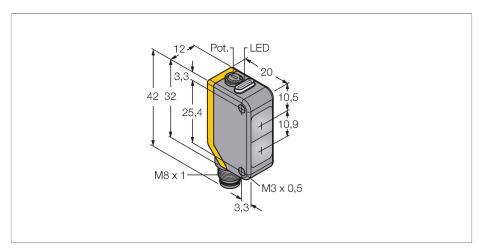


# Q20NDLQ7 Photoelectric Sensor – Diffuse Mode Sensor





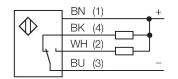
Туре	Q20NDLQ7	
ID no.	3077756	
Optical data		
Function	Proximity switch	
Operating mode	Diffuse	
Light type	Red	
Wavelength	655 nm	
Range	1800 mm	
Electrical data		
Operating voltage	1030 VDC	
Residual ripple	< 10 % U <sub>ss</sub>	
DC rated operational current	≤ 100 mA	
No-load current	≤ 18 mA	
Reverse polarity protection	yes	
Output function	Complementary contact, NPN	
Switching frequency	≤ 600 Hz	
Readiness delay	≤ 100 ms	
Response time typical	< 0.8 ms	
Setting option	Potentiometer	
Mechanical data		
Design	Rectangular, Q20	
Dimensions	20 x 12 x 42 mm	
Housing material	Plastic, Thermoplastic material	
Lens	plastic, Acrylic	
Electrical connection	Connectors, M8 × 1, PVC	
Number of cores	4	
Ambient temperature	-20+60 °C	



### **Features**

- Male M8 × 1; 4-pin
- ■Protection class IP67
- ■LED all-round visible
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- ■NPN switching output, changeover

## Wiring diagram



## Functional principle

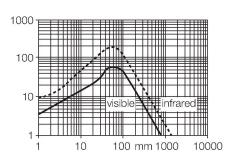
Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects a sufficient amount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

Excess gain curvee Excess gain in relation to the distance

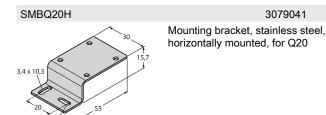
# Technical data

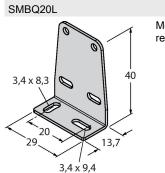
Protection class	IP67		
Power-on indication	LED, Green		
Switching state	LED, Yellow		
Error indication	LED, green, Flashing		
Excess gain indication	LED, yellow, flashing		
Tests/approvals			
Approvals	CE		

## **Excess Gain Curve**

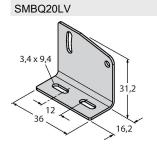


## Accessories





3079040 Mounting bracket, stainless steel, rectangular, for Q20



Mounting bracket, stainless steel, rectangular, for Q20

3079042



Protective housing, stainless steel, for Q20

3079043

### Accessories

Dimension drawing	Туре	ID no.	
09.5 16.5 29 16.5 	PKW4M-2/TEL	6625067	Connection cable, female M8, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com
M8 x 1 o 9.6	PKG4M-2/TEL	6625061	Connection cable, female M8, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com