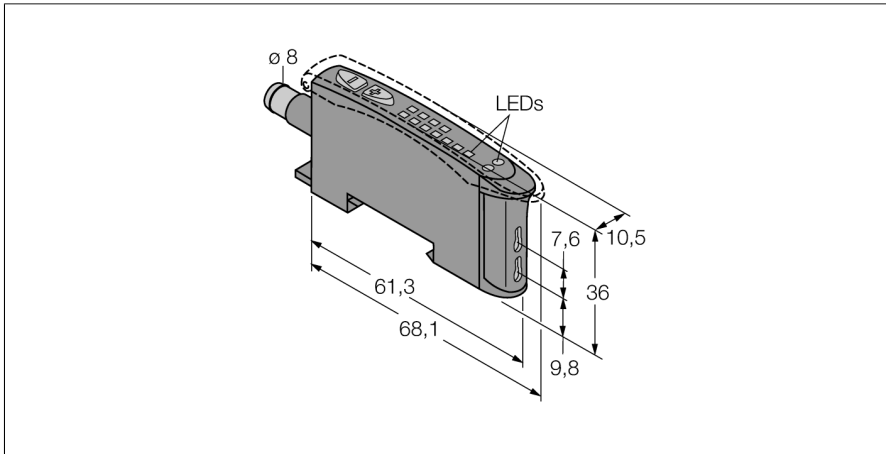


# Photoelectric Sensor

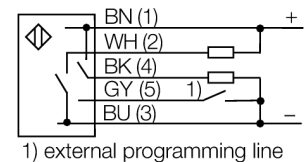
## Photoelectric Sensor for Plastic Fibers

### D10BFPGQ



- Male 8 mm, 6-pin, snap-lock
- 8-segment LED display
- Response time, adjustable
- Light/dark operation
- Teach programming
- Visible green light
- Operating voltage 10...30 VDC
- Selectable 30 ms switch-off delay

#### Wiring Diagram



|      |          |
|------|----------|
| Type | D10BFPGQ |
| ID   | 3072617  |

| Optical data     |                    |
|------------------|--------------------|
| Function         | Fiber optic sensor |
| Operating mode   | Plastic fiber      |
| Fiber-optic type | plastic            |
| Light type       | Green              |
| Wavelength       | 525 nm             |

| Electrical data             |                             |
|-----------------------------|-----------------------------|
| Operating voltage $U_s$     | 10...30 VDC                 |
| Residual ripple             | < 10 % $U_s$                |
| No-load current $I_0$       | ≤ 45 mA                     |
| Short-circuit protection    | yes                         |
| Reverse polarity protection | yes                         |
| Output function             | NO contact, PNP/NPN         |
| Switching frequency         | 2.5 kHz                     |
| Readiness delay             | ≤ 200 ms                    |
| Response time typical       | < 0.2 ms                    |
| Setting option              | Push Button<br>Remote Teach |

| Mechanical data       |                                 |
|-----------------------|---------------------------------|
| Design                | Rectangular, D10B               |
| Housing material      | Plastic, Thermoplastic material |
| Electrical connection | Connector, M8 × 1, PVC          |
| Number of cores       | 6                               |
| Ambient temperature   | -20...+55 °C                    |
| Relative humidity     | 0...90%                         |
| Protection class      | IP50                            |

| Special features       |               |
|------------------------|---------------|
| Power-on indication    | LED, Green    |
| Switching state        | LED, Yellow   |
| Excess gain indication | Bargraph, red |

#### Functional principle

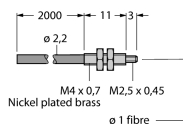
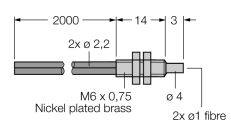
Glass or fibre optic sensors are the optimum choice for high temperature or space restricted applications. Fibre optics transfer the light from the sensor to a remote object. Individual fibre optics are used for opposed mode sensing, whereas bifurcated fibre optics are suited for diffuse mode operation.

|                 |           |
|-----------------|-----------|
| Tests/approvals |           |
| Approvals       | CE, cURus |

## Accessories

| Type code  | Ident no. |   | Dimension drawing |
|------------|-----------|---|-------------------|
| SMBR55F01  | 3067104   | Mounting panel, PBT, black, for R55F series, wall mounting                                      |                   |
| SMBR55FRA  | 3058809   | Mounting bracket, 19-ga. stainless steel, for D10, DF-G1 and R55F series, lateral wall mounting |                   |
| DIN-35-70  | 3026604   | DIN rail, width 35 mm, length 70 mm   |                   |
| DIN-35-105 | 3030470   | DIN rail, width 35 mm, length 105 mm  |                   |
| DIN-35-140 | 3026605   | DIN rail, width 35 mm, length 140 mm  |                   |

## Function accessories

| Type code | Ident no. |  | Dimension drawing   |
|-----------|-----------|--|---|
| PIT46U    | 3026034   | Plastic fiber-optic sensor, operating mode: Opposed mode, threaded sleeve M3 x 0.5 mm, field wireable wire without end tip, polyethylene sheath, ambient temperatures -30 °C...+70 °C  |  <p>Technical drawing of the PIT46U sensor showing dimensions: total length 2000 mm, sleeve length 11 mm, and a 3 mm section. The sleeve has an outer diameter of 2.2 mm. The sensor body is made of nickel-plated brass and features an M4 x 0.7 thread and an M2.5 x 0.45 thread. It contains one fiber with a diameter of 1 mm.</p>             |
| PBT46U    | 3025967   | Plastic fiber-optic sensor, operating mode: Diffuse mode, threaded sleeve M3 x 0.75 mm, field wireable wire without end tip, polyethylene sheath, ambient temperatures -30 °C...+70 °C |  <p>Technical drawing of the PBT46U sensor showing dimensions: total length 2000 mm, sleeve length 14 mm, and a 3 mm section. The sleeve has an outer diameter of 2.2 mm. The sensor body is made of nickel-plated brass and features an M6 x 0.75 thread and an 4 mm diameter section. It contains two fibers, each with a diameter of 1 mm.</p> |