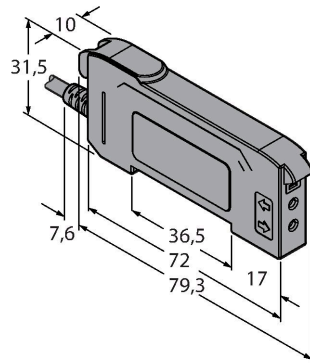


DF-G1-KS-2M

Photoelectric Sensor – Photoelectric Sensor for Plastic Fibers



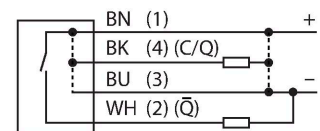
Technical data

Type	DF-G1-KS-2M
ID	3025791
Optical data	
Function	Fiber optic sensor
Operating mode	Plastic fiber
Light type	Red
Wavelength	660 nm
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	< 10 % U _{ss}
DC rated operational current	≤ 40 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Communication protocol	IO-Link
Output function	NO/NC, PNP
Switching frequency	5 kHz
Readiness delay	≤ 500 ms
Response time typical	< 0.2 ms
Setting option	Push Button
IO-Link	
IO-Link specification	V 1.1
IO-Link port type	Class A
Communication mode	COM 2 (38.4 kBaud)
Process data width	16 bit
Frame type	Type_2_2
Minimum cycle time	2 ms
Function Pin 4	IO-Link

Features

- Cable 2 m
- 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



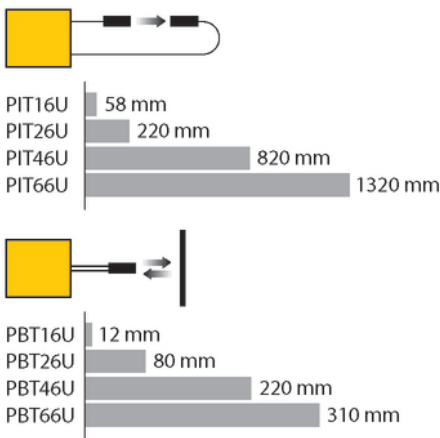
Functional principle

Glass or 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

Function Pin 2	DI
Maximum cable length	20 m
Profile support	Smart Sensor Profil
Included in the SIDI GSDML	Yes
Mechanical data	
Design	Rectangular, DF-G1
Dimensions	79.3 x 10 x 33 mm
Housing material	Plastic, Thermoplastic material, Black
Electrical connection	Cable, 2 m, 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
Tests/approvals	
Approvals	CE, cULus listed

Excess Gain Curve



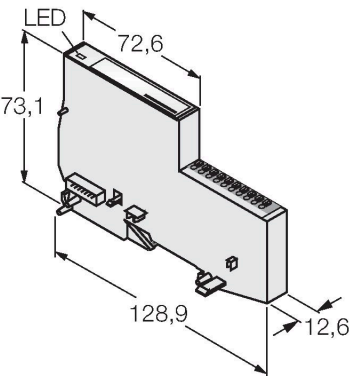
Accessories

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			

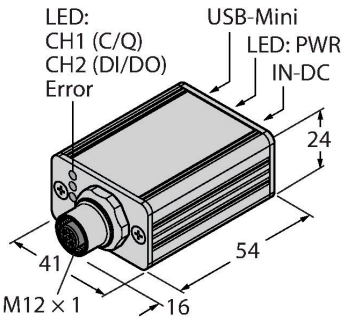
Accessories

Dimension drawing	Type	ID	
The dimension drawing shows the BL67-4IOL module mounted on a DIN rail. Key dimensions are labeled: 32 mm for the top width, 91 mm for the top length, 77.5 mm for the height of the module, 145 mm for the length of the module on the rail, 195 mm for the total length including the rail, and 13 mm for the rail height. An LED is indicated on the top surface.	BL67-4IOL	6827386	4-channel IO-Link Master module for the modular BL67 I/O-system

