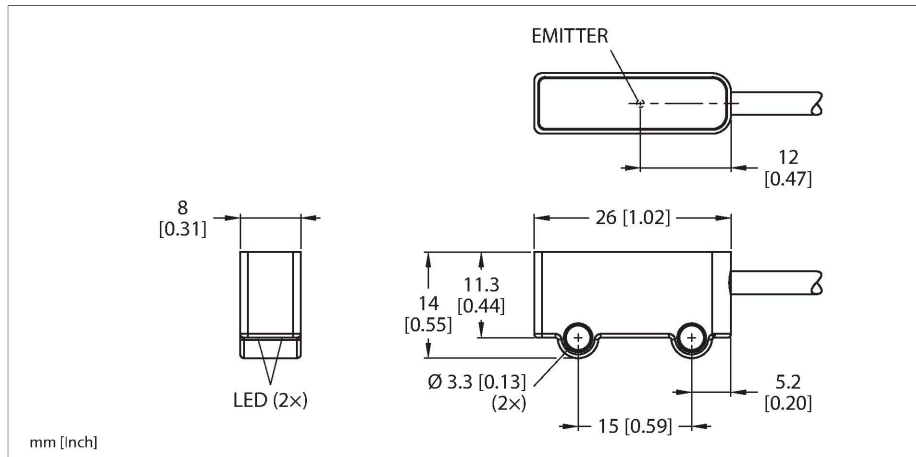


Q2XRNLPF-Q3

Photoelectric Sensor – Retroreflective Sensor with Polarizing Filter



Technical data

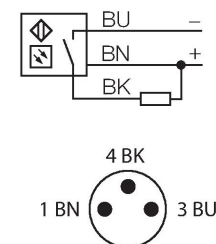
Type	Q2XRNLPF-Q3
ID	3811942
Optical data	
Function	Proximity switch
Light type	Red polarized
Wavelength	645 nm
Range	3300 mm
Electrical data	
Operating voltage U_B	10...30 VDC
Residual ripple	< 10 % U_{ss}
DC rated operating current I_o	≤ 16 mA
Reverse polarity protection	yes
Output function	NPN
Readiness delay	≤ 120 ms
Response time typical	< 0.85 ms
Setting option	Potentiometer
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	3
Ambient temperature	-25...+50 °C
Relative humidity	0...95 %



Features

- Miniature sensor with slim housing for confined spaces
- Protection class IP67
- Connection via 150-mm PVC cable with M8 × 1 male connector, 3-pin
- Adjusted via potentiometer
- NPN switching output, dark operation

Wiring diagram



Functional principle

Retroreflective sensors have an emitter and a receiver incorporated in the same housing. The light beam of the emitter is directed at a reflector which returns the light back to the receiver. An object is detected when it interrupts this light beam. Retroreflective sensors feature some of the advantages of opposed mode sensors, such as good contrast and high excess gain. Furthermore, only one device has to be installed and wired. However, devices without a polarizing filter have a smaller range and are more susceptible to disturbances caused by shiny objects.

Excess gain curve
Excess gain in relation to range (LP type)

Technical data

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

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