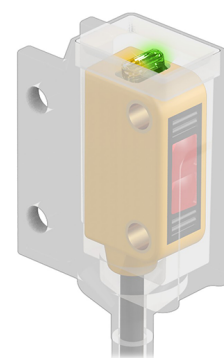
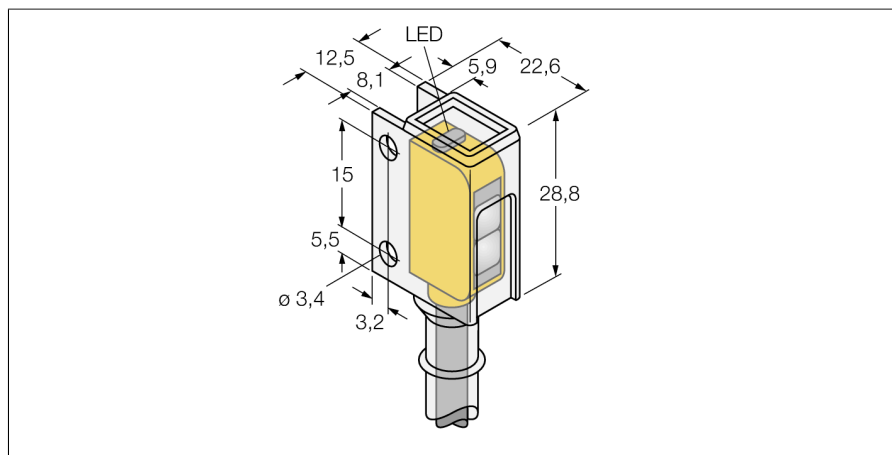


Photoelectric Sensor

Opposed Mode Sensor (Emitter/Receiver)

Miniature Sensor

Q12AB6RCR



Type	Q12AB6RCR
ID	3076486

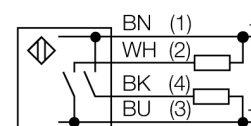
Optical data	
Function	Opposed mode sensor
Operating mode	Receiver
Wavelength	640 nm
Range	0...2000 mm

Electrical data	
Operating voltage U_s	10...30 VDC
Residual ripple	< 10 % U_s
DC rated operating current I_s	≤ 50 mA
No-load current I_0	≤ 20 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, light operation, PNP/NPN
Switching frequency	≤ 450 Hz
Readiness delay	≤ 120 ms
Response time typical	< 1.3 ms

Mechanical data	
Design	Rectangular, Q12
Housing material	Plastic, Thermoplastic material, Yellow
Lens	plastic, Polycarbonate
Electrical connection	Cable, 2 m, PVC
Number of cores	3
Core cross-section	0.34 mm ²
Ambient temperature	-20...+55 °C
Protection class	IP67

- Cable, PVC, 2 m
- Protection class IP67
- Chemical-proof PFA sheath
- LED all-round visible
- Indication of insufficient excess gain
- Operating voltage: 10...30 VDC
- Switching output, bipolar, light operation

Wiring Diagram



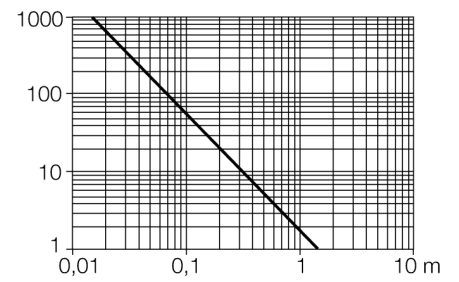
Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque targets. An excellent contrast between light and dark conditions and an extremely high excess gain are typical of this sensing mode, thus allowing operation over larger distances and under difficult conditions.

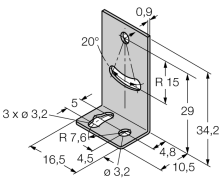
Excess gain curve

Excess gain in relation to the distance

Special features	Chemical-resistant Resistant to chemicals
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, yellow, flashing
Tests/approvals	
Approvals	CE, cURus



Accessories

Type code	Ident no.		Dimension drawing
SMBQ12A	3074341	Mounting bracket; material VA 1.4401, for photoelectric sensor, Q12 series	
SMBQ12T	3073722	Mounting bracket; material VA 1.4401, for photoelectric sensor, Q12 series	