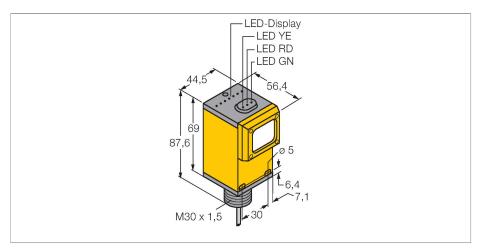


Q45VR2CV4 W/30 Photoelectric Sensor – Convergent Mode Sensor



Technical data

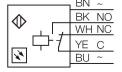
ID no. 3038467 Optical data Proximity switch Function Proximity switch Operating mode Convergent Light type Red Wavelength 680 nm Focal distance 100 mm Range 100 mm Electrical data 90250 VAC No-load current ≤ 50 mA Output function Complementary contact, Relay out Readiness delay ≤ 100 ms Response time typical < 15 ms Setting option Potentiometer Mechanical data Potentiometer Mechanical data Plastic, Thermoplastic material Lens plastic, Acrylic Electrical connection Cable, 9 m, PVC Number of cores 5	
Function Proximity switch Operating mode Convergent Light type Red Wavelength 680 nm Focal distance 100 mm Range 100 mm Electrical data Operating voltage 90250 VAC No-load current ≤ 50 mA Output function Complementary contact, Relay out 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	
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Housing material Lens Plastic, Thermoplastic material plastic, Acrylic Electrical connection Cable, 9 m, PVC	
Lens plastic, Acrylic Electrical connection Cable, 9 m, PVC	
Electrical connection Cable, 9 m, PVC	
Number of cores 5	
Core cross-section 0.34 mm ²	
Ambient temperature -40+70 °C	
Protection class IP67	
Special features keep/defer	



Features

- Cable, PVC, 2 m
- ■Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 90...250 VAC
- Relay output, changeover (SPDT)
- Light or dark operation, adjusted via selector switch

Wiring diagram



Functional principle

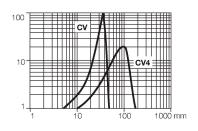
Convergent mode sensors are equipped with a lens in front of the emitter diode that produces a small and intense focal point at a defined distance from the sensor. Similar to diffuse mode sensors, the light reflected by the target is evaluated. Convergent mode sensors are ideal for detection of small 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

Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, red
Tests/approvals	
Tests/approvals MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C



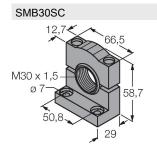
Accessories

SMB30A 3032723

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



3011185 Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30



3052521 Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable