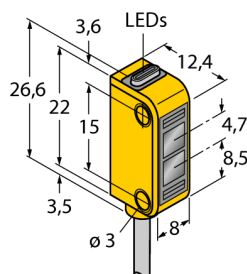


Photoelectric Sensor

Diffuse Mode Sensor with Fixed-Field Background Suppression

Miniature Sensor

Q12RB6FF50 W/30



Type	Q12RB6FF50 W/30
ID	3072121

Optical data	
Function	Proximity switch
Operating mode	Background suppression, non-adjustable
Light type	Red
Wavelength	640 nm
Range	3...50 mm

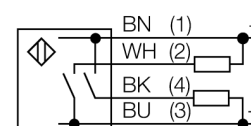
Electrical data	
Operating voltage U_s	10...30 VDC
Residual ripple	< 10 % U_s
DC rated operating current I_s	≤ 50 mA
No-load current I_0	≤ 20 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, PNP/NPN
Switching frequency	≤ 700 Hz
Readiness delay	≤ 120 ms
Response time typical	< 0.85 ms

Mechanical data	
Design	Rectangular, Q12
Housing material	Plastic, Thermoplastic material, Yellow
Lens	plastic, Polycarbonate
Electrical connection	Cable, 9 m, PVC
Number of cores	3
Core cross-section	0.34 mm ²
Ambient temperature	-20...+55 °C
Protection class	IP67

Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, yellow, flashing

- Cable, PVC, 9 m
- Protection class IP67
- LED all-round visible
- Indication of insufficient excess gain
- Operating voltage: 10...30 VDC
- Switching output, bipolar, dark operation

Wiring Diagram

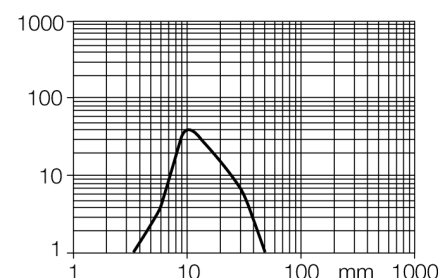


Functional principle

The emitter and receiver are incorporated in a single housing. The light reflection of the target is detected and triggers the sensor to switch. Thus the switching distance largely depends on the reflectivity of the target.

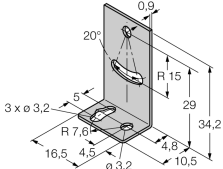
Excess gain curve

Excess gain in relation to the distance



Tests/approvals	
MTTF	135 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus

Accessories

Type code	Ident no.		Dimension drawing
SMBQ12A	3074341	Mounting bracket; material VA 1.4401, for photoelectric sensor, Q12 series	
SMBQ12T	3073722	Mounting bracket; material VA 1.4401, for photoelectric sensor, Q12 series	