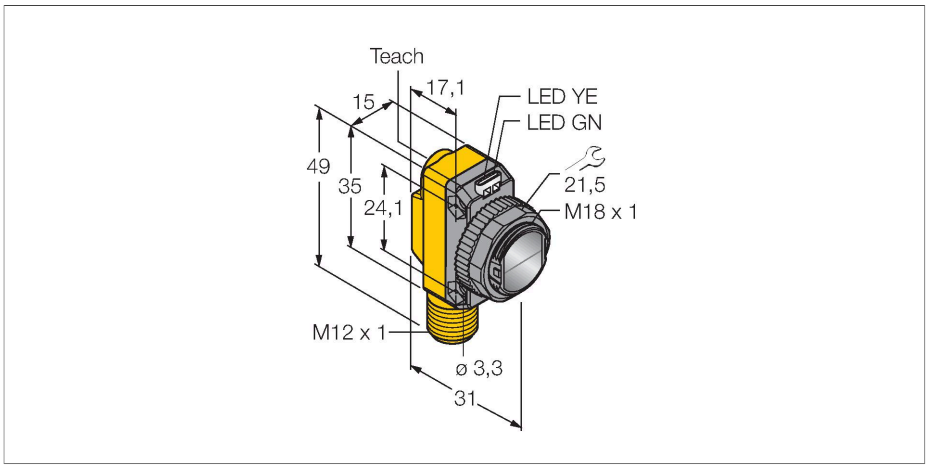
QS18EK6DQ8
Photoelectric Sensor – Diffuse Mode Sensor



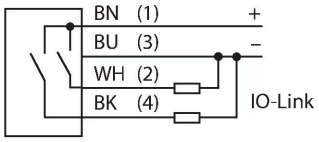
Technical data

Type	QS18EK6DQ8
ID	3802799
Optical data	
Function	Proximity switch
Operating mode	Diffuse
Light type	IR
Wavelength	940 nm
Range	0…800 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	≤ 833 Hz
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
Function Pin 2	DI
Maximum cable length	20 m
Profile support	Smart Sensor Profil

Features

- Male M12 × 1; 4-pin
- Protection class IP67
- LED all-round visible
- Sensitivity adjusted via teach button
- 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



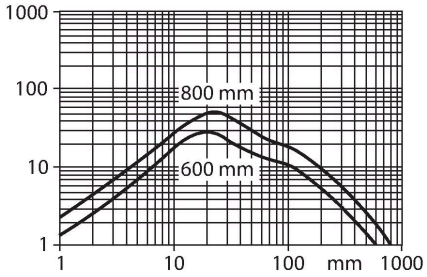
Functional principle

Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the reflectivity of the target. This type of sensor is especially suited for detection of transparent objects (diffuse mode sensor with or without background suppression or convergent mode sensors).

Excess gain curve
Excess gain in relation to the distance

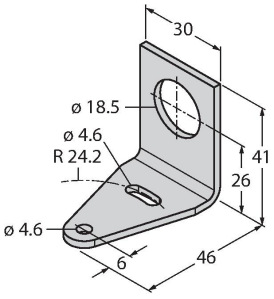
Technical data

Included in the SIDI GSDML	Yes
Mechanical data	
Design	Rectangular, QS18
Dimensions	31 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, Acrylic
Electrical connection	Connector, M12 × 1
Ambient temperature	-20…+70 °C
Protection class	IP67
Special features	Pushbutton Teach input
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Alarm display	LED yellow Flashing
Tests/approvals	
Approvals	CE, cURus



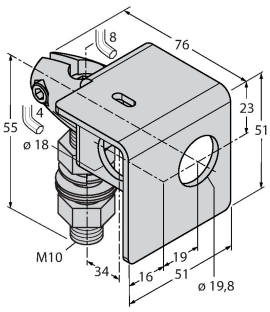
Accessories

SMB18A 3033200



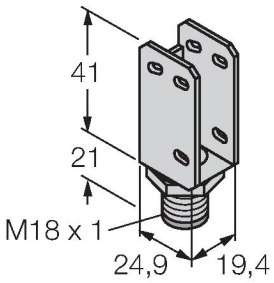
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18AFAM10 3012558



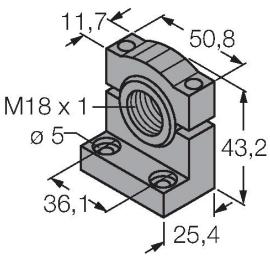
Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMBQS18A 3069721



