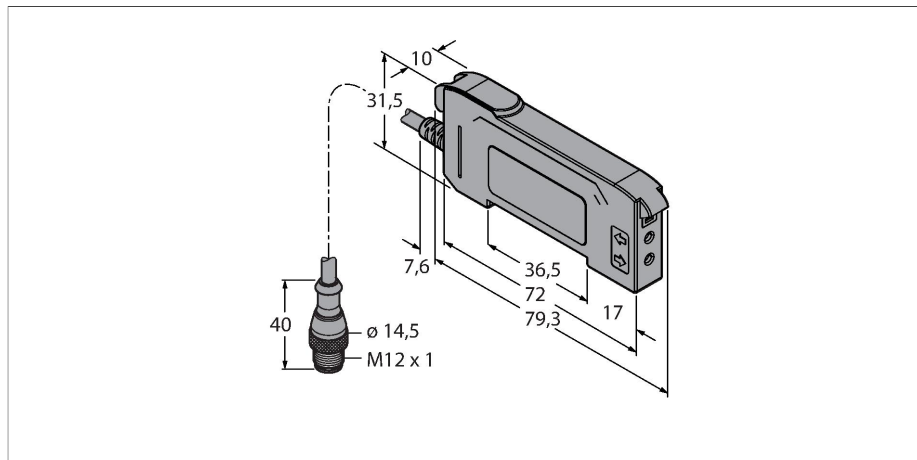


# DF-G1-PS-Q5

## Photoelectric Sensor – Photoelectric Sensor for Plastic Fibers



### Technical data

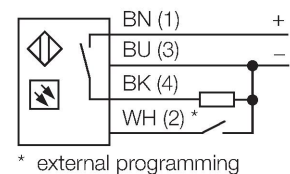
|                              |                                            |
|------------------------------|--------------------------------------------|
| Type                         | DF-G1-PS-Q5                                |
| ID                           | 3019358                                    |
| <b>Optical data</b>          |                                            |
| Function                     | Fiber optic sensor                         |
| Operating mode               | Plastic fiber                              |
| Light type                   | Red                                        |
| Wavelength                   | 660 nm                                     |
| <b>Electrical data</b>       |                                            |
| Operating voltage            | 10...30 VDC                                |
| Residual ripple              | < 10 % U <sub>ss</sub>                     |
| DC rated operational current | ≤ 40 mA                                    |
| Short-circuit protection     | yes                                        |
| Reverse polarity protection  | yes                                        |
| Output function              | NO/NC, PNP                                 |
| Switching frequency          | 5 kHz                                      |
| Readiness delay              | ≤ 500 ms                                   |
| Response time typical        | < 0.2 ms                                   |
| Setting option               | Push Button<br>Remote Teach                |
| <b>Mechanical data</b>       |                                            |
| Design                       | Rectangular, DF-G1                         |
| Dimensions                   | 79.3 x 10 x 33 mm                          |
| Housing material             | Plastic, Thermoplastic material, Black     |
| Electrical connection        | Cable with connector, M12 × 1, 0.15 m, PVC |
| Number of cores              | 4                                          |
| Ambient temperature          | -10...+55 °C                               |
| Relative humidity            | 0...90 %                                   |



### Features

- Cable with male end M12x1
- Visible red light
- Programming via teach cable or multi-function button
- Operating voltage: 10...30 VDC
- PNP output
- Light/dark operation

### Wiring diagram



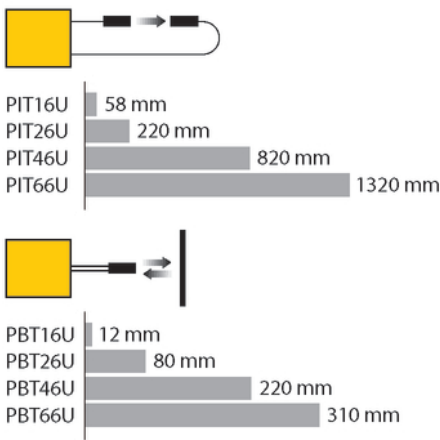
### Functional principle

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

Technical data

|                        |                       |
|------------------------|-----------------------|
| Protection class       | IP50                  |
| Special features       | keep/defer            |
| Switching state        | LED, Yellow           |
| Excess gain indication | Dual Digital Displays |
| Tests/approvals        |                       |
| Approvals              | CE, cULus listed      |

