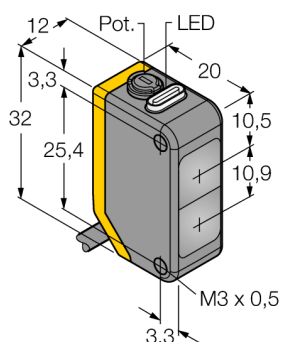


Photoelectric Sensor

Diffuse-Mode Sensor

Q20PDXL W/30



Type	Q20PDXL W/30
ID	3078161

Optical data	
Function	Proximity switch
Operating mode	Diffuse
Light type	IR
Wavelength	850 nm
Range	1...1500 mm

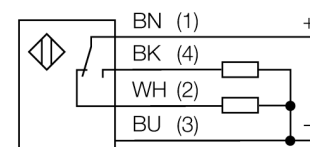
Electrical data	
Operating voltage U_s	10...30 VDC
Residual ripple	< 10 % U_s
DC rated operating current I_s	≤ 100 mA
No-load current I_0	≤ 18 mA
Reverse polarity protection	yes
Output function	Complementary contact, PNP
Switching frequency	≤ 600 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.8 ms
Setting option	Potentiometer

Mechanical data	
Design	Rectangular, Q20
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Cable, 9 m, PVC
Number of cores	4
Core cross-section	0.35 mm ²
Ambient temperature	-20...+60 °C
Protection class	IP67

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

- Cable, PVC, 9 m
- Protection class IP67
- LED, all-round visible
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- PNP switching output, changeover

Wiring Diagram



Functional principle

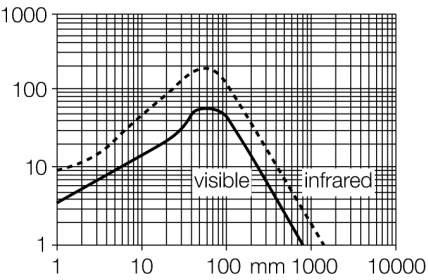
Like retroreflective sensors, diffuse-mode sensors also have an emitter and a receiver incorporated in the same housing. However, diffuse-mode sensors do not evaluate the interruption of a light beam but the reflection of an object. An object is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse-mode sensors thus largely depends on the reflectivity of the object.

Excess gain curve

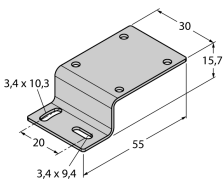
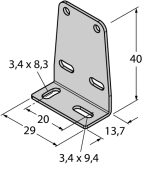
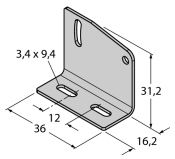
Excess gain in relation to range

Excess Gain Curve

Tests/approvals	
Approvals	CE



Accessories

Type code	Ident no.		Dimension drawing
SMBQ20H	3079041	Mounting bracket, stainless steel, horizontally mounted, for Q20	
SMBQ20L	3079040	Mounting bracket, stainless steel, rectangular, for Q20	
SMBQ20LV	3079042	Mounting bracket, stainless steel, rectangular, for Q20	
SMBQ20U	3079043	Protective housing, stainless steel, for Q20	