-AD-62x-03E-961                                | DW-AD-503-P8                                  | DW-Ax-50x-P12                         | DW-LS-703-P12G                           |
| Assured Operating Distance                               | 0.65 mm [0.02 in]                                | 1.22 mm [0.04 in]                             |                                       |                                          |
| Rated Operating Distance                                 | 0.8 mm [0.03 in]                                 | 1.5 mm [0.05 in]                              |                                       |                                          |
| Material Correction Factors                              | See the <a href="#">Material influence table</a> |                                               |                                       |                                          |
| Output Type                                              | NPN or PNP, N.O.                                 | PNP, N.O.                                     |                                       |                                          |
| Operating Voltage                                        | 10 to 30 VDC                                     |                                               |                                       |                                          |
| No-load Supply Current                                   | ≤ 10mA                                           |                                               |                                       |                                          |
| Operating (Load) Current                                 | 100mA                                            | ≤ 200mA                                       |                                       |                                          |
| Off-state (Leakage) Current                              | ≤ 0.1 mA                                         |                                               |                                       |                                          |
| Voltage Drop                                             | ≤ 2.0 VDC @100mA                                 | ≤ 2.0 VDC                                     |                                       |                                          |
| Switching Frequency                                      | ≤ 8,000Hz                                        | 800Hz                                         | 600Hz                                 | 850Hz                                    |
| Differential Travel<br>(% of Nominal Distance)           | ≤ 10% s <sub>r</sub>                             | 3% S <sub>r</sub> ≤ Hyst ≤ 15% S <sub>r</sub> |                                       |                                          |
| Repeat Accuracy                                          | 0.2 mm                                           | ≤ 0.075 mm                                    | ≤ 0.1 mm                              | ≤ 0.06 mm                                |
| Ripple                                                   | ≤ 20%                                            |                                               |                                       |                                          |
| Operating Pressure / Peak Pressure                       | ≤ 200 bar                                        | ≤ 500 bar / ≤ 1000 bar                        |                                       | ≤ 500 bar / ≤ 800 bar                    |
| Reverse Polarity Protection                              | Yes                                              |                                               |                                       |                                          |
| Short-Circuit Protection                                 | Yes                                              |                                               |                                       |                                          |
| Operating Temperature                                    | -25 to 70°C [-13 to 158°F]                       | -25 to 100°C [-13 to 212°F]                   |                                       | -25 to 85°C [-13 to 185°F]               |
| Protection Degree (DIN 40050)                            | IP68, IP69K                                      | IP68                                          |                                       | IP68, IP69K                              |
| Indication/Switch Status                                 | Yellow LED                                       |                                               |                                       |                                          |
| Housing Material                                         | Stainless steel V2A                              | Stainless steel V4A                           | Stainless-steel DIN 1.4305 / AISI 303 | Stainless steel V4A / 1.4435 / AISI 316L |
| Sensing Face Material                                    | Ceramic                                          | ZrO <sub>2</sub> [Zirconium dioxide]          | ZrO <sub>2</sub> [Zirconium dioxide]  | Stainless steel V4A / 1.4435 / AISI 316L |
| Shock/Vibration                                          | IEC 60947-5-2 / 7.4                              |                                               |                                       |                                          |
| Tightening Torque                                        | N/A                                              | 12 N•m                                        | 40 N•m                                | 50 N•m max                               |
| Weight                                                   | 18g [0.63 oz]                                    | 40g [1.41 oz]                                 | 27g [0.95 oz]                         | 137g [4.83 oz]                           |
| Connection                                               | PUR, 3-wire, pigtail, 6.5 ft [2m]                |                                               | 3-wire, 4-pin M12 quick-disconnect    |                                          |
| IO-Link                                                  | v1.1 PNP models                                  |                                               |                                       |                                          |
| Agency Approvals                                         | CE, cULus E239373                                |                                               |                                       |                                          |

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

# Accessories for 3mm Sensors

## Right-angle Mounting Bracket

Mounting bracket, right-angle, 316L stainless steel. Package of 2.  
For use with 3mm sensors.

| Accessories for 3mm Sensors |         |                                                                                                         |                     |             |
|-----------------------------|---------|---------------------------------------------------------------------------------------------------------|---------------------|-------------|
| Part Number                 | Price   | Description                                                                                             | Drawing Link        | Weight [lb] |
| <a href="#">OPT2037</a>     | \$25.50 | Wenglor mounting bracket, right-angle, 316L stainless steel. Package of 2.<br>For use with 3mm sensors. | <a href="#">PDF</a> | 0.02        |



[OPT2037](#)