

Q459E W/30

Photoelectric Sensor – Opposed Mode Sensor (Emitter)



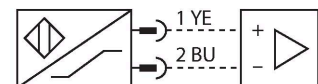
Technical data

Type	Q459E W/30
ID	3040813
Optical data	
Function	Opposed mode sensor
Operating mode	Emitter
Light type	IR
Wavelength	880 nm
Range	0...6000 mm
Electrical data	
Operating voltage	5...15 VDC
No-load current	≤ 50 mA
Readiness delay	≤ 0 ms
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	2
Core cross-section	0.34 mm ²
Ambient temperature	-40...+70 °C
Protection class	IP67
Excess gain indication	LED
Tests/approvals	
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, FM, CSA

Features

- Cable, PVC, 2 m
- Protection class IP67
- Operating voltage: 5...15 VDC
- acc. to 60947-5-6 (NAMUR)

Wiring diagram



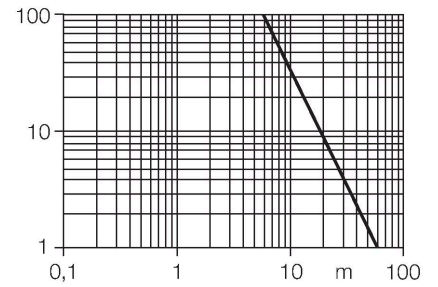
Functional principle

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 extremely 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

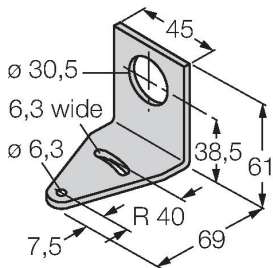
Ignition protection category	Ex ia IIC T5
Ex approval acc. to conformity certificate	KEMA 03ATEX 1441 X



Accessories

SMB30A

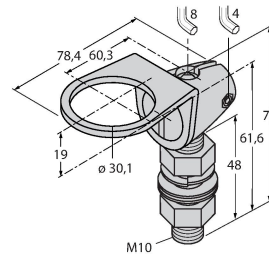
3032723



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

SMB30FAM10

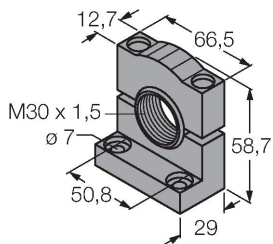
3011185



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

Accessories

Dimension drawing

Type

ID

IM1-22EX-R

7541231

Isolating switching amplifier, 2-channel; 2 relay outputs; input NAMUR signal; selectable ON/OFF mode for wire-break and short-circuit monitoring; adjustable output mode (NO / NC mode); removable terminal blocks; width 18 mm; universal power supply unit

