

# prosense® P8 Series Inductive Rectangular Proximity Sensors



## 8 x 16 mm rectangular – DC

- Compact 8 x 16 x 4 mm plastic housing
- Axial cable or M8 quick-disconnect models; purchase cable separately
- Complete overload protection
- IP67 rated
- Lifetime warranty



### ProSense P8 Series Rectangular DC Inductive Proximity Selection Chart

| Part Number              | Price   | Sensing Range    | Mounting  | Output State | Logic | Connection                | Wiring    | Drawing Link        |
|--------------------------|---------|------------------|-----------|--------------|-------|---------------------------|-----------|---------------------|
| <a href="#">P8-AP-1F</a> | \$78.00 | 1.5 mm [0.06 in] | Flush     | N.O.         | PNP   | M8x1, 3-pin               | Diagram 1 | <a href="#">PDF</a> |
| <a href="#">P8-CP-1F</a> | \$78.00 | 1.5 mm [0.06 in] | Flush     | N.C.         | PNP   | M8x1, 3-pin               | Diagram 1 | <a href="#">PDF</a> |
| <a href="#">P8-AN-1F</a> | \$78.00 | 1.5 mm [0.06 in] | Flush     | N.O.         | NPN   | M8x1, 3-pin               | Diagram 2 | <a href="#">PDF</a> |
| <a href="#">P8-CN-1A</a> | \$78.00 | 1.5 mm [0.06 in] | Flush     | N.C.         | NPN   | 3-wire cable, 2m [6.5ft]  | Diagram 2 | <a href="#">PDF</a> |
| <a href="#">P8-AP-2F</a> | \$78.00 | 2.5 mm [0.10 in] | Non-flush | N.O.         | PNP   | M8x1, 3-pin               | Diagram 1 | <a href="#">PDF</a> |
| <a href="#">P8-CP-2F</a> | \$78.00 | 2.5 mm [0.10 in] | Non-flush | N.C.         | PNP   | M8x1, 3-pin               | Diagram 1 | <a href="#">PDF</a> |
| <a href="#">P8-AN-2A</a> | \$78.00 | 2.5 mm [0.10 in] | Non-flush | N.O.         | NPN   | 3-wire cable, 2m [6.5 ft] | Diagram 2 | <a href="#">PDF</a> |

## Wiring Diagrams

**Diagram 1**  
PNP Output

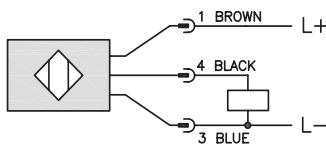
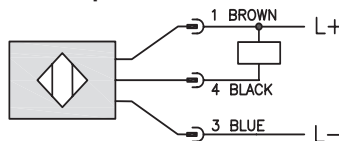
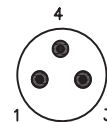


**Diagram 2**  
NPN Output



**M8 connector**



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

# P8 Series Inductive Rectangular Specifications

| P8 Series Rectangular DC Inductive Proximity Specifications |                   |                          |                             |              |                     |                 |
|-------------------------------------------------------------|-------------------|--------------------------|-----------------------------|--------------|---------------------|-----------------|
| Part Number                                                 | Operating Voltage | Operating (Load) Current | Off-state (Leakage) Current | Voltage Drop | Switching Frequency | Repeat Accuracy |
| <a href="#"><u>P8-AP-1F</u></a>                             | 10-30 VDC         | 100mA                    | 50µA                        | 2.5 V        | 2500Hz              | 1.0 %           |
| <a href="#"><u>P8-CP-1F</u></a>                             | 10-30 VDC         | 100mA                    | 50µA                        | 2.5 V        | 2500Hz              | 1.0 %           |
| <a href="#"><u>P8-AN-1F</u></a>                             | 5-30 VDC          | 50mA                     | 50µA                        | 1.1 V        | 2500Hz              | 5.0 %           |
| <a href="#"><u>P8-CN-1A</u></a>                             | 10-30 VDC         | 100mA                    | 50µA                        | 1.8 V        | 2500Hz              | 1.0 %           |
| <a href="#"><u>P8-AP-2F</u></a>                             | 10-30 VDC         | 100mA                    | 1µA                         | 2.5 V        | 3000Hz              | 3.0 %           |
| <a href="#"><u>P8-CP-2F</u></a>                             | 10-30 VDC         | 100mA                    | 1µA                         | 2.5 V        | 3000Hz              | 3.0 %           |
| <a href="#"><u>P8-AN-2A</u></a>                             | 10-30 VDC         | 100mA                    | 50µA                        | 2.5 V        | 2500Hz              | 5.0 %           |

| P8 Series Rectangular DC Inductive Proximity Specifications |                                                                                         |                  |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------|
| Mounting Type                                               | Flush                                                                                   | Non-flush        |
| Nominal Distance                                            | See Selection Table                                                                     |                  |
| Assured Operating Distance                                  | 1.2 mm [0.05 in]                                                                        | 2.2 mm [0.09 in] |
| Material Correction Factors                                 | See Material Influence Table                                                            |                  |
| Output Type                                                 | See Sensor Selection Chart                                                              |                  |
| No-load Supply Current                                      | 3mA                                                                                     |                  |
| Ripple                                                      | 15%                                                                                     |                  |
| Time Delay Before Availability (tv)                         | 20ms                                                                                    |                  |
| Reverse Polarity Protection                                 | Yes                                                                                     |                  |
| Short-Circuit Protection                                    | Yes                                                                                     |                  |
| Operating Temperature                                       | -25 to +70°C [-13 to +158°F]                                                            |                  |
| Protection Degree (DIN 40050)                               | IP67                                                                                    |                  |
| Indication/Switch Status                                    | Embedded function LED for switch status                                                 |                  |
| Housing Material                                            | PA 6, GF30 (Nylon 6 Polymer)                                                            |                  |
| Sensing Face Material                                       | PA 6, GF30 (Nylon 6 Polymer)                                                            |                  |
| Shock / Vibration                                           | Shock: EN 60068-2-27<br>Vibration: EN 60068-2-6                                         |                  |
| Tightening Torque                                           | 0.06 N•m [0.04 lb•ft]                                                                   |                  |
| Weight (cable/M8 connector)                                 | M8 Models 9.07 g [0.31 oz]<br>Cabled Models 22.68 g [0.8 oz]                            |                  |
| Connections                                                 | M8x1, 3-pin 0.30 m [0.98 ft] or cable 2m [6.5 ft]<br>PUR, 28AWG [0.09 mm <sup>2</sup> ] |                  |
| Agency Approvals                                            | CE, cULus, IEC 60947-5-2                                                                |                  |

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

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