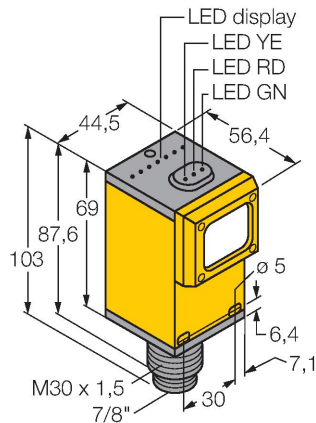


Q45VR3CVQ

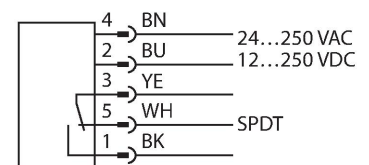
Photoelectric Sensor – Convergent Mode Sensor



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

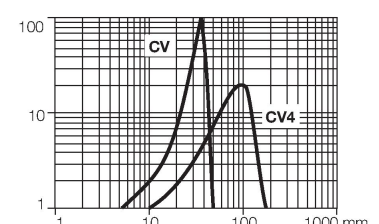
Wiring diagram



Functional principle

Convergent mode sensors are equipped with a lens in front of the emitter diode that produces a small and intense focal point at a defined distance from the sensor. Similar to diffuse mode sensors, the light reflected by the target is evaluated. Convergent mode sensors are ideal for detection of small targets or colour marks and edge guiding or positioning control of transparent materials. The targets must always be within the focal depth of the sensors. The focal depth is defined as the area in front of or behind the focal point within which the object can be detected. Based on the intense light concentration in the focal point, convergent mode sensors are capable of detecting targets with a low reflectivity.

Excess gain curve
Excess gain in relation to the distance



Technical data

Type	Q45VR3CVQ
ID no.	3054306
Optical data	
Function	Proximity switch
Operating mode	Convergent
Light type	Red
Wavelength	680 nm
Focal distance	38 mm
Range	38 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 101.6 mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Connectors, 7/8", PVC
Number of cores	5
Ambient temperature	-25...+55 °C
Protection class	IP67
Special features	keep/defer

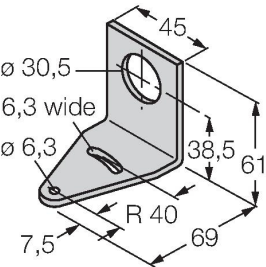
Technical data

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

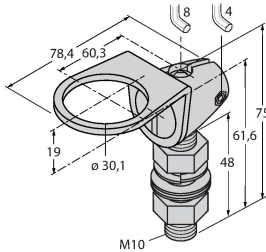


Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread

Technical drawing of SMB30A mounting bracket. Dimensions: 45 (width), 6.3 (hole diameter), 6.3 (width), 38.5 (height), 61 (total height), 69 (base width), 7.5 (base offset), R 40 (radius).

SMB30FAM10

3011185

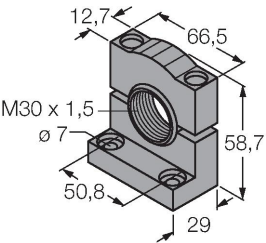


Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm

Technical drawing of SMB30FAM10 mounting bracket. Dimensions: 78.4 (width), 60.3 (hole diameter), 19 (hole offset), 30.1 (hole diameter), 48 (thread length), 61.6 (total height), 75 (base width), M10 (thread).

SMB30SC

3052521



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

Technical drawing of SMB30SC mounting bracket. Dimensions: 12.7 (width), 66.5 (height), 58.7 (total height), 50.8 (base width), 29 (base offset), M30 x 1.5 (thread), 7 (hole diameter).