Excess Gain Curve



Accessories

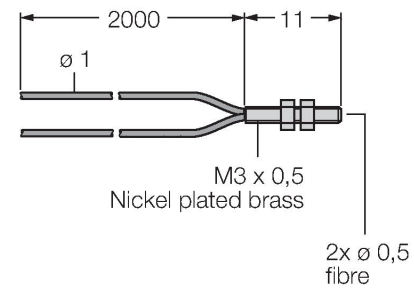
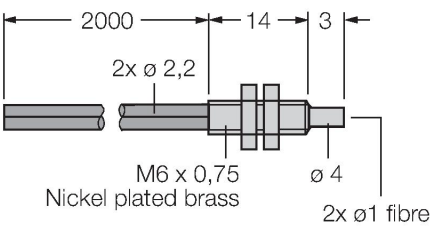
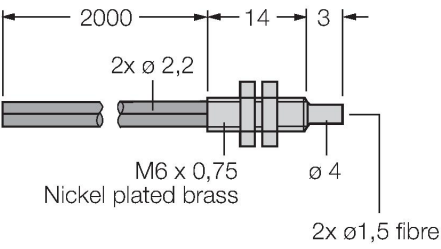
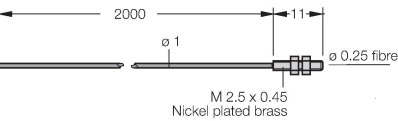
|                                      |         |                                      |         |
|--------------------------------------|---------|--------------------------------------|---------|
| DIN-35-70                            | 3026604 | DIN-35-105                           | 3030470 |
| DIN rail, width 35 mm, length 70 mm  |         | DIN rail, width 35 mm, length 105 mm |         |
| DIN-35-140                           | 3026605 |                                      |         |
| DIN rail, width 35 mm, length 140 mm |         |                                      |         |

Accessories

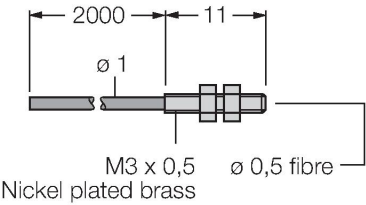
| Dimension drawing | Type          | ID      |                                                                                                                                                                                                                  |
|-------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | RKC4.4T-2/TEL | 6625013 | Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |
|                   | WKC4.4T-2/TEL | 6625025 | Connection cable, female M12, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>   |

Accessories

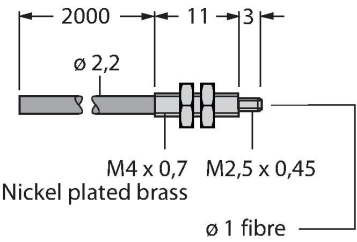
| Dimension drawing | Type   | ID      |                                                                                                                                                                                        |
|-------------------|--------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | PBT16U | 3042822 | 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 |

| Dimension drawing                                                                   | Type   | ID      |                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------|--------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | PBT26U | 3026080 | Plastic fiber, sensing mode: Diffuse mode, threaded bush M3 x 0.75 mm, preassembled wire without end tip, polyethylene jacket, ambient temperatures -30 °C...+70 °C                    |
|   | 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 |
|  | PBT66U | 3039982 | Plastic fiber-optic sensor, operating mode: Diffuse mode, threaded sleeve M6 x 0.75 mm, pre-assembled wire without end tip, polyethylene sheath, ambient temperatures -30 °C...+70 °C  |
|  | PIT16U | 3039983 | 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  |

| Dimension drawing | Type   | ID      |                                                                                                                                                                    |
|-------------------|--------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | PIT26U | 3026079 | Plastic fiber, sensing mode: Opposed mode, threaded bush M3 x 0.5 mm, preassembled wire without end tip, polyethylene jacket, ambient temperatures -30 °C...+70 °C |



|        |         |                                                                                                                                                                                       |
|--------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 |
|--------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|        |         |                                                                                                                                                                                       |
|--------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PIT66U | 3039899 | 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 |
|--------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

