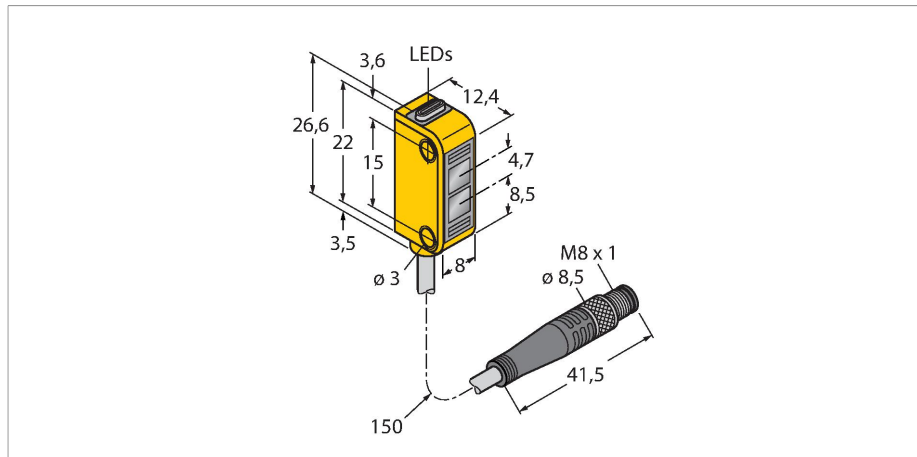


Q12RN6FF50Q3

Photoelectric Sensor – Diffuse Mode Sensor with Fixed-Field Background Suppression Miniature Sensor



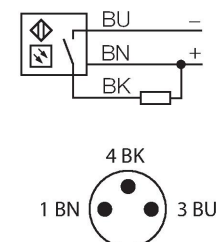
Technical data

Type	Q12RN6FF50Q3
ID	3077105
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	10...30 VDC
Residual ripple	< 10 % U _{ss}
DC rated operational current	≤ 50 mA
No-load current	≤ 20 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, NPN
Switching frequency	≤ 700 Hz
Readiness delay	≤ 120 ms
Response time typical	< 0.85 ms
Mechanical data	
Design	Rectangular, Q12
Dimensions	12.4 x 8 x 26.6 mm
Housing material	Plastic, Thermoplastic material, Yellow
Lens	plastic, Polycarbonate

Features

- Cable, PVC, 150 mm, with M8 × 1 male end, 3-pin
- Protection class IP67
- LED all-round visible
- Indication of insufficient excess gain
- Operating voltage: 10...30 VDC
- NPN switching output, dark operation

Wiring diagram



Functional principle

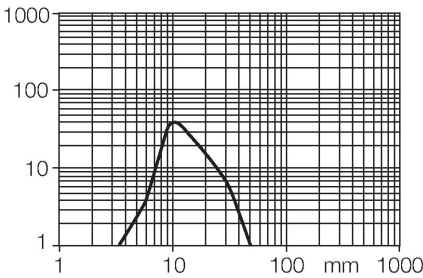
The emitter and receiver are incorporated in a single housing. The light reflection of the target is detected and triggers the sensor to switch. Thus the switching distance largely depends on the reflectivity of the target.

Excess gain curve

Excess gain in relation to the distance

Technical data

Electrical connection	Connector, M8 × 1, 0.15 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
Tests/approvals	
MTTF	135 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus



Accessories

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

Accessories

Dimension drawing	Type	ID	
	PKG3M-2/TEL	6625058	Connection cable, female M8, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com
	PKW3M-2/TEL	6625064	Connection cable, female M8, angled, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com