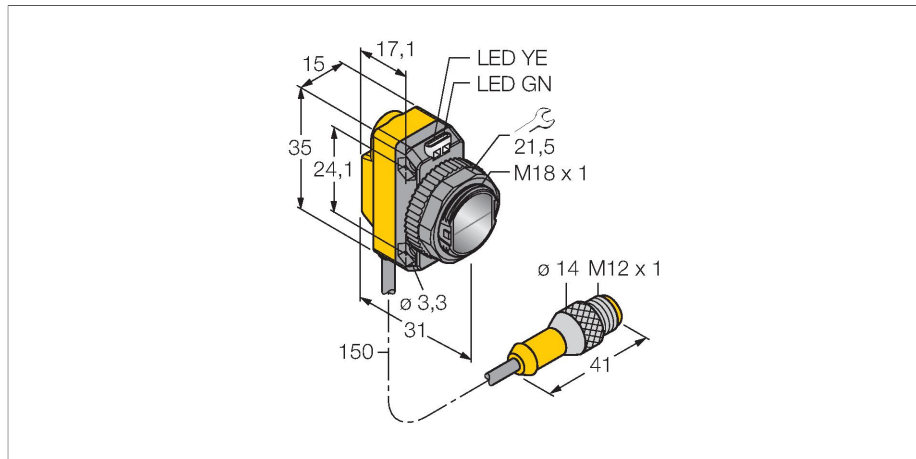


QS18K6AF250Q5

Photoelectric Sensor – Diffuse Mode Sensor with Adjustable Foreground Suppression



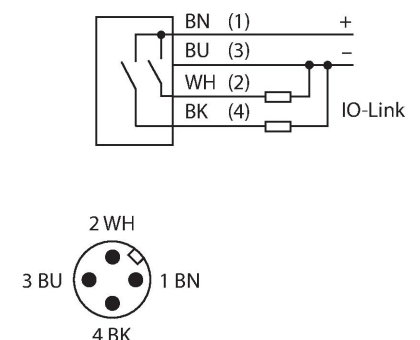
Technical data

Type	QS18K6AF250Q5
ID	3802460
Optical data	
Function	Proximity switch
Operating mode	Background suppression, adjustable
Light type	Red
Wavelength	640 nm
Range	30...250 mm
Electrical data	
Operating voltage	10...30 VDC
DC rated operational current	≤ 100 mA
No-load current	≤ 35 mA
Reverse polarity protection	yes
Communication protocol	IO-Link
Output function	NO/NC, PNP/NPN
Switching frequency	≤ 700 Hz
Readiness delay	≤ 200 ms
Response time typical	< 2.8 ms
Setting option	Potentiometer Remote Teach
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

Features

- Cable with male end, M12 x 1, 4-pin, PVC, 150 mm
- Protection class IP67
- LED all-round visible
- Cut-off point adjusted via potentiometer
- Operating voltage: 10...30 VDC
- 1 × PNP/NPN switching output with IO-Link communication
- 1 × PNP/NPN switching output
- Transmission of process value and parametrization via IO-link

Wiring diagram



Functional principle

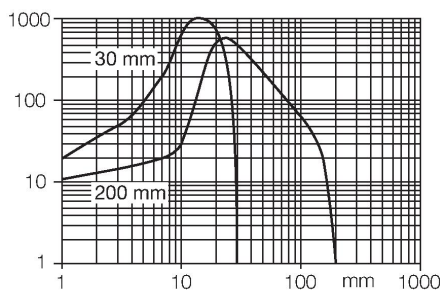
Diffuse mode sensors with foreground and background suppression operate with a single emitter and two receiver elements, one for close range and one for far range. The target's position and the optical structure of the sensor determine which receiver element gets the most light. The optics before the receiver is modified with the adjusting screw shifting this way the boundary between close and long-

Technical data

Minimum cycle time	2 ms
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
Mechanical data	
Design	Rectangular with thread, QS18
Dimensions	31 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, Acrylic
Electrical connection	Cable with connector, M12 × 1, 0.15 m, PVC
Number of cores	4
Ambient temperature	-25...+55 °C
Protection class	IP67
Special features	keep/defer
Power-on indication	LED, Green
Excess gain indication	LED
Tests/approvals	
MTTF	268 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus

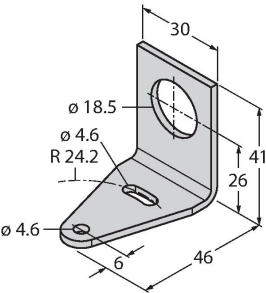
range. This operation determines whether the reflecting object is in or outside the measuring range.

