

pro<sup>sense</sup>

# D80 Series Rectangular Inductive Proximity Sensors

**D80-0P-4T****D80V-A0-3M**

## Large Rectangular 80 x 40 mm

- Long sensing range
- Large active sensor face
- Non-flush or flush models
- Robust housing for harsh environments  
PPE (Polyphenylene Ether)
- IP65 or IP67 rated
- Lifetime warranty

UK  
CA

CE

cUL<sup>®</sup>USLIMITED  
LIFETIME  
WARRANTY

## D80 Series Rectangular Inductive Proximity Sensors Selection Chart

| Part Number      | Price    | Sensing Range             | Operating Voltage         | Mounting  | Output State              | Logic | Connection                          | Wiring    | Drawing Link        |
|------------------|----------|---------------------------|---------------------------|-----------|---------------------------|-------|-------------------------------------|-----------|---------------------|
| 80 x 40 x 105 mm |          |                           |                           |           |                           |       |                                     |           |                     |
| D80-0P-4T        | \$152.00 | 20-60mm<br>[0.78-2.36 in] | 10-36 VDC                 | Non-flush | N.O./N.C.<br>(selectable) | PNP   | Terminal Chamber                    | Diagram 1 | <a href="#">PDF</a> |
| D80-0P-4H*       | \$152.00 |                           |                           |           |                           |       | 4-pin M12 quick-disconnect          | Diagram 2 | <a href="#">PDF</a> |
| 80 x 40 x 92 mm  |          |                           |                           |           |                           |       |                                     |           |                     |
| D80-AP-3H *      | \$146.00 | 50mm<br>[1.96 in]         | 10-36 VDC                 | Flush     | N.O.                      | PNP   | 4-pin M12 quick-disconnect          | Diagram 2 | <a href="#">PDF</a> |
| D80V-A0-3M *     | \$146.00 |                           | 20-140 VAC/<br>10-140 VDC |           |                           | —     | 3-pin mini<br>7/8 in - 16UNF thread | Diagram 3 | <a href="#">PDF</a> |
| D80V-A0-3Q *     | \$146.00 |                           |                           |           |                           | —     | 3-pin 1/2 in - 20UNF thread         | Diagram 3 | <a href="#">PDF</a> |

\*Purchase cable separately.

## Wiring Diagrams

Diagram 1

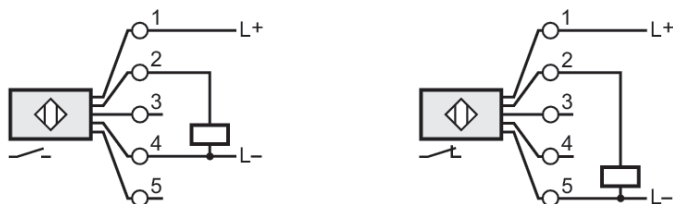


Diagram 2

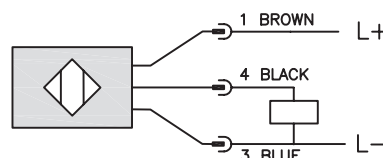
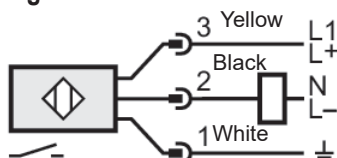
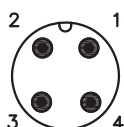
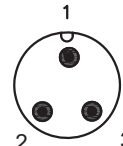
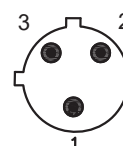
Terminals: 2.5 mm<sup>2</sup>; Cable sheath: Ø 7-13 mm; Cable gland: M20 X 1.5

Diagram 3



M12 connector

Connector: 1 x 7/8"  
coding: AConnector: 1 x 1/2"  
coding: C

## Mounting Bracket

### D80 Series Rectangular Proximity Sensors Mounting Bracket

| Part Number       | Price   | Description                                                                                                    | Weight                | Drawing Link        |
|-------------------|---------|----------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|
| <b>D80-BRKT-3</b> | \$30.00 | ProSense mounting bracket, parallel, stainless steel.<br>For use with D80-xx-3x flush mount prox sensors only. | 317.1 g<br>[11.18 oz] | <a href="#">PDF</a> |



