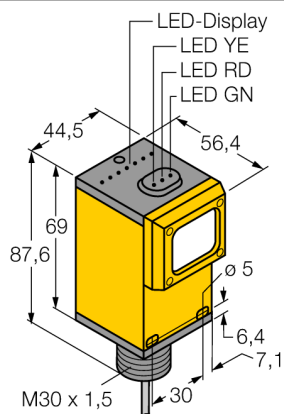


Photoelectric Sensor

Diffuse Mode Sensor

Q45VR2DX W/30



Type	Q45VR2DX W/30
ID	3060881

Optical data	
Function	Proximity switch
Operating mode	Diffuse
Light type	IR
Wavelength	880 nm
Range	0...3000 mm

Electrical data	
Operating voltage U_a	90...250VAC
No-load current I_0	≤ 50 mA
Output function	Complementary contact, Relay output
Readiness delay	≤ 100 ms
Response time typical	< 15 ms
Setting option	Potentiometer

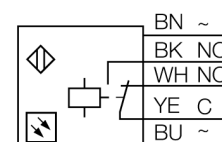
Mechanical data	
Design	Rectangular, Q45
Dimensions	Ø 30 x 56.4 x 44.5 x 87.6 mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Cable, 9 m, PVC
Number of cores	5
Core cross-section	0.34 mm ²
Ambient temperature	-40...+70 °C
Protection class	IP67

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

- 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

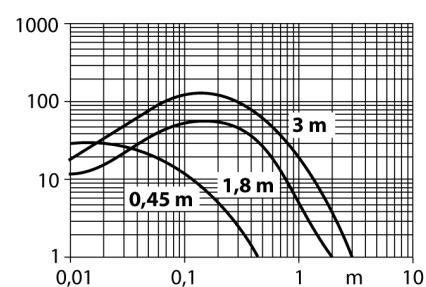


Functional principle

Like retroreflective sensors, diffuse mode sensors also contain emitter and receiver circuitry in the same housing. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the object. An object is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the object's reflectivity. This type of sensor is especially suited for detection of transparent objects (diffuse mode sensor with or without background suppression or convergent mode sensors).

Excess gain curve

Excess gain in relation to distance



Accessories

Type code	Ident no.		Dimension drawing
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	