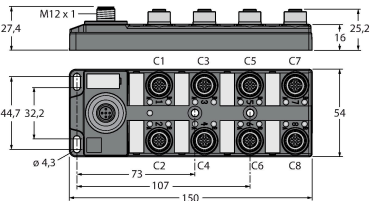
Dimension drawing	Type	ID	
	BL20-E-4IOL	6827385	IO-Link master module for the modular BL20 I/O system, 4-channel



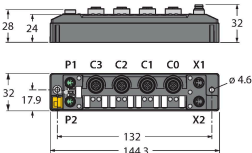
USB-2-IOL-0002	6825482	IO-Link Master with integrated USB port
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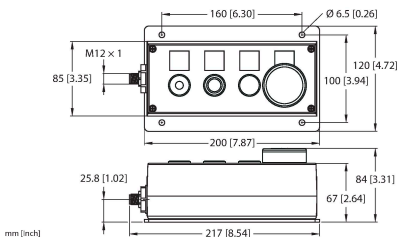
TBIL-M1-16DXP	6814102	16-channel I/O-hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
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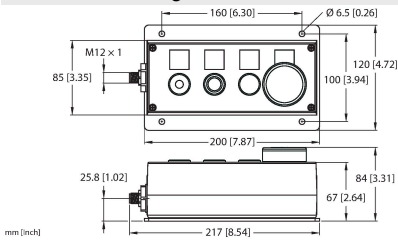
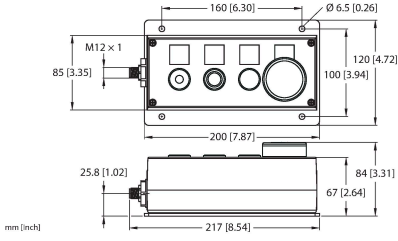
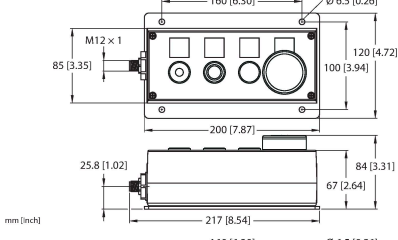
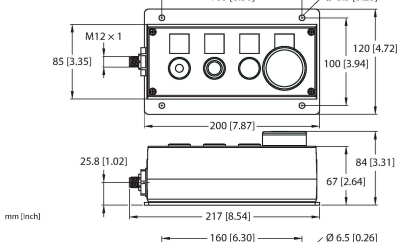
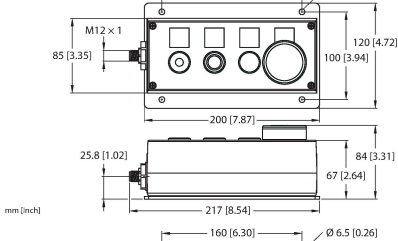
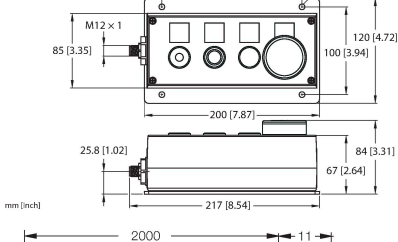
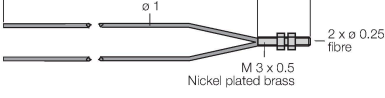


