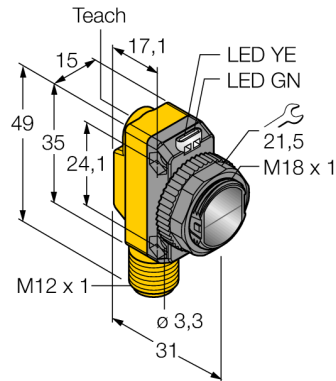


Photoelectric Sensor

Convergent Mode Sensor

QS18EK6CV45Q8



Type	QS18EK6CV45Q8
ID	3802811

Optical data	
Function	Convergent mode sensor
Light type	Red
Wavelength	660 nm
Focal distance	43 mm

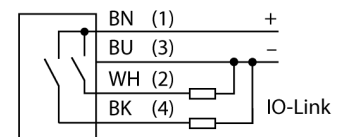
Electrical data	
Operating voltage U_s	10...30 VDC
DC rated operating current I_s	≤ 100 mA
No-load current I_0	≤ 35 mA
Reverse polarity protection	yes
Communication protocol	IO-Link
Output function	NO/NC, PNP/NPN
Switching frequency	≤ 833 Hz

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 Profile
Included in the SIDI GSDML	Yes

Mechanical data	
Design	Rectangular, QS18
Housing material	Plastic, ABS
Lens	plastic, Acrylic
Electrical connection	Connector, M12 × 1
Ambient temperature	-20...+70 °C
Protection class	IP67

- 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



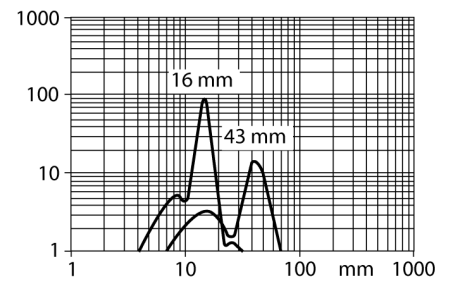
Functional principle

Convergent mode sensors are equipped with a lens in front of the emitter diode that produces a small and intense focal point at a defined distance from the sensor. Similar to diffuse mode sensors, the light reflected by the target is evaluated. Convergent mode sensors are ideal for detection of small targets or colour marks and edge guiding or positioning control of transparent materials. The targets must always be within the focal depth of the sensors. The focal depth is defined as the area in front of or behind the focal point within which the object can be detected. Based on the intense light concentration in the focal point, convergent mode sensors are capable of detecting targets with a low reflectivity.

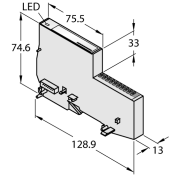
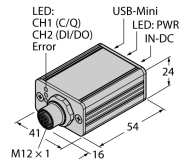
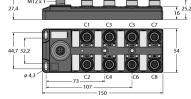
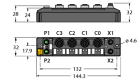
Excess gain curve

Excess gain in relation to the distance

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



Function accessories

Type code	Ident no.		Dimension drawing
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)	
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	
50153501 MD 742-11-82X5-12 Leuze	100051716	16-channel I/O hub for the connection of 16 digital PNP signals to an IO-Link master (input/output freely selectable per channel)	