QM42VN6R
Photoelectric Sensor –   Opposed Mode Sensor (Emitter/ Receiver)

Technical data

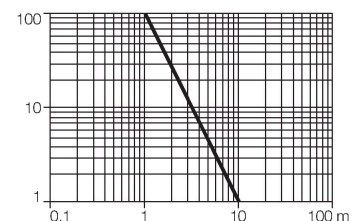| Type	QM42VN6R
ID	3044337
Optical data	
Function	Opposed mode sensor
Operating mode	Receiver
Wavelength	880 nm
Range	0…10000 mm
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	< 10 % U_{ss}
DC rated operational current	≤ 100 mA
No-load current	≤ 30 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO/NC, NPN
Switching frequency	≤ 500 Hz
Readiness delay	≤ 100 ms
Response time typical	< 1 ms
Overcurrent release	> 150 mA
Setting option	Potentiometer
Mechanical data	
Design	Rectangular, QM42
Dimensions	42 x 12.7 x 42 mm
Housing material	Metal, Zinc Alloy Die-Cast, Black-finished
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	4

Features

- Cable, PVC, 2 m, 4-wire
- Metal housing, ZN, black
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage 10…30 VDC
- NPN switching output
- Light/dark operation

Wiring diagram
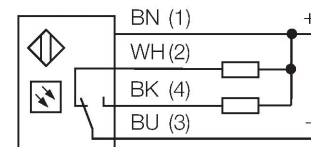
Functional principle

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 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

Core cross-section	0.5 mm^2
Ambient temperature	-20…+70 °C
Protection class	IP67
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED
Alarm display	LED yellow Flashing
Tests/approvals	
Approvals	CE, cURus

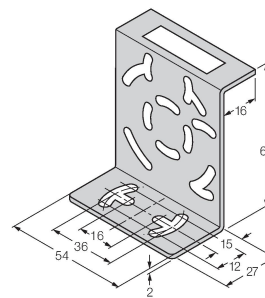## Accessories

SMB30SK	3052523
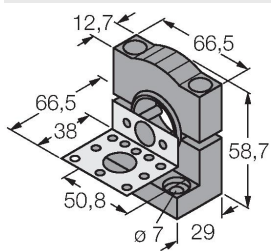
Mounting bracket, PBT black, with mounting plate, stainless steel, for types with 18 mm thread, QM42/QMT42
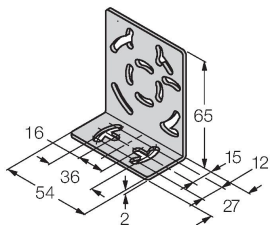
SMB46S	3048748

Mounting bracket, stainless steel, for QS18, QS30, MINI-BEAM, QM42/QMT42

SMB46L	3048747

Mounting bracket, stainless steel, for QS18, QS30, MINI-BEAM, QM42/QMT42