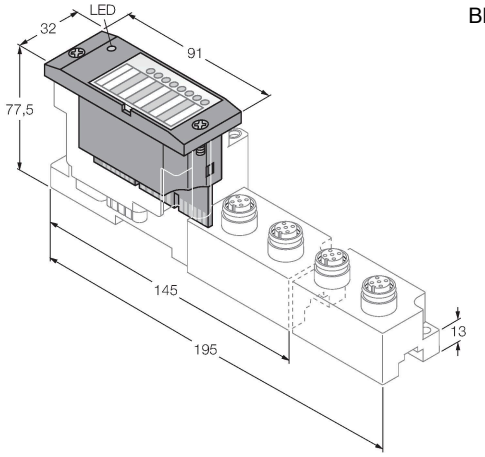
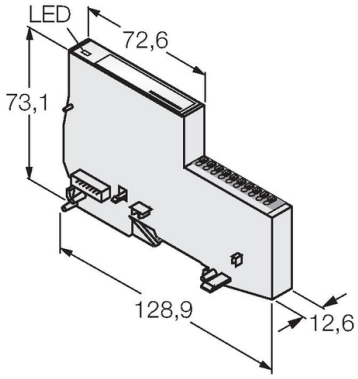
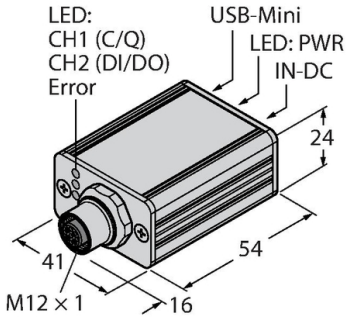
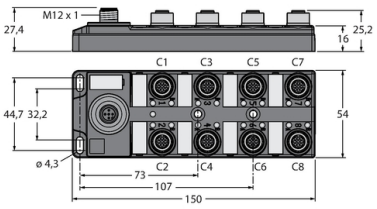
Mounting bracket, stainless steel, for 18 mm thread

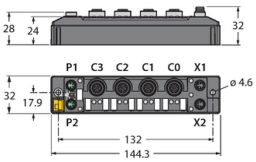
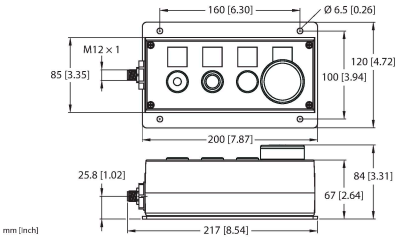
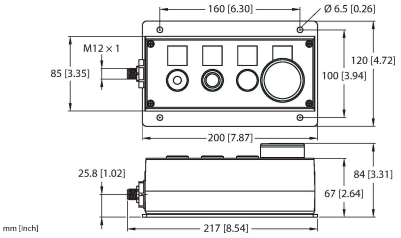
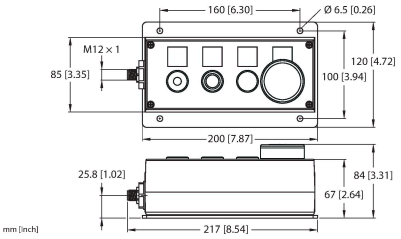
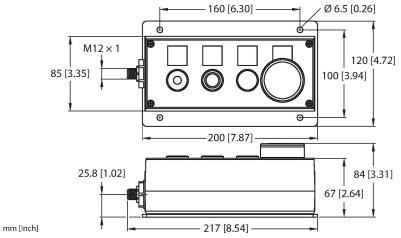
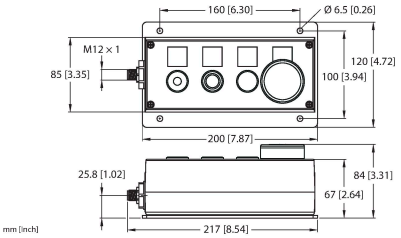
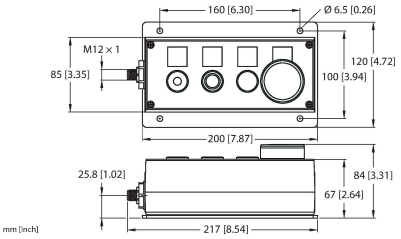
SMB18SF 3052519

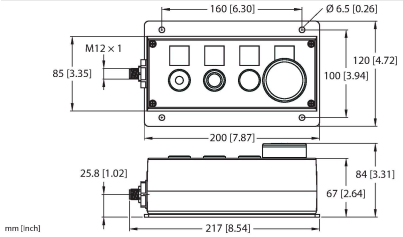


Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

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
	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)

Dimension drawing	Type	ID	
	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
	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)
	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)
	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)
	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)

Dimension drawing	Type	ID	
	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)