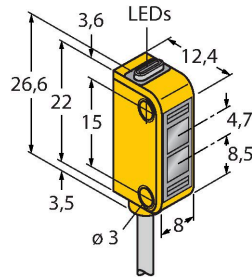


# Q12AB6LV

## Photoelectric Sensor – Retroreflective Sensor Miniature Sensor



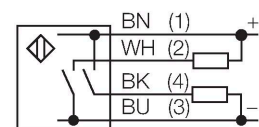
### Technical data

Type	Q12AB6LV
ID	3072122
<b>Optical data</b>	
Function	Retroreflective Sensor
Operating mode	Unpolarized
Reflector included in delivery	no
Light type	Red
Wavelength	640 nm
Range	40...1500 mm
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	< 10 % U <sub>ss</sub>
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	≤ 700 Hz
Readiness delay	≤ 120 ms
Response time typical	< 0.7 ms
<b>Mechanical data</b>	
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



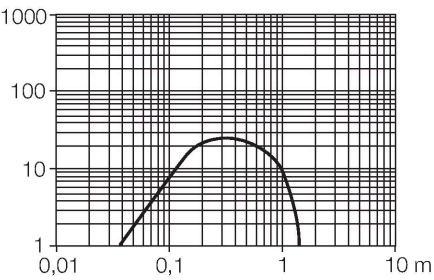
### Functional principle

Retro-reflective sensors incorporate emitter and receiver in a single compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device. A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.

Excess gain curve  
Excess gain in relation to the distance

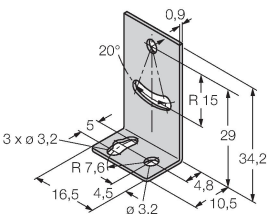
Technical data

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
Tests/approvals	
MTTF	135 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus



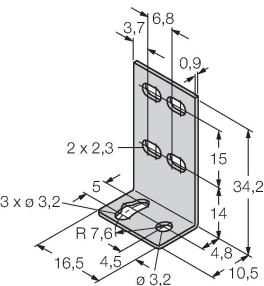
Accessories

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

Accessories

Dimension drawing Type ID

BRT-60X40C 3044997

Rectangular reflector, reflection coefficient 1.48, material: acrylic, ambient temperature -20...+60 °C

