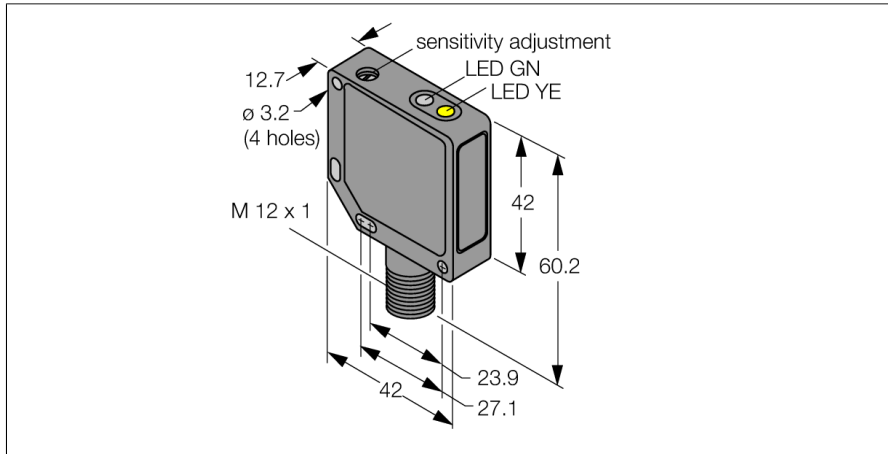


Photoelectric Sensor

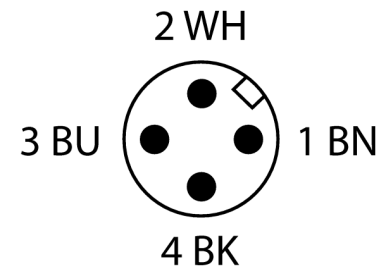
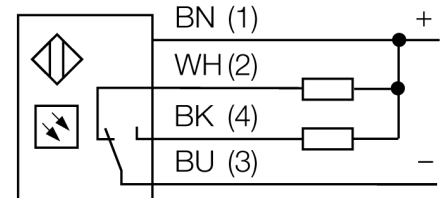
Diffuse Mode Sensor with Fixed-Field Background Suppression

QM42VN6AFV150Q



- Male M12 × 1, 4-pin
- Metal housing, ZN, black
- Protection class IP67
- Scanning width adjusted via potentiometer
- Operating voltage 10...30 VDC
- NPN switching output
- Light/dark operation

Wiring Diagram



Type	QM42VN6AFV150Q
ID	3048696

Optical data	
Function	Proximity switch
Operating mode	Background suppression, adjustable
Light type	Red
Wavelength	680 nm
Range	50...150 mm

Electrical data	
Operating voltage U_s	10...30 VDC
Residual ripple	< 10 % U_s
DC rated operating current I_s	≤ 100 mA
No-load current I_0	≤ 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
Housing material	Metal, Zinc Alloy Die-Cast, Black-finished
Lens	plastic, Acrylic
Electrical connection	Connector, M12 × 1, PVC
Number of cores	4
Ambient temperature	-20...+55 °C
Protection class	IP67

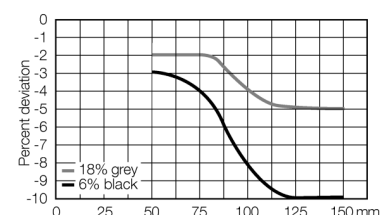
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED
Alarm display	LED yellow Flashing

Functional principle

Diffuse mode sensors with background suppression operate with a single emitter and several receiver elements. The target position and the photoelectric structure of the sensor determine which of the receiving elements receives the most light. The sensor electronics determine whether the reflecting object is within or outside the measuring range. These sensors come with an adjustable cut-off point.

Deviation curve

Sensing range deviation curve

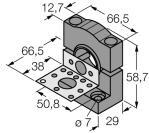
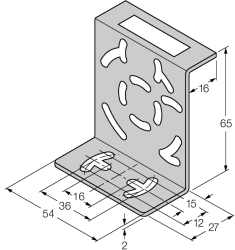


Tests/approvals

Approvals

CE, cURus

Accessories

Type code	Ident no.		Dimension drawing
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, MI-NI-BEAM, QM42/QMT42	
SMB46L	3048747	Mounting bracket, stainless steel, for QS18, QS30, MI-NI-BEAM, QM42/QMT42	