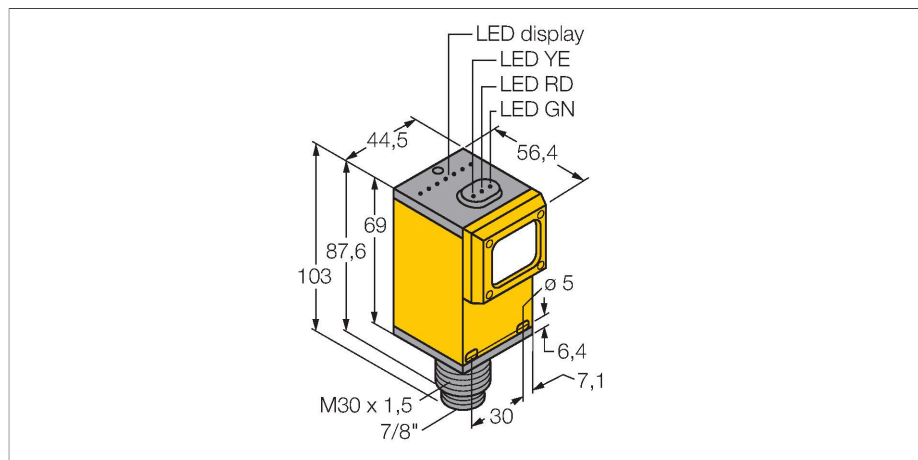


# Q45VR3LVQ

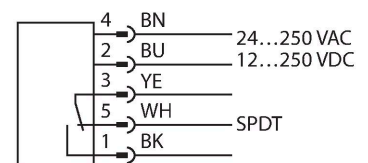
## Photoelectric Sensor – Retroreflective Sensor



### Features

- Male connector 7/8"
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 12...250 VDC or 24...250 VAC
- Relay output, changeover (SPDT)
- Light or dark operation, adjusted via selector switch

### Wiring diagram



### Technical data

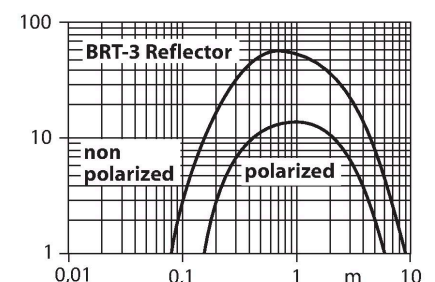
Type	Q45VR3LVQ
ID no.	3054315
<b>Optical data</b>	
Function	Retroreflective Sensor
Operating mode	Unpolarized
Reflector included in delivery	yes
Light type	Red
Wavelength	680 nm
Range	80...9000 mm
<b>Electrical data</b>	
Operating voltage	12...250 VDC
Operating voltage	24...250 VAC
DC rated operational current	≤ 5000 mA
Output function	Complementary contact, Relay output
Switching frequency	0.033 kHz
Switching frequency	≤ 33 Hz
Readiness delay	≤ 100 ms
Response time typical	< 15 ms
Max. DC switching capacity	1 W
Setting option	Potentiometer
<b>Mechanical data</b>	
Design	Rectangular, Q45
Dimensions	Ø 30 x 103 x 54.6 x 44.5 mm
Housing material	Plastic, Thermoplastic material
Lens	acrylic, Acrylic
Electrical connection	Connectors, 7/8", PVC
Number of cores	5



### 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



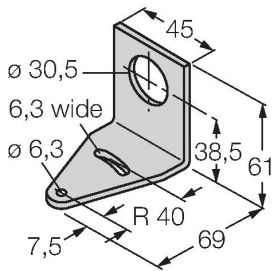
## Technical data

Ambient temperature	-40...+70 °C
Protection class	IP67
Special features	keep/defer
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, red
<b>Tests/approvals</b>	
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus, CSA

## Accessories

SMB30A

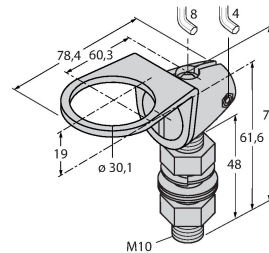
3032723



Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread

SMB30FAM10

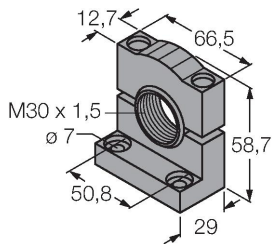
3011185



Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm

SMB30SC

3052521



Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable

## Accessories

Dimension drawing	Type	ID no.	
<p>Technical drawing of a round reflector. The drawing shows a top view and a side view. The top view is a circle with a diameter of 81 mm (tolerance 3.19) and a central hole with a diameter of 5.2 mm (tolerance 0.21). The side view shows a thickness of 7 mm (tolerance 0.28).</p>	BRT-3	3016164	Round reflector, reflection coefficient 1.0, material acrylic, ambient temperature -20...+60 °C