Excess gain curves relating to the nearest and farthest cut-off point



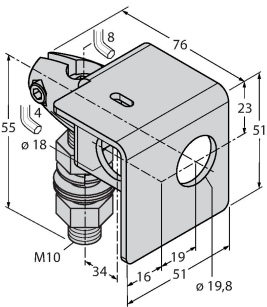
Accessories

SMB18A 3033200



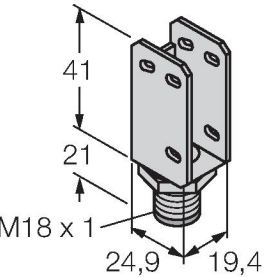
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18AFAM10 3012558

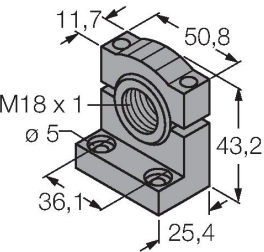


Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

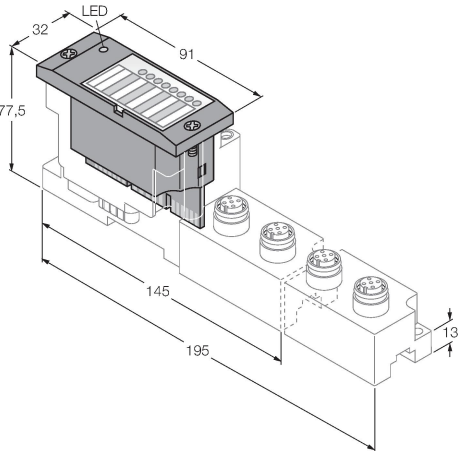
SMBQS18A 3069721
Mounting bracket, stainless steel, for 18 mm thread

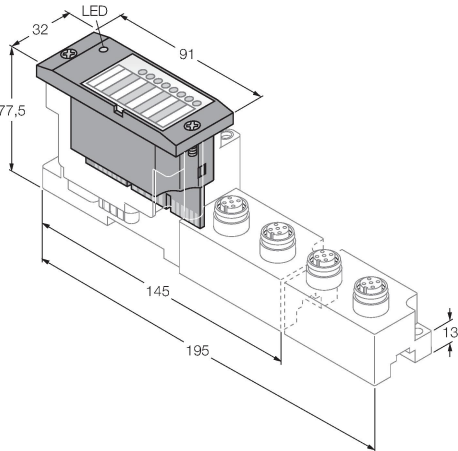


SMB18SF 3052519
Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

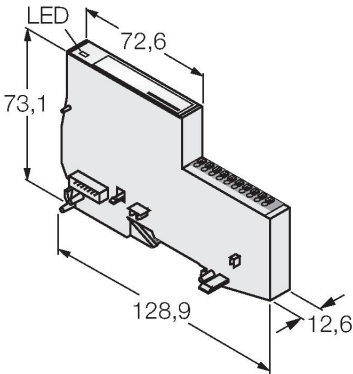


Accessories

Dimension drawing	Type	ID	
	BL67-4IOL	6827386	4-channel IO-Link Master module for the modular BL67 I/O-system
	BL20-E-4IOL	6827385	IO-Link master module for the modular BL20 I/O system, 4-channel



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



Dimension drawing	Type	ID	
	USB-2-IOL-0002	6825482	IO-Link Master with integrated USB port



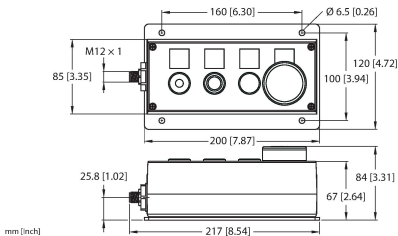
TBIL-M1-16DXP	6814102	16-channel I/O-hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
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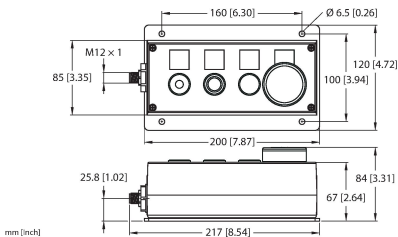
TBEN-S2-4IOL	6814024	Compact multiprotocol I/O module, 4 IO-Link Master 1.1 Class A, 4 universal PNP digital channels 0.5 A
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OPIL-E4-IO2-FE01(DE)	100029326	16-channel I/O hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)
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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)
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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)
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Dimension drawing	Type	ID	
	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)
	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)
	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)
	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)