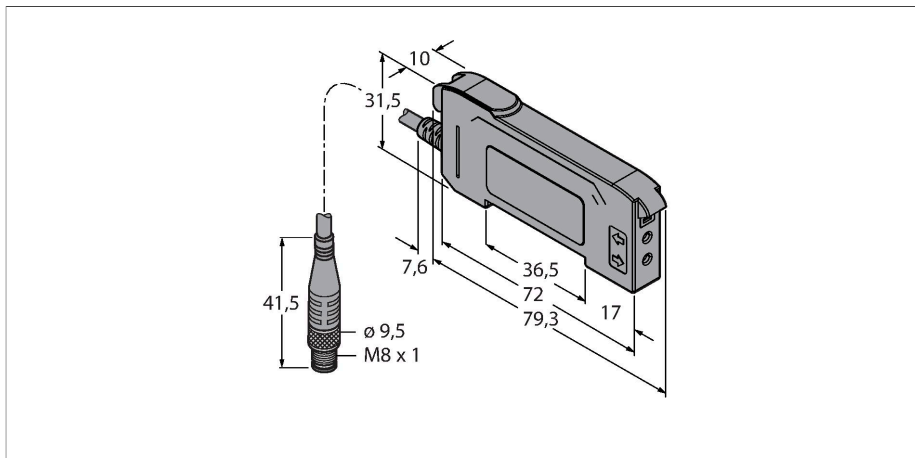


# DF-G1-NS-Q3

## Photoelectric Sensor – Photoelectric Sensor for Plastic Fibers



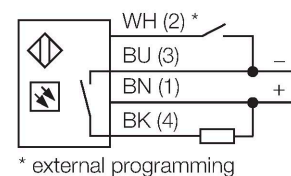
### Technical data

Type	DF-G1-NS-Q3
ID	3019352
<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, NPN
Switching frequency	5 kHz
Readiness delay	≤ 500 ms
Response time typical	< 0.2 ms
Setting option	Push Button 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, M8 × 1, 0.15 m, PVC
Number of cores	4
Ambient temperature	-10...+55 °C
Relative humidity	0...90 %

### Features

- Cable with male end M8
- Visible red light
- Programming via teach cable or multi-function button
- Operating voltage: 10...30 VDC
- NPN output
- Light/dark operation

### Wiring diagram



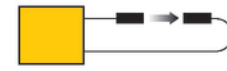
### Functional principle

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.

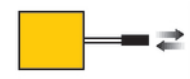
## Technical data

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

## Excess Gain Curve



PIT16U	58 mm
PIT26U	220 mm
PIT46U	820 mm
PIT66U	1320 mm





PBT16U	12 mm
PBT26U	80 mm
PBT46U	220 mm
PBT66U	310 mm

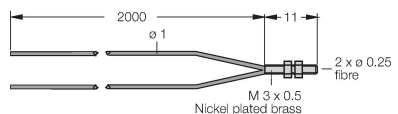
## Accessories

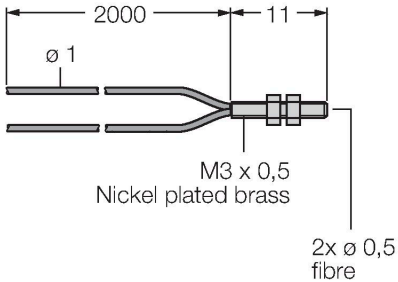
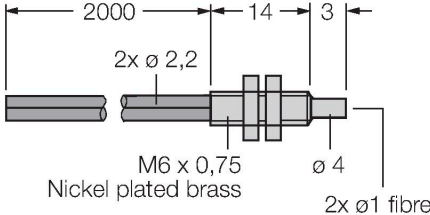
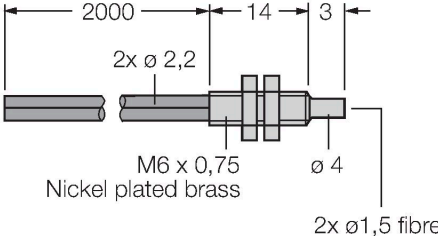
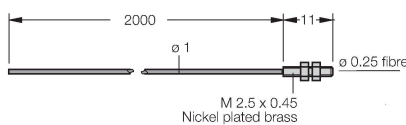
DIN-35-70	3026604	DIN-35-105	3030470
	DIN rail, width 35 mm, length 70 mm		DIN rail, width 35 mm, length 105 mm
DIN-35-140	3026605		
	DIN rail, width 35 mm, length 140 mm		

## Accessories

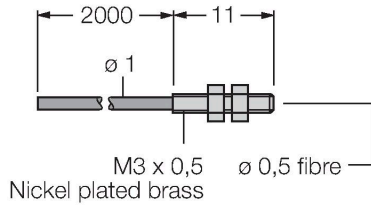
Dimension drawing	Type	ID	
	PKG4S-2/TEL	6627370	Connection cable, female Ø M8, straight, 4-pin, snap-on type, cable length: 2 m, jacket material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>
	PKW4S-2/TEL	6627373	Connection cable, Ø 8 mm female, snap-on type, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>

## Accessories

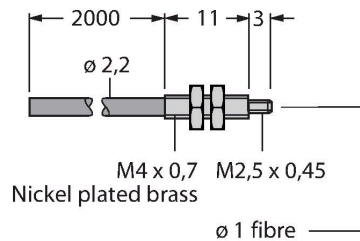
Dimension drawing	Type	ID	
	PBT16U	3042822	Plastic fiber-optic sensor, operating mode: Diffuse mode, threaded sleeve M3 x 0.75 mm, field wireable wire without end tip, polyethylene sheath, ambient temperatures -30 °C...+70 °C

Dimension drawing	Type	ID	
 <p>Dimension drawing of PBT26U sensor. It shows a long cable with a diameter of <math>\varnothing 1</math> mm. The total length is 2000 mm. The sensing tip is 11 mm long and features a threaded bush with an M3 x 0,5 thread. The tip is made of nickel-plated brass and contains two <math>\varnothing 0,5</math> mm fibers.</p>	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
 <p>Dimension drawing of PBT46U sensor. It shows a long cable with a diameter of <math>\varnothing 1</math> mm. The total length is 2000 mm. The sensing tip is 14 mm long and features a threaded sleeve with an M6 x 0,75 thread. The tip is made of nickel-plated brass and contains two <math>\varnothing 2,2</math> mm fibers. The diameter of the tip is <math>\varnothing 4</math> 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>Dimension drawing of PBT66U sensor. It shows a long cable with a diameter of <math>\varnothing 1</math> mm. The total length is 2000 mm. The sensing tip is 14 mm long and features a threaded sleeve with an M6 x 0,75 thread. The tip is made of nickel-plated brass and contains two <math>\varnothing 2,2</math> mm fibers. The diameter of the tip is <math>\varnothing 4</math> mm.</p>	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
 <p>Dimension drawing of PIT16U sensor. It shows a long cable with a diameter of <math>\varnothing 1</math> mm. The total length is 2000 mm. The sensing tip is 11 mm long and features a threaded sleeve with an M 2.5 x 0.45 thread. The tip is made of nickel-plated brass and contains one <math>\varnothing 0,25</math> mm fiber.</p>	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
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	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
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