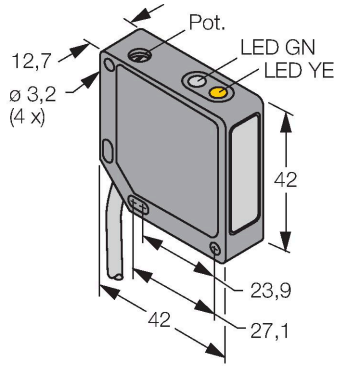
QM42VP6D
Photoelectric Sensor – Diffuse Mode Sensor



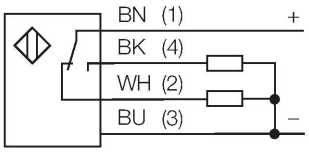
Technical data

Type	QM42VP6D
ID	3044333
Optical data	
Function	Proximity switch
Operating mode	Diffuse
Light type	IR
Wavelength	880 nm
Range	0…400 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, PNP
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
- PNP switching output
- Light/dark operation

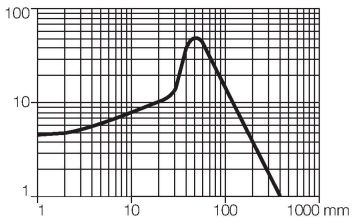
Wiring diagram



Functional principle

Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects a sufficient amount of light back to the receiver. The switching distance of diffuse mode sensors largely depends on the reflectivity of the target.

Excess gain curve
Excess gain in relation to the distance



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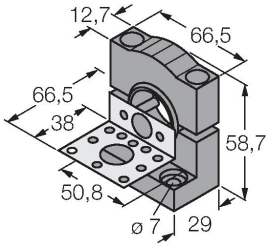
Technical data

Core cross-section	0.5 mm²
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

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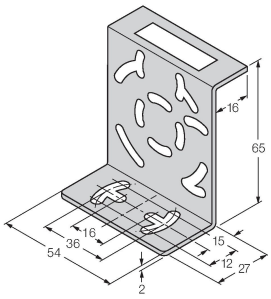

Mounting bracket, stainless steel, for QS18, QS30, MINI-BEAM, QM42/ QMT42

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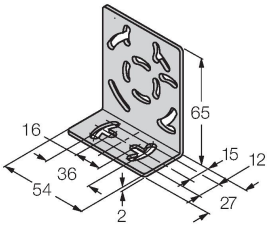

Mounting bracket, stainless steel, for QS18, QS30, MINI-BEAM, QM42/ QMT42

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