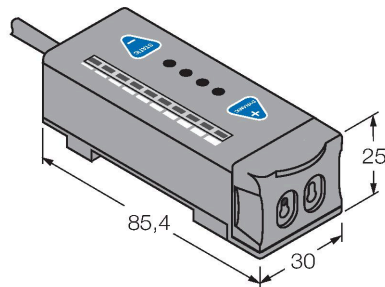


# R55FPW

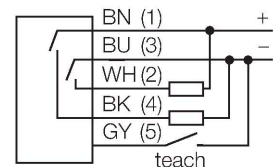
## Photoelectric Sensor – Photoelectric Sensor for Plastic Fibers



### Features

- Cable, PVC, 2 m, 5-wire
- Protection class IP67
- Teach button
- 10-segment bargraph
- Switch-off delay (no delay, 20 ms, 40 ms)
- White emitter LED
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light or dark operation

### Wiring diagram



### 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.

### Technical data

|                             |                                        |
|-----------------------------|----------------------------------------|
| Type                        | R55FPW                                 |
| ID                          | 3058027                                |
| <b>Optical data</b>         |                                        |
| Function                    | Fiber optic sensor                     |
| Operating mode              | Plastic fiber                          |
| Fiber-optic type            | plastic                                |
| Light type                  | White                                  |
| <b>Electrical data</b>      |                                        |
| Operating voltage           | 10...30 VDC                            |
| Residual ripple             | < 10 % $U_{ss}$                        |
| No-load current             | ≤ 70 mA                                |
| Short-circuit protection    | yes                                    |
| Reverse polarity protection | yes                                    |
| Output function             | NO contact, PNP/NPN                    |
| Switching frequency         | 10 kHz                                 |
| Readiness delay             | ≤ 100 ms                               |
| Response time typical       | < 0.05 ms                              |
| Setting option              | Push Button<br>Remote Teach            |
| <b>Mechanical data</b>      |                                        |
| Design                      | Rectangular, R55F                      |
| Dimensions                  | 85.4 x 30 x 25 mm                      |
| Housing material            | Plastic, Thermoplastic material, Black |
| Electrical connection       | Cable, 2 m, PVC                        |
| Number of cores             | 5                                      |
| Core cross-section          | 0.34 mm <sup>2</sup>                   |
| Ambient temperature         | -10...+55 °C                           |

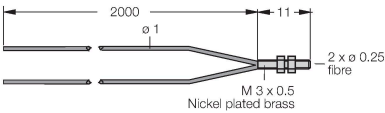
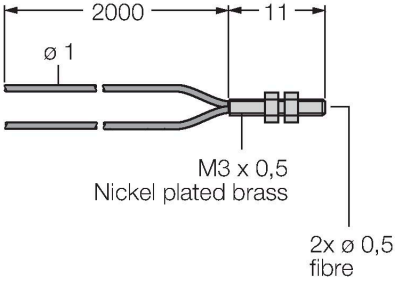
Technical data

|                        |                                           |
|------------------------|-------------------------------------------|
| Relative humidity      | 0...90 %                                  |
| Protection class       | IP67                                      |
| Special features       | keep/defer<br>Wash down                   |
| Power-on indication    | LED, Green                                |
| Switching state        | LED, Green                                |
| Excess gain indication | Bargraph, green                           |
| Tests/approvals        |                                           |
| MTTF                   | 178 years acc. to SN 29500 (Ed. 99) 40 °C |
| Approvals              | CE                                        |

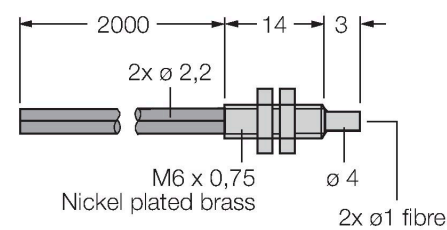
Accessories

|                                                            |         |                                                                                                 |         |
|------------------------------------------------------------|---------|-------------------------------------------------------------------------------------------------|---------|
| SMBR55F01                                                  | 3067104 | SMBR55FRA                                                                                       | 3058809 |
| Mounting panel, PBT, black, for R55F series, wall mounting |         | Mounting bracket, 19-ga. stainless steel, for D10, DF-G1 and R55F series, lateral wall mounting |         |
| 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                       |         |                                                                                                 |         |

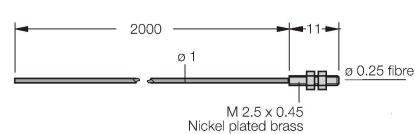
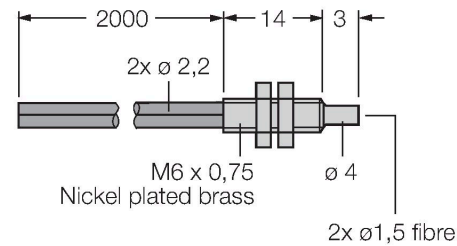
Accessories

| Dimension drawing                                                                   | Type   | ID      |                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------|--------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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 |
|  | 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                    |

| Dimension drawing | Type   | ID      |                                                                                                                                                                                        |
|-------------------|--------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | 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 |

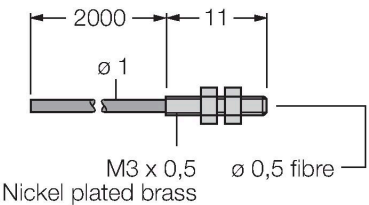


|        |         |                                                                                                                                                                                       |
|--------|---------|-------------------------------------------------------------------------------------------------------------------------------------------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

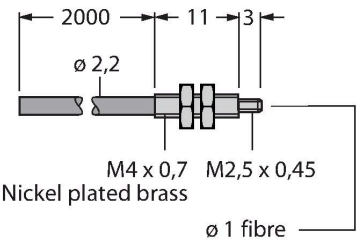


|        |         |                                                                                                                                                                                       |
|--------|---------|-------------------------------------------------------------------------------------------------------------------------------------------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

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



| Dimension drawing | Type   | ID      |                                                                                                                                                                                       |
|-------------------|--------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | 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

