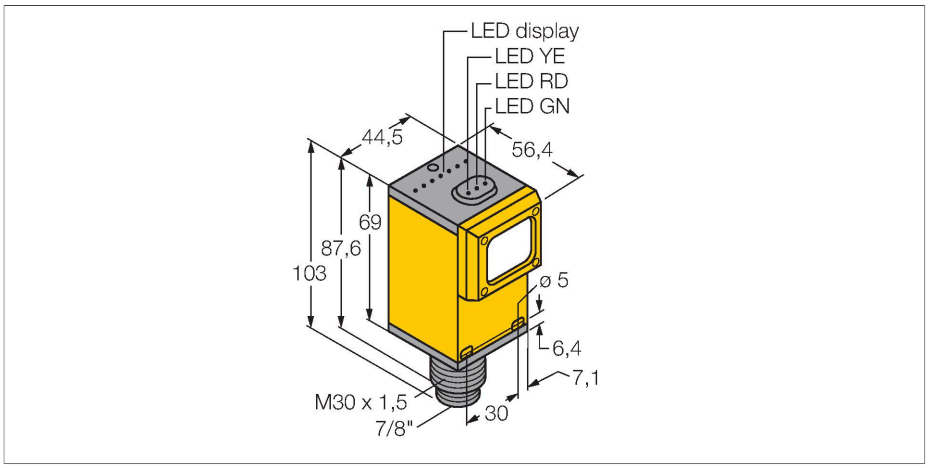
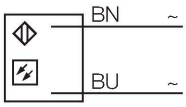
Q453EQ
Photoelectric Sensor – Opposed Mode Sensor (Emitter)



Features

- Male connector 7/8"
- Protection class IP67
- Operating voltage: 12…250 VDC or 24… 250 VAC

Wiring diagram

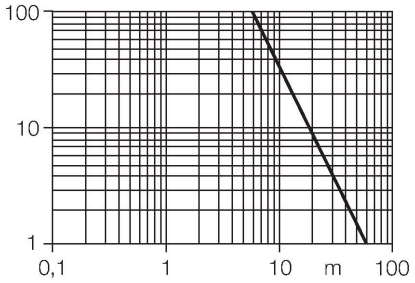


Technical data

Type	Q453EQ
ID no.	3054328
Optical data	
Function	Opposed mode sensor
Operating mode	Emitter
Light type	IR
Wavelength	880 nm
Range	0…60000 mm
Electrical data	
Operating voltage	12…250 VDC
Operating voltage	24…250 VAC
DC rated operational current	≤ 5000 mA
No-load current	≤ 50 mA
Switching frequency	0.033 kHz
Readiness delay	≤ 0 ms
Mechanical data	
Design	Rectangular, Q45
Dimensions	Ø 30 x 103 x 56.4 x 44.5 mm
Housing material	Plastic, Thermoplastic material
Lens	acrylic, Acrylic
Electrical connection	Connectors, 7/8", PVC
Number of cores	3
Ambient temperature	-40…+70 °C
Protection class	IP67
Power-on indication	LED, Green
Switching state	LED, Yellow
Excess gain indication	LED, red

Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque targets. An excellent contrast between light and dark conditions and an extremly high excess gain are typical of this sensing mode, thus allowing operation over larger distances and under difficult conditions.
Excess gain curve
Excess gain in relation to the distance

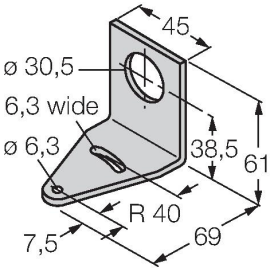


Technical data

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

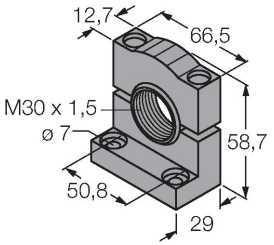
Accessories

SMB30A 3032723



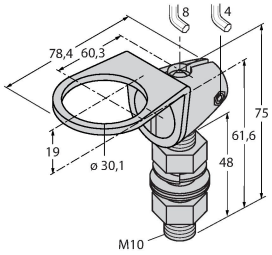
Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread

SMB30SC 3052521



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

SMB30FAM10 3011185



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