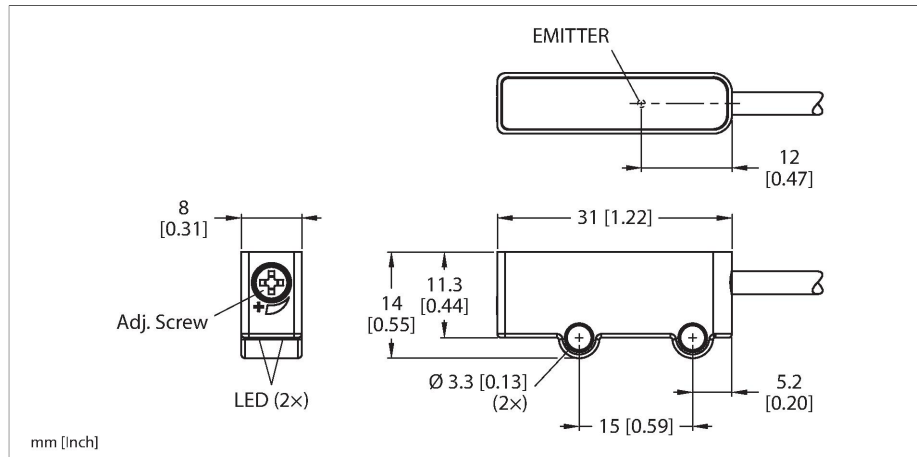


Q2XKLAF3IR-Q

Photoelectric Sensor – Diffuse-Mode Sensor With Switching Output and IO-Link



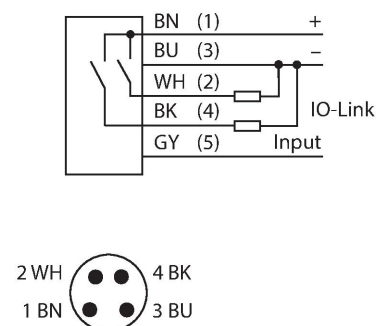
Technical data

Type	Q2XKLAF3IR-Q
ID	3816155
Optical data	
Function	Proximity switch
Operating mode	Background suppression, adjustable
Light type	IR
Wavelength	940 nm
Range	20...3000 mm
Electrical data	
Operating voltage U_B	10...30 VDC
Residual ripple	< 10 % U_{ss}
DC rated operating current I_o	≤ 16 mA
Reverse polarity protection	yes
Communication protocol	IO-Link
Output function	NO/NC, PNP
Readiness delay	≤ 120 ms
Response time typical	< 0.85 ms
Setting option	Potentiometer
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

- Miniature sensor with slim housing for confined spaces
- Protection class IP67
- Connection via 150-mm PVC cable with M8 × 1 male connector, 4-pin
- Range: 3000 mm
- Crosstalk protection
- Operating voltage: 12...30 VDC
- Output 1: PNP switching output with IO-Link communication
- Output 2: PNP switching output, alarm output or Pulse Frequency Modulation (PFM)
- Transmission of process value and parametrization via IO-link

Wiring diagram



Functional principle

Diffuse-mode sensors with background suppression operate with a single emitter and several receiver elements. The position of the object to be detected and the optical structure of the sensor dictate which receiver element gets the most light. The sensor electronics

Technical data

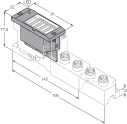
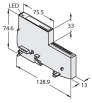
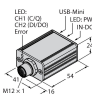
Function Pin 2	DI
Maximum cable length	20 m
Profile support	Smart Sensor Profile
Included in the SIDI GSDML	Yes
Mechanical data	
Design	Rectangular, Q2X
Dimensions	14 x 31 mm
Housing material	Plastic, PC ABS
Lens	acrylic, Acrylic
Electrical connection	Cable with connector, M8 × 1, PVC
Number of cores	4
Ambient temperature	-25...+50 °C
Relative humidity	0...95 %
Protection class	IP67
Special features	Miniature Crosstalk protection
Power-on indication	LED, Green
Switching state	LED, Yellow
Excess gain indication	LED, yellow, flashing
Tests/approvals	
Approvals	CE, cURus

determine whether the reflecting object is within or outside the detection range. The sensors are available with an adjustable or a fixed cut-off point.

Accessories

SMBQ2XB	3812494	SMBQ2XA	3812493
Mounting bracket, stainless steel, for Q2X design, L-shaped for wall mounting		Mounting bracket, stainless steel, for Q2X design, L-shaped for mounting on horizontal surfaces	

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

Dimension drawing	Type	ID	
	TBEN-S2-4IOL	6814024	master (input/output freely selectable per channel) Compact multiprotocol I/O module, 4 IO-Link Master 1.1 Class A, 4 universal PNP digital channels 0.5 A