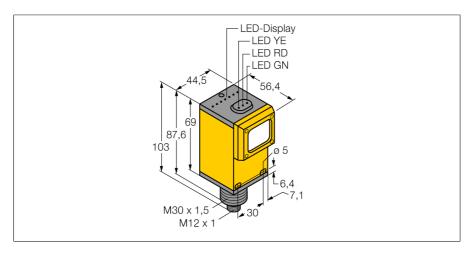


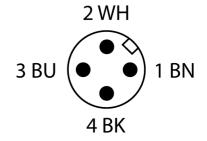
Photoelectric Sensor Convergent Mode Sensor Q45BW22CV4Q1



Туре	Q45BW22CV4Q1	
ID	3040220	
Optical data		
Function	Proximity switch	
Operating mode	Convergent	
Light type	Red	
Wavelength	680 nm	
Focal distance	100 mm	
Electrical data		
Operating voltage U _B	90250VAC	
No-load current I₀	≤ 50 mA	
Output function	NO contact, Relay output	
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 102.6 mm	
Housing material	Plastic, Thermoplastic material	
Lens	plastic, Acrylic	
Electrical connection	Connector, 1/2", PVC	
Number of cores	4	
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	
Tests/approvals		
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C	
Approvals	CE, cURus, CSA	

- M12 × 1 male connector
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 90...250 VAC
- Relay output, NO (SPST)
- Light or dark operation, adjusted via selector switch

Wiring Diagram

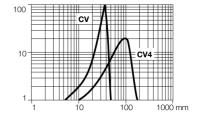


Functional principle

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





Accessories

Type code	Ident no.		Dimension drawing
SMB30A	3032723	Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread	o 30,5 6,3 wide o 6,3 7,5 R 40 69
SMB30FAM10	3011185	Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm	78.4 60.3 78.4 60.3 19 0 30.1 48
SMB30SC	3052521	Mounting bracket, PBT black, for sensors with 30 mm thread rotatable	12.7 66.5 M30 x 1,5 67. 58.7 50.8