Q45VR3LV W/30'
Photoelectric Sensor – Retroreflective Sensor
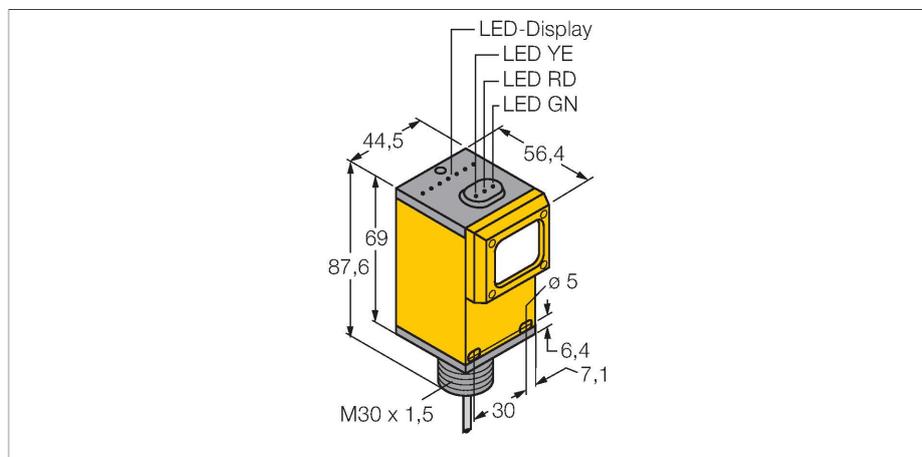


Technical data

Type	Q45VR3LV W/30'
ID no.	3060889
Optical data	
Function	Retroreflective Sensor
Operating mode	Unpolarized
Reflector included in delivery	yes
Light type	Red
Wavelength	680 nm
Range	80…9000 mm
Electrical data	
Operating voltage	12…250 VDC
Operating voltage	24…250 VAC
Output function	Complementary contact, Relay output
Switching frequency	≤ 33 Hz
Readiness delay	≤ 100 ms
Response time typical	< 15 ms
Setting option	Potentiometer
Mechanical data	
Design	Rectangular, Q45
Dimensions	Ø 30 x 56.4 x 44.5 x 87.6 mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Cable, 9 m, PVC
Number of cores	5
Core cross-section	0.34 mm^2
Ambient temperature	-25…+55 °C
Protection class	IP67

Features

- Cable, PVC, 2 m
- 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
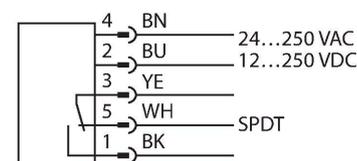
Functional principle

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

Special features	keep/defer
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, red
Tests/approvals	
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus, CSA
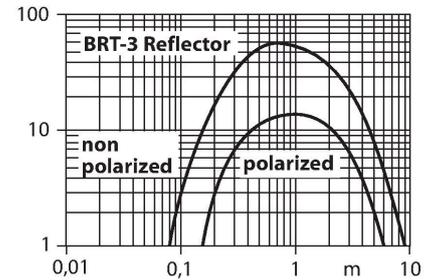
Accessories

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.	
	BRT-3	3016164	Round reflector, reflection coefficient 1.0, material acrylic, ambient temperature -20…+60 °C