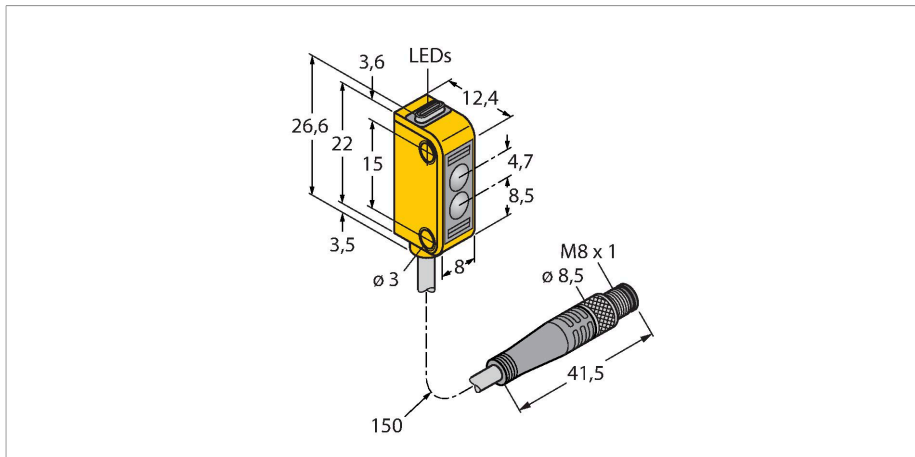


# Q12RB6LPQ

## Photoelectric Sensor – Retroreflective Sensor with Polarizing Filter

### Miniature Sensor



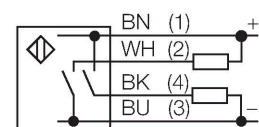
#### Technical data

Type	Q12RB6LPQ
ID	3072132
<b>Optical data</b>	
Function	Retroreflective Sensor
Operating mode	Polarized
Reflector included in delivery	no
Light type	Red polarized
Wavelength	640 nm
Range	100...1000 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, dark 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

#### Features

- Cable, PVC, 150 mm, with M8 × 1 male end, 4-pin
- Protection class IP67
- LED all-round visible
- Indication of insufficient excess gain
- Glass lens
- Operating voltage: 10...30 VDC
- Switching output, bipolar, dark operation

#### Wiring diagram



#### Functional principle

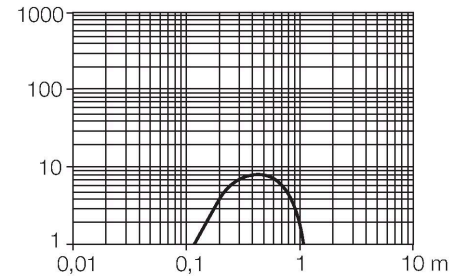
Retro-reflective sensors incorporate emitter and receiver in a single compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device.

## Technical data

Lens	glass, Glass
Electrical connection	Cable with connector, M8 × 1, 0.15 m, PVC
Number of cores	4
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
<b>Tests/approvals</b>	
MTTF	135 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus

A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.

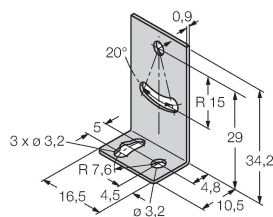
Excess gain curve  
Excess gain in relation to the distance



## Accessories

SMBQ12A

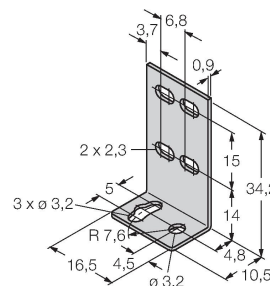
3074341



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	
	PKW4M-2/TEL	6625067	Connection cable, female M8, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>
	PKG4M-2/TEL	6625061	Connection cable, female M8, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>

## Accessories

Dimension drawing	Type	ID	
	BRT-60X40C	3044997	Rectangular reflector, reflection coefficient 1.48, material: acrylic, ambient temperature -20...+60 °C

