

PD Series Inductive Proximity Sensors



Miniature M5 (5mm) Stainless Steel – DC

- Stainless steel construction
- Axial cable or M8 quick-disconnect models
- Complete overload protection
- IP67 rated
- Smallest self-contained inductive proximity sensor available on the U.S. market
- LED status indicator
- Lifetime warranty



Dimensions

mm [inches]

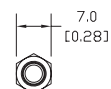


Figure 1

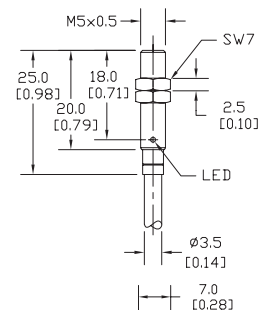
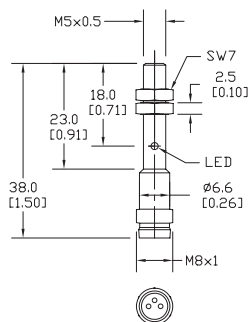
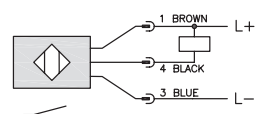


Figure 2

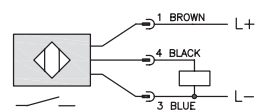


Wiring Diagrams

NPN Output

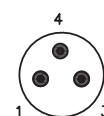


PNP Output



Connector

M8 connector



| PD Series M5 DC Inductive Proximity Selection Chart | | | | | | | |
|---|---------|-----------------------|----------|--------------|-------|-------------------------|------------|
| Part Number | Price | Sensing Range mm [in] | Mounting | Output State | Logic | Connection | Dimensions |
| Standard Distance | | | | | | | |
| PD1-AN-1A | \$54.00 | 0.8 [0.03] | Flush | N.O. | NPN | 2m [6.5 ft] axial cable | Figure 1 |
| PD1-AP-1A | \$54.00 | 0.8 [0.03] | Flush | N.O. | PNP | 2m [6.5 ft] axial cable | Figure 1 |
| PD1-AN-1F | \$54.00 | 0.8 [0.03] | Flush | N.O. | NPN | M8 [8mm] connector | Figure 2 |
| PD1-AP-1F | \$54.00 | 0.8 [0.03] | Flush | N.O. | PNP | M8 [8mm] connector | Figure 2 |
| Extended Distance | | | | | | | |
| PD1-AN-3A | \$64.00 | 1.5 [0.06] | Flush | N.O. | NPN | 2m [6.5 ft] axial cable | Figure 1 |
| PD1-AP-3A | \$64.00 | 1.5 [0.06] | Flush | N.O. | PNP | 2m [6.5 ft] axial cable | Figure 1 |
| PD1-AN-3F | \$64.00 | 1.5 [0.06] | Flush | N.O. | NPN | M8 [8mm] connector | Figure 2 |
| PD1-AP-3F | \$64.00 | 1.5 [0.06] | Flush | N.O. | PNP | M8 [8mm] connector | Figure 2 |

| PD Series Specifications | | |
|---|--|----------------------------|
| Mounting Type | Standard Distance | Extended Distance |
| | Flush | |
| Nominal Sensing Distance | 0.8 mm [0.03 in] | 1.5 mm [0.06 in] |
| Operating Distance | NA | |
| Material Correction Factors | See the Material influence table | |
| Output Type | NPN or PNP/N.O. only/3-wire | |
| Operating Voltage | 10 to 30 VDC | |
| No-load Supply Current | ≤10mA | |
| Operating (Load) Current | ≤200mA | |
| Off-state (Leakage) Current | ≤ 10μA | ≤ 0.1mA |
| Voltage Drop | ≤ 2.0 V | |
| Switching Frequency | 5kHz | 3kHz |
| Differential Travel (% of Nominal Distance) | ≤ 10% | |
| Repeat Accuracy | ≤ 1.5% | |
| Ripple | ≤ 20% | |
| Time Delay Before Availability (tv) | 10ms | |
| 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] | |
| Protection Degree (DIN 40050) | IEC IP67 | |
| Indication/Switch Status | Yellow (output energized) | |
| Housing Material | Stainless steel | |
| Sensing Face Material | Polybutylene Terephthalate [PBT] | Polyester |
| Shock/Vibration | See Proximity Sensor Terminology | |
| Tightening Torque | 1.5 Nm (13.3 lb./in.) | |
| Weight | 43g [1.52 oz]/10g [0.36 oz] | 34g [1.20 oz]/4g [0.14 oz] |
| Connection | 2 meter [6.5 ft] PVC axial cable / M8 connector | |
| Agency Approvals | UL file E328811 | |

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

Accessories for 5mm Sensors

Right-angle Mounting Bracket

Mounting bracket, right-angle, plastic. For use with 5mm sensors.

| Accessories for 5mm Sensors | | | | |
|-----------------------------|--------|--|---------------------|-------------|
| Part Number | Price | Description | Drawing Link | Weight [lb] |
| OPT2100 | \$8.00 | Wenglor mounting bracket, right-angle, plastic. For use with 5mm sensors. | PDF | 0.02 |



[OPT2100](#)