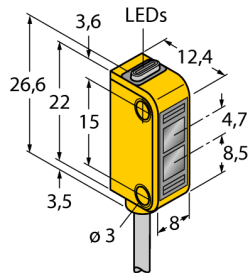


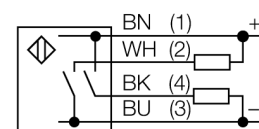
# Photoelectric Sensor Opposed Mode Sensor (Emitter/Receiver) Miniature Sensor Q12RB6R W/30



Type	Q12RB6R W/30
ID	3072139
<b>Optical data</b>	
Function	Opposed mode sensor
Operating mode	Receiver
Wavelength	640 nm
Range	0...2000 mm
<b>Electrical data</b>	
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, PNP/NPN
Switching frequency	≤ 450 Hz
Readiness delay	≤ 120 ms
Response time typical	< 1.3 ms
<b>Mechanical data</b>	
Design	Rectangular, Q12
Housing material	Plastic, Thermoplastic material, Yellow
Lens	plastic, Polycarbonate
Electrical connection	Cable, 9 m, PVC
Number of cores	3
Core cross-section	0.34 mm <sup>2</sup>
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

- Cable, PVC, 9 m
- Protection class IP67
- LED all-round visible
- Indication of insufficient excess gain
- Operating voltage: 10...30 VDC
- Switching output, bipolar, dark operation

## Wiring Diagram



## Functional principle

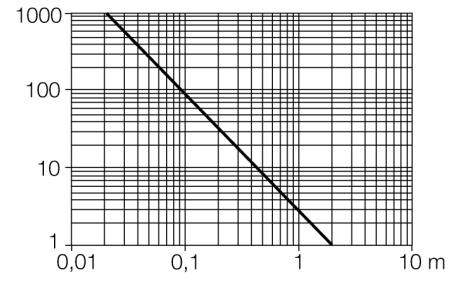
Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors 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

## Tests/approvals

MTTF	139 years acc. to SN 29500 (Ed. 99) 40 °C
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	