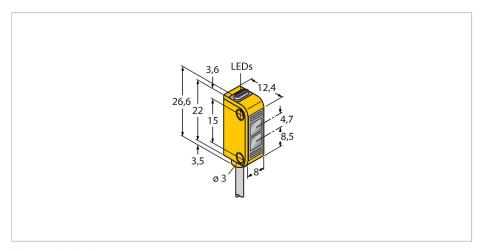
Q12AB6R | 19-01-2022 00-56 | Technical modifications reserved

Q12AB6R Photoelectric Sensor – Opposed Mode Sensor (Emitter/Receiver) Miniature Sensor



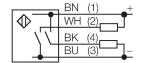
Technical data

Туре	Q12AB6R
ID	3072134
Optical data	
Function	Opposed mode sensor
Operating mode	Receiver
Wavelength	640 nm
Range	02000 mm
Electrical data	
Operating voltage	1030 VDC
Residual ripple	< 10 % U _{ss}
DC rated operational current	≤ 50 mA
No-load current	≤ 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
Dimensions	12.4 x 8 x 26.6 mm
Housing material	Plastic, Thermoplastic material, Yellow
Lens	plastic, Polycarbonate
Electrical connection	Cable, 2 m, PVC

Features

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

Wiring diagram



Functional principle

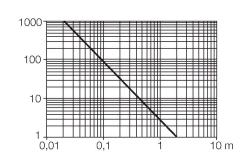
Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque targets. An excellent contrast between light and dark conditions and an extremly 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



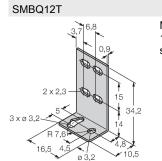
Technical data

Number of cores	3
Core cross-section	0.34 mm²
Ambient temperature	-20+55 °C
Protection class	IP67
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, yellow, flashing
Tests/approvals	
MTTF	139 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus



Accessories

SMBQ12A	3074341
20° R15	Mounting bracket; material VA 1.4401, for photoelectric sensor, Q12 series



Mounting bracket; material VA 1.4401, for photoelectric sensor, Q12 series

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