# D80 Series Rectangular Inductive Proximity Sensors

## D80 Series Rectangular Inductive Proximity Sensors Specifications

| Sensor                        | D80-0P-4T                                                                                          | D80-0P-4H                      | D80-AP-3H                                             | D80V-A0-3M                                                                                             | D80V-A0-3Q                         |
|-------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------|
| Mounting Type                 | Non-flush                                                                                          |                                | Flush                                                 |                                                                                                        |                                    |
| Sensing Range                 | 20-60mm [0.78-2.36 in]<br>Adjustable via potentiometer                                             |                                | 50mm [1.96 in]                                        |                                                                                                        |                                    |
| Real Sensing Range (Sr)       | 60mm ± 10%                                                                                         |                                | 50mm                                                  |                                                                                                        |                                    |
| Material Correction Factors   | <a href="#">See Material Influence Table</a>                                                       |                                |                                                       |                                                                                                        |                                    |
| Output Type                   | N.O./N.C.(selectable), PNP                                                                         |                                | N.O. PNP                                              | N.O.                                                                                                   |                                    |
| Operating Voltage             | 10 – 36 VDC                                                                                        |                                |                                                       | 20 –140 VAC / 10 –140 VDC                                                                              |                                    |
| No-load Supply Current        | 15mA (24V)                                                                                         | < 15                           | 15mA (24V)                                            | 5.5 mA                                                                                                 |                                    |
| Operating (Load) Current      | 250mA                                                                                              |                                |                                                       | 450mA                                                                                                  |                                    |
| Off-state (Leakage) Current   | Neglectable (3-wire system)                                                                        |                                |                                                       | 1.7mA (140 VAC/VDC)                                                                                    |                                    |
| Voltage Drop                  | 2.5 V                                                                                              |                                |                                                       | 6V                                                                                                     |                                    |
| Switching Frequency           | 100 Hz                                                                                             |                                | 70 Hz                                                 | 25 Hz                                                                                                  |                                    |
| Hysteresis (% of Sr)          | 1 to 15                                                                                            |                                | 3 to 20                                               |                                                                                                        |                                    |
| Switch-point Drift (% of Sr)  | -10 to 10%                                                                                         |                                | -15 to 15%                                            |                                                                                                        |                                    |
| Protection Class              | II                                                                                                 |                                |                                                       | I                                                                                                      |                                    |
| Reverse Polarity Protection   | Yes                                                                                                |                                |                                                       |                                                                                                        |                                    |
| Short-Circuit Protection      | Yes                                                                                                | Yes, non-latching              |                                                       |                                                                                                        |                                    |
| Ambient Temperature           | -25 to 80°C [-13 to 180°F]                                                                         |                                | -25 to 70°C [-13 to 158°F]                            |                                                                                                        |                                    |
| Protection Degree (DIN 40050) | IP65                                                                                               | IP67                           |                                                       |                                                                                                        |                                    |
| Indication/Switch Status      | Yellow LED:<br>Switching Status                                                                    |                                | Yellow LED:<br>Switching Status /<br>Green LED: Power | Red LED: Switching Status /<br>Green LED: Power /<br>Green/Red LED: Alternating flashing short circuit |                                    |
| Housing Material              | PPE (Polyphenylene Ether)                                                                          |                                | PPE (Polyphenylene Ether), diecast zinc nickel-plated |                                                                                                        |                                    |
| Shock                         | EN 60068-2-27 Ea 100g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes   |                                |                                                       |                                                                                                        |                                    |
| Vibration                     | EN 60068-2-6 Fc 20g (10 to 3000 Hz) / 50 sweep cycles per frequency; 1 octave per minute in 3 axes |                                |                                                       |                                                                                                        |                                    |
| Tightening Torque             | 2.8 +/- 0.3 N•m                                                                                    |                                |                                                       |                                                                                                        |                                    |
| Weight                        | 434g [15.30 oz]                                                                                    | 440.5 g [15.53 oz]             | 420.5 g [14.83 oz]                                    | 427g [15.06 oz]                                                                                        | 432g [15.23 oz]                    |
| Connection                    | Terminal chamber<br>2.50 mm² (14 AWG)                                                              | 4-pin M12 quick-<br>disconnect | 4-pin M12 quick-<br>disconnect                        | 3-pin<br>1/2in - 20UNF thread                                                                          | 3-pin mini<br>7/8in - 16UNF thread |
| Agency Approvals              | CE, cULus E174191, UKCA                                                                            |                                |                                                       |                                                                                                        |                                    |

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