# PD Series Inductive Proximity Sensors

Miniature M5 (5 mm) stainless steel – DC
- Eight models available
- 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

## PD Series M5 DC Inductive Prox Selection Chart

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Price</th>
<th>Sensing Range</th>
<th>Housing</th>
<th>Output State</th>
<th>Logic</th>
<th>Connection</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD1-AN-1A</td>
<td>$42.50</td>
<td>0.8 mm (0.03 in)</td>
<td>Shielded</td>
<td>NO</td>
<td>NPN</td>
<td>2 m (6.5') axial cable</td>
<td>Figure 1</td>
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<td>PD1-AP-1A</td>
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<td>0.8 mm (0.03 in)</td>
<td>Shielded</td>
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<td>PNP</td>
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<tr>
<td>PD1-AN-1F</td>
<td>$42.50</td>
<td>1.5 mm (0.06 in)</td>
<td>Shielded</td>
<td>N.O</td>
<td>NPN</td>
<td>M8 (8 mm) connector</td>
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## PD Series Specifications

<table>
<thead>
<tr>
<th>Mounting Type</th>
<th>Standard Distance</th>
<th>Extended Distance</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Shielded</td>
<td>Shielded</td>
</tr>
</tbody>
</table>

### Nominal Sensing Distance
- Standard Distance: 0.8 mm (0.03 in)
- Extended Distance: 1.5 mm (0.06 in)

### Operating Distance
- NA

### Material Correction Factors
- See Material influence table

### Output Type
- NPN or PNP/NO only/3-wire

### Operating Voltage
- 10 to 30 VDC

### No-load Supply Current
- ≤10mA

### Operating (Load) Current
- ≤200mA

### Off-state (Leakage) Current
- ≤10μA

### Voltage Drop
- ≤2.0 V

### Switching Frequency
- 5 kHz

### Differential Travel (% of Nominal Distance)
- ≤10%

### Repeat Accuracy
- ≤1.5%

### Ripple
- ≤20%

### Time Delay Before Availability (tv)
- 10 ms

### 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
- 43 g (1.52 oz)/10 g (0.36 oz)
- 34 g (1.20 oz)/4 g (0.14 oz)

### Connection
- 2 meter PVC axial cable / M8 connector

### Agency Approvals
- UL file E28811

## Dimensions

### Figure 1

<table>
<thead>
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<th>Dimensions</th>
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<td>0.8 mm</td>
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### Figure 2

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## Wiring diagrams

### NPN Output

### PNP Output

### Connector
- M8 connector
Accessories for 5mm Sensors

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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Price</th>
<th>Description</th>
<th>Weight (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPT2100</td>
<td>$6.25</td>
<td>Mounting bracket, right-angle, plastic. For use with 5mm sensors.</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Dimensions

<table>
<thead>
<tr>
<th>mm</th>
<th>inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.2</td>
<td>0.28</td>
</tr>
<tr>
<td>6.1</td>
<td>0.24</td>
</tr>
<tr>
<td>5.0</td>
<td>0.20</td>
</tr>
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</table>

See our website: www.AutomationDirect.com for complete engineering drawings