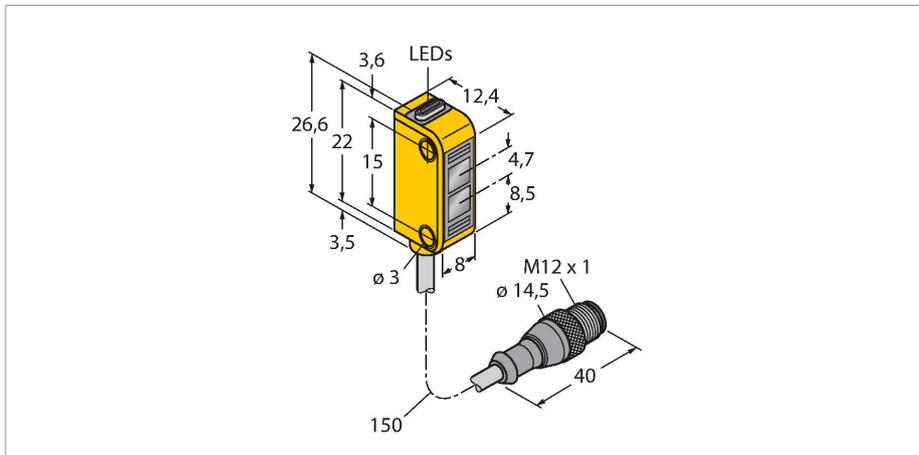


# Q12RB6RQ5

## Photoelectric Sensor – Opposed Mode Sensor (Emitter/Receiver)

### Miniature Sensor



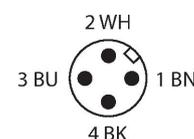
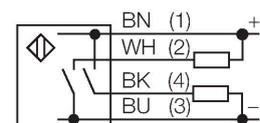
#### Technical data

Type	Q12RB6RQ5
ID	3074140
<b>Optical data</b>	
Function	Opposed mode sensor
Operating mode	Receiver
Wavelength	640 nm
Range	0...2000 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, PNP/NPN
Switching frequency	≤ 450 Hz
Readiness delay	≤ 120 ms
Response time typical	< 1.3 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 with connector, M12 × 1, 0.15 m, PVC

#### Features

- Cable, PVC, 150 mm, with M12 × 1 male end, 4-pin
- 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

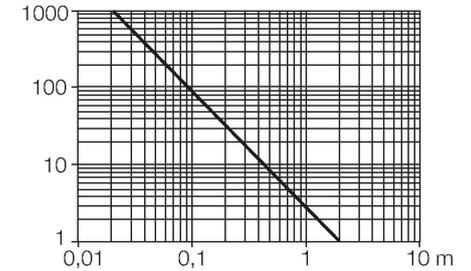
Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors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

## Technical data

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	139 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus

sensing mode, thus allowing operation over larger distances and under difficult conditions.

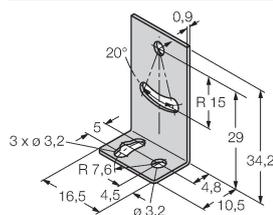
Excess gain curve  
Excess gain in relation to the distance



## Accessories

SMBQ12A

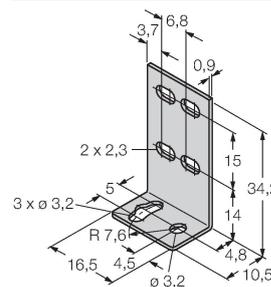
3074341



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	
	RKC4.4T-2/TEL	6625013	Connection cable, female M12, 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>
	WKC4.4T-2/TEL	6625025	Connection cable, female M12, 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>