

Q45BW13LV W/30

Photoelectric Sensor – Retroreflective Sensor



Technical data

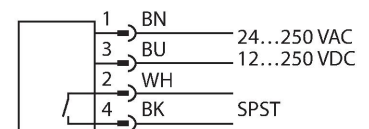
Type	Q45BW13LV W/30
ID no.	3066173
Optical data	
Function	Retroreflective Sensor
Operating mode	Unpolarized
Reflector included in delivery	yes
Light type	Red
Wavelength	680 nm
Range	80...9000 mm
Electrical data	
Operating voltage	12...250 VDC
Operating voltage	24...250 VAC
Output function	NO contact, Relay output
Switching frequency	≤ 33 Hz
Readiness delay	≤ 100 ms
Response time typical	< 2 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	4
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, NO (SPST)
- Light or dark operation, adjusted via selector switch

Wiring diagram



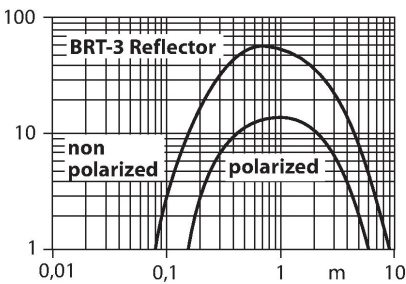
Functional principle

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

SMB30A3032723

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

Technical drawing of the SMB30A mounting bracket. It is a rectangular stainless steel bracket for sensors with a 30mm thread. Dimensions include: top width 45, hole diameter $\varnothing 30,5$, hole spacing 6,3, bottom hole diameter $\varnothing 6,3$, hole spacing 38,5, total height 61, bottom flange width 69, bottom flange thickness 7,5, and a rounded corner with radius R 40.

SMB30FAM103011185

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

Technical drawing of the SMB30FAM10 mounting bracket. It is a stainless steel bracket for M10 x 1.5 thread sensors. Dimensions include: top width 78,4, hole diameter $\varnothing 30,1$, hole spacing 60,3, total height 75, bottom flange width 61,6, bottom flange thickness 48, and a threaded section with M10 thread.

SMB30SC3052521

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

Technical drawing of the SMB30SC mounting bracket. It is a black PBT rotatable bracket for sensors with a 30 mm thread. Dimensions include: top width 12,7, hole diameter $\varnothing 7$, hole spacing 66,5, total height 58,7, bottom flange width 50,8, and bottom flange thickness 29.

Accessories

Dimension drawing	Type	ID no.	
Technical drawing of the BRT-3 reflector. It shows a circular reflector with a diameter of $\varnothing 81$ [3.19] and a central hole with a diameter of $\varnothing 5.2$ [0.21]. The thickness of the reflector is 7 [0.28].	BRT-3	3016164	Round reflector, reflection coefficient 1.0, material acrylic, ambient temperature -20...+60 °C