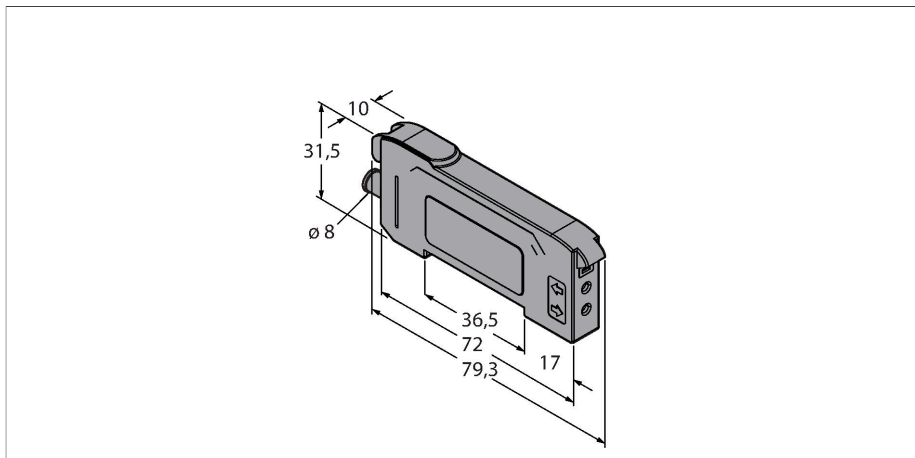


# DF-G2-KD-Q7

## Photoelectric Sensor – Photoelectric Sensor for Plastic Fibers



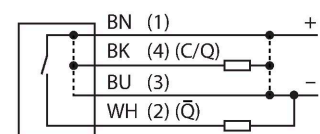
### Technical data

Type	DF-G2-KD-Q7
ID	3097703
<b>Optical data</b>	
Function	Fiber optic sensor
Operating mode	Plastic fiber
Light type	Red
Wavelength	635 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
Communication protocol	IO-Link
Output function	NO contact, PNP
Output 2	Switching output
Current output	100 mA
Switching frequency	50 kHz
Readiness delay	≤ 500 ms
Response time typical	< 0.05 ms
Setting option	Push Button Remote Teach
<b>IO-Link</b>	
IO-Link specification	V 1.1
IO-Link port type	Class A
Communication mode	COM 2 (38.4 kBaud)
Process data width	16 bit

### Features

- Male connector, 8 mm, 4-pin
- Visible red light
- Programming via teach cable or multi-function button
- Operating voltage: 10...30 VDC
- IO-Link
- 2 × PNP output, changeover contact
- Light/dark operation

### Wiring diagram



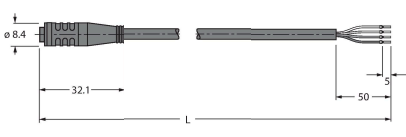

### Functional principle

Glass or plastic fibers are the optimum choice for high-temperature applications and limited spaces. Optical fibers transfer the light from the sensor to a remote object. Single optical fibers are suited for opposed sensing mode, while bifurcated optical fibers are best suited for diffuse sensing mode.

## Technical data

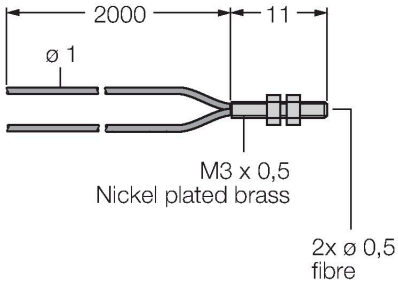
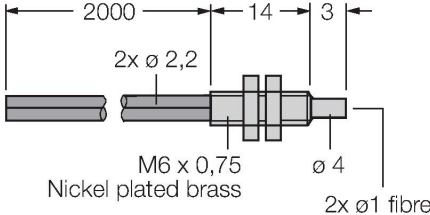
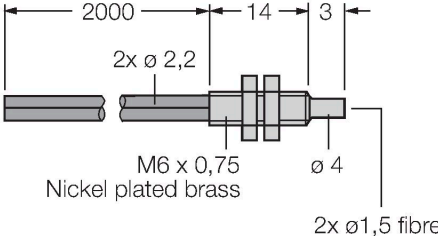
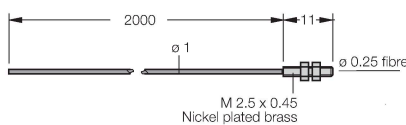
Function Pin 4	IO-Link
Function Pin 2	DI
Maximum cable length	20 m
Profile support	Smart Sensor Profil
Included in the SIDI GSDML	Yes
<b>Mechanical data</b>	
Design	Rectangular, DF-G1
Dimensions	79.3 x 10 x 33 mm
Housing material	Plastic, Thermoplastic material, Black
Electrical connection	Connector, M8 × 1, PVC
Number of cores	4
Ambient temperature	-10...+55 °C
Relative humidity	0...90 %
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

## 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

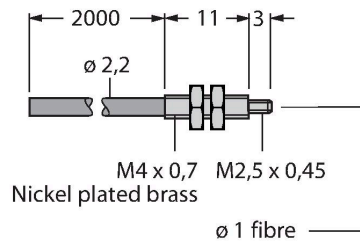
Dimension drawing	Type	ID	
	PBT16U	3042822	Plastic fiber-optic sensor, operating mode: Diffuse mode, threaded sleeve M3 x 0.75 mm, field wireable wire without end tip, polyethylene sheath, ambient temperatures -30 °C...+70 °C

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 2,2</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 1</math> mm fibers.</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 2,2</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 1,5</math> mm fibers.</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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