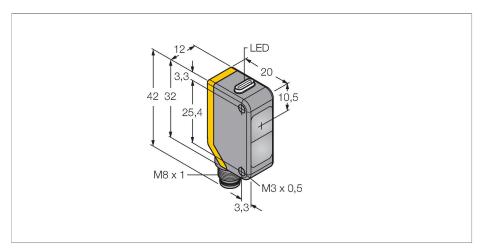


# Q20ELQ7 Photoelectric Sensor – Opposed Mode Sensor (Emitter)



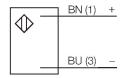


ID no.   3078160	Туре	Q20ELQ7		
Function Opposed mode sensor  Operating mode Emitter  Light type IR  Wavelength 850 nm  Range 020000 mm  Electrical data Operating voltage 1030 VDC  Residual ripple < 10 % U₂s  No-load current ≤ 18 mA  Reverse polarity protection yes  Readiness delay ≤ 100 ms  Mechanical 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  Protection class IP67  Power-on indication LED, Green	ID no.	3078160		
Operating mode Emitter  Light type IR  Wavelength 850 nm  Range 020000 mm  Electrical data Operating voltage 1030 VDC  Residual ripple < 10 % U₂₂   No-load current ≤ 18 mA  Reverse polarity protection yes  Readiness delay ≤ 100 ms  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  Protection class IP67  Power-on indication LED, Green	Optical data			
Light type       IR         Wavelength       850 nm         Range       020000 mm         Electrical data       030 VDC         Residual ripple       < 10 % U₂₂	Function	Opposed mode sensor		
Wavelength       850 nm         Range       020000 mm         Electrical data       030 VDC         Residual ripple       < 10 % U₂₂	Operating mode	Emitter		
Range 020000 mm  Electrical data  Operating voltage 1030 VDC  Residual ripple < 10 % U₂₂   No-load current ≤ 18 mA  Reverse polarity protection yes  Readiness delay ≤ 100 ms  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  Protection class IP67  Power-on indication LED, Green	Light type	IR		
Electrical data  Operating voltage  Residual ripple  < 10 % U₅  No-load current  ≤ 18 mA  Reverse polarity protection  Readiness delay  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  Protection class  IP67  Power-on indication  LED, Green	Wavelength	850 nm		
Operating voltage       1030 VDC         Residual ripple       < 10 % U <sub>ss</sub> No-load current       ≤ 18 mA         Reverse polarity protection       yes         Readiness delay       ≤ 100 ms         Mechanical data       Design         Dimensions       20 x 12 x 42 mm         Housing material       Plastic, Thermoplastic material         Lens       plastic, Acrylic         Electrical connection       Connectors, M8 x 1, PVC         Number of cores       4         Ambient temperature       -20+60 °C         Protection class       IP67         Power-on indication       LED, Green	Range	020000 mm		
Residual ripple       < 10 % U <sub>ss</sub> No-load current       ≤ 18 mA         Reverse polarity protection       yes         Readiness delay       ≤ 100 ms         Mechanical data       Pesign         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         Protection class       IP67         Power-on indication       LED, Green	Electrical data			
No-load current       ≤ 18 mA         Reverse polarity protection       yes         Readiness delay       ≤ 100 ms         Mechanical data       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         Protection class       IP67         Power-on indication       LED, Green	Operating voltage	1030 VDC		
Reverse polarity protection yes   Readiness delay ≤ 100 ms   Mechanical data 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   Protection class IP67   Power-on indication LED, Green	Residual ripple	< 10 % U <sub>ss</sub>		
Readiness delay ≤ 100 ms   Mechanical data 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   Protection class IP67   Power-on indication LED, Green	No-load current	≤ 18 mA		
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         Protection class       IP67         Power-on indication       LED, Green	Reverse polarity protection	yes		
DesignRectangular, Q20Dimensions20 x 12 x 42 mmHousing materialPlastic, Thermoplastic materialLensplastic, AcrylicElectrical connectionConnectors, M8 × 1, PVCNumber of cores4Ambient temperature-20+60 °CProtection classIP67Power-on indicationLED, Green	Readiness delay	≤ 100 ms		
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  Protection class  IP67  Power-on indication  LED, Green	Mechanical data			
Housing material  Lens  plastic, Thermoplastic material  plastic, Acrylic  Electrical connection  Connectors, M8 × 1, PVC  Number of cores  4  Ambient temperature  -20+60 °C  Protection class  IP67  Power-on indication  LED, Green	Design	Rectangular, Q20		
Lens       plastic, Acrylic         Electrical connection       Connectors, M8 × 1, PVC         Number of cores       4         Ambient temperature       -20+60 °C         Protection class       IP67         Power-on indication       LED, Green	Dimensions	20 x 12 x 42 mm		
Electrical connection  Connectors, M8 × 1, PVC  Number of cores  4  Ambient temperature  -20+60 °C  Protection class  IP67  Power-on indication  LED, Green	Housing material	Plastic, Thermoplastic material		
Number of cores 4  Ambient temperature -20+60 °C  Protection class IP67  Power-on indication LED, Green	Lens	plastic, Acrylic		
Ambient temperature -20+60 °C  Protection class IP67  Power-on indication LED, Green	Electrical connection	Connectors, M8 × 1, PVC		
Protection class IP67 Power-on indication LED, Green	Number of cores	4		
Power-on indication LED, Green	Ambient temperature	-20+60 °C		
	Protection class	IP67		
	Power-on indication	LED, Green		
Excess gain indication LED	Excess gain indication	LED		
Tests/approvals	Tests/approvals			
Approvals CE	Approvals	CE		



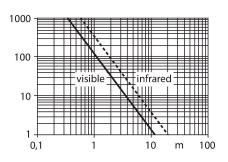
### **Features**

- Male M8 × 1; 4-pin
  Protection class IP67
  LED all-round visible
  Operating voltage: 10...30 VDC
- Wiring diagram



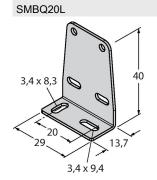
## Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque targets. An excellent contrast between light and dark conditions and an extremly high excess gain are typical of this sensing mode, thus allowing operation over larger distances and under difficult conditions.

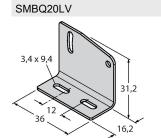


## Accessories





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	Type	ID no.	
M8 x 1 7 9 9.5 9 9	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
M8x1 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