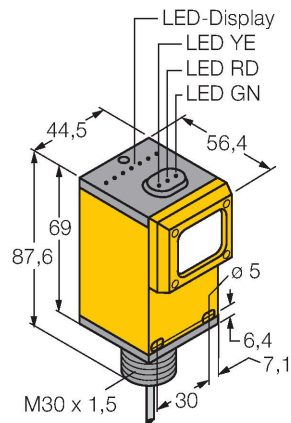


Q45AD9R W/30

Photoelectric Sensor – Opposed Mode Sensor (Emitter/Receiver)



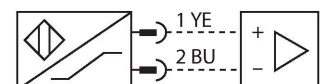
Technical data

Type	Q45AD9R W/30
ID	3040814
Optical data	
Function	Opposed mode sensor
Operating mode	Receiver
Range	0...6000 mm
Electrical data	
Operating voltage	5...15 VDC
Voltage	Nom. 8.2 VDC
Current consumption non-actuated	≤ 1 mA
Actuated current consumption	≥ 2.1 mA
No-load current	≤ 2.1 mA
Output function	Light operation, NAMUR
Switching frequency	≤ 100 Hz
Readiness delay	≤ 0 ms
Response time typical	< 2 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	2
Core cross-section	0.34 mm ²
Ambient temperature	-40...+70 °C

Features

- Cable, PVC, 2 m
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 5...15 VDC
- NAMUR output: dark ≤ 1.2 mA ; light ≥ 2.1 mA
- Acc. to EN 60947-5-6 (NAMUR)

Wiring diagram

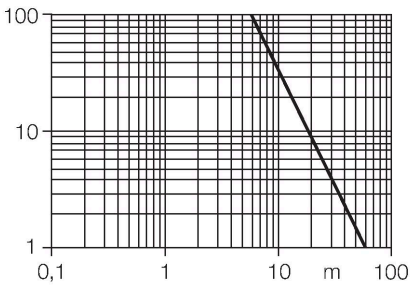


Functional principle

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

Protection class	IP67
Switching state	LED, Red
Excess gain indication	LED, flashing
Tests/approvals	
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, FM, CSA
Ignition protection category	Ex ia IIC T5
Ex approval acc. to conformity certificate	FM12ATEX0094X



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	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