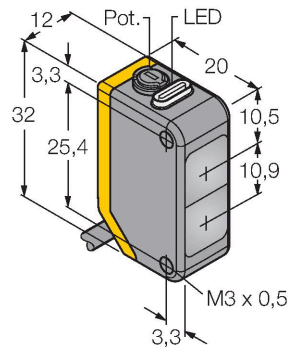


# Q20PLV W/30

## Photoelectric Sensor – Retroreflective Sensor



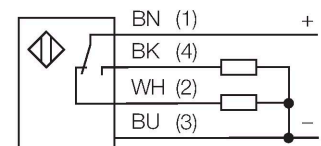
### Technical data

Type	Q20PLV W/30
ID no.	3077789
<b>Optical data</b>	
Function	Retroreflective Sensor
Operating mode	Unpolarized
Reflector included in delivery	no
Light type	Red
Wavelength	655 nm
Range	30...6000 mm
<b>Electrical data</b>	
Operating voltage	10...30 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, PNP
Switching frequency	≤ 600 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.8 ms
Setting option	Potentiometer
<b>Mechanical data</b>	
Design	Rectangular, Q20
Dimensions	20 x 12 x 32 mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Cable, 9 m, PVC
Number of cores	4

### Features

- 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

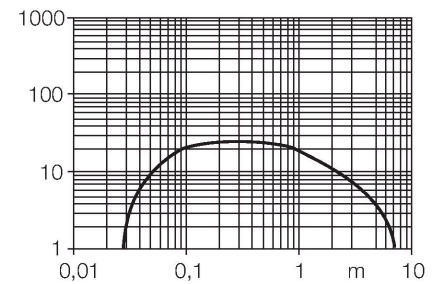
Retroreflective sensors have emitter and receiver circuitry incorporated in the same housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. A target is detected when it interrupts this beam. Retroreflective sensors feature some of the advantages of opposed mode sensors (good contrast and high excess gain). Furthermore, only one device has to be installed and wired. A smaller sensing range and susceptibility of devices without polarizing filter can be of disadvantage when shiny targets have to be detected.

Excess gain curve  
Excess gain in relation to distance

## Technical data

Core cross-section	0.35 mm <sup>2</sup>
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
<b>Tests/approvals</b>	
Approvals	CE

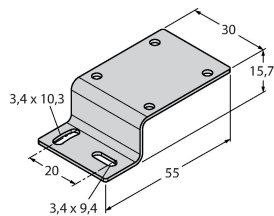
## Excess Gain Curve



## Accessories

### SMBQ20H

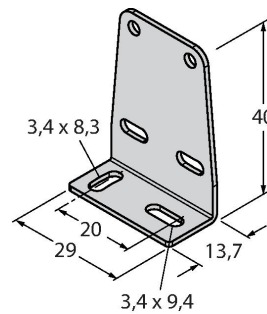
3079041



Mounting bracket, stainless steel, horizontally mounted, for Q20

### SMBQ20L

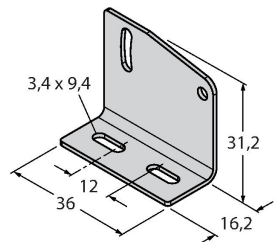
3079040



Mounting bracket, stainless steel, rectangular, for Q20

### SMBQ20LV

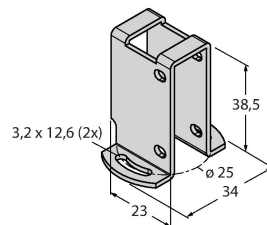
3079042



Mounting bracket, stainless steel, rectangular, for Q20

### SMBQ20U

3079043



Protective housing, stainless steel, for Q20

Accessories

Dimension drawing	Type	ID no.	
	BRT-84	3058979	Round reflector, reflection coefficient