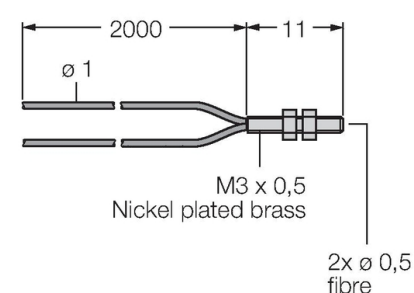
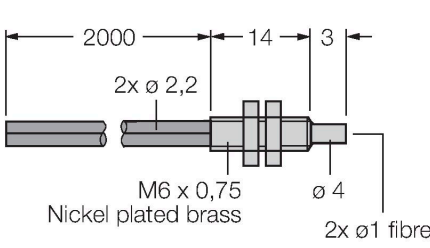
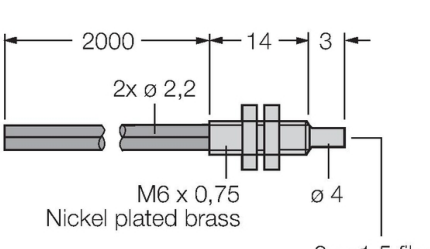
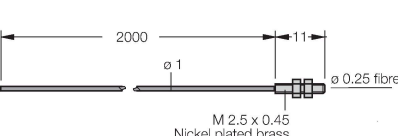
TBEN-S2-4IOL	6814024	Compact multiprotocol I/O module, 4 IO-Link Master 1.1 Class A, 4 universal PNP digital channels 0.5 A
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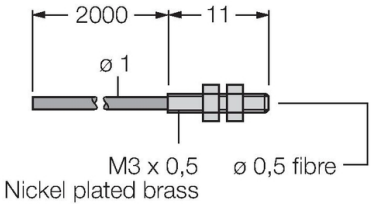
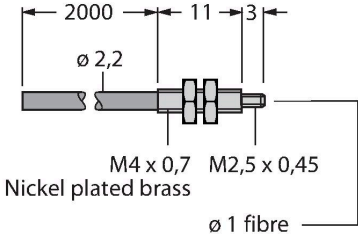
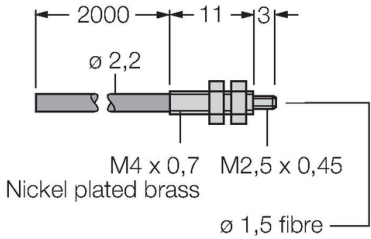


OPIL-E4-IO2-FE01(DE)	100029326	16-channel I/O hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
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Dimension drawing	Type	ID	
 mm [inch]	OPIL-E4-IO2-FE02	100029327	16-channel I/O hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
 mm [inch]	OPIL-E4-IO2-FE03	100029328	16-channel I/O hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
 mm [inch]	OPIL-E4-IO3-FE04	100036394	16-channel I/O hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
 mm [inch]	OPIL-E4-IO3-FE01	100036505	16-channel I/O hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
 mm [inch]	OPIL-E4-IO3-FE02	100036506	16-channel I/O hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
 mm [inch]	OPIL-E4-IO3-FE03	100036507	16-channel I/O hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
 mm [inch]	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	
 Dimension drawing of PIT26U sensor. The drawing shows a cross-section of the sensor assembly. It consists of a long section of nickel-plated brass with a diameter of 1 mm (ø 1) and a length of 2000 mm. This is followed by a shorter section of nickel-plated brass with a diameter of 0.5 mm (ø 0,5) and a length of 11 mm. The total length of the assembly is 2011 mm. The sensor is made of nickel-plated brass. The fiber optic cable is made of plastic and has a diameter of 0.5 mm (ø 0,5). The sensing mode is opposed mode, threaded bush M3 x 0.5 mm, preassembled wire without end tip, polyethylene jacket, 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 of PIT46U sensor. The drawing shows a cross-section of the sensor assembly. It consists of a long section of nickel-plated brass with a diameter of 2.2 mm (ø 2,2) and a length of 2000 mm. This is followed by a shorter section of nickel-plated brass with a diameter of 0.7 mm (ø 0,7) and a length of 11 mm. The total length of the assembly is 2011 mm. The sensor is made of nickel-plated brass. The fiber optic cable is made of plastic and has a diameter of 1 mm (ø 1). The sensing mode is opposed mode, threaded sleeve M3 x 0.5 mm, field wireable wire without end tip, polyethylene sheath, 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
 Dimension drawing of PIT66U sensor. The drawing shows a cross-section of the sensor assembly. It consists of a long section of nickel-plated brass with a diameter of 2.2 mm (ø 2,2) and a length of 2000 mm. This is followed by a shorter section of nickel-plated brass with a diameter of 0.7 mm (ø 0,7) and a length of 11 mm. The total length of the assembly is 2011 mm. The sensor is made of nickel-plated brass. The fiber optic cable is made of plastic and has a diameter of 1.5 mm (ø 1,5). The sensing mode is 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