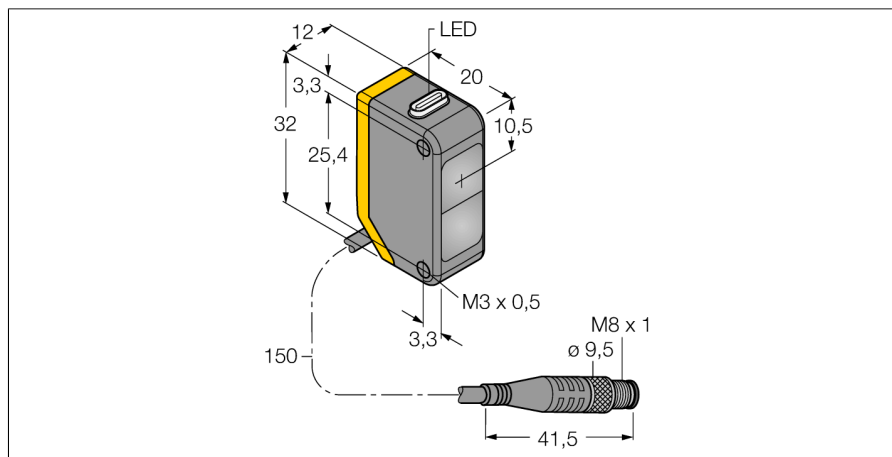


Photoelectric Sensor

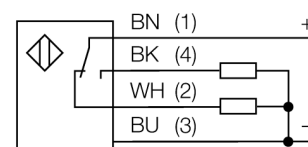
Opposed Mode Sensor (Receiver)

Q20PRLQ



- Cable with male end, PVC, M8 × 1, 4-pin, 150 mm
- Protection class IP67
- LED, all-round visible
- Operating voltage: 10...30 VDC
- PNP switching output, changeover

Wiring Diagram

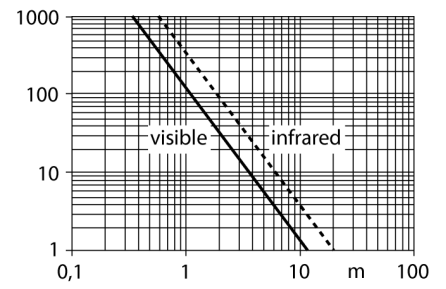


Functional principle

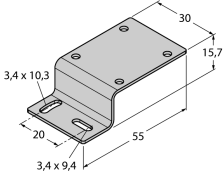
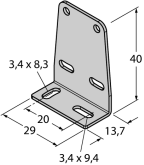
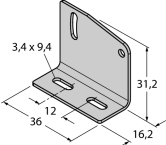
Opposed mode sensors consist of an emitter and a receiver. They are installed in such a way that the emitted light is aimed directly at the receiver. When an object interrupts or weakens the light beam, a switching operation is triggered. Opposed mode sensors are the most reliable photoelectric sensors for any application that requires the detection of opaque objects. High light/dark contrast and very high excess gain are typical of this operating mode and enable operation over long distances and under difficult conditions.

Excess Gain Curve

Type	Q20PRLQ
ID	3078282
Optical data	
Function	Opposed mode sensor
Operating mode	Receiver
Range	0...20000 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	< 1 ms
Mechanical data	
Design	Rectangular, Q20
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Cable with connector, M8 × 1, 0.15 m, PVC
Number of cores	4
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
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	