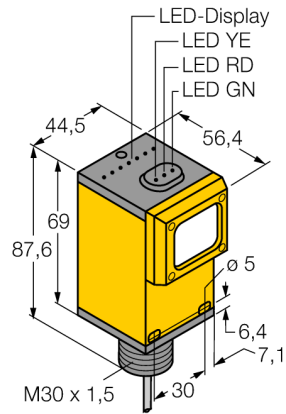


Photoelectric Sensor

Retroreflective Sensor with Polarizing Filter

Q45BW223LP



Type	Q45BW223LP
ID	3047570
Optical data	
Function	Retroreflective Sensor
Operating mode	Polarized
Reflector included in delivery	yes
Light type	Red polarized
Wavelength	680 nm
Range	150...6000 mm
Electrical data	
Operating voltage U_a	22...36VAC
No-load current I_o	≤ 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	$\varnothing 30 \times 56.4 \times 44.5 \times 87.6$ mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	3
Core cross-section	0.34 mm^2
Ambient temperature	$-40...+70$ °C
Protection class	IP67
Special features	
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, red

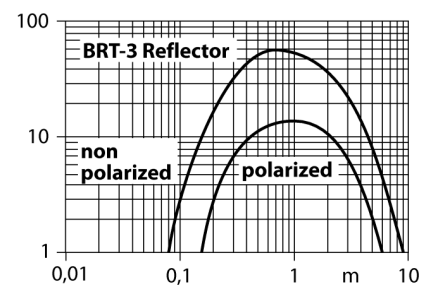
- Cable, PVC, 2 m
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 90...250 VAC
- Relay output, NO (SPST)
- Light or dark operation, adjusted via selector switch

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

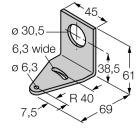
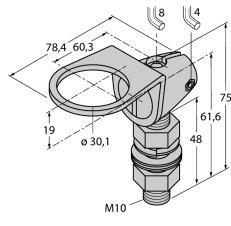
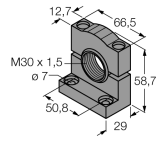


Tests/approvals

MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
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Approvals	CE, cURus, CSA
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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	

Function accessories

Type code	Ident no.		Dimension drawing
BRT-3	3016164	Round reflector, reflection coefficient 1.0, material acrylic, ambient temperature -20...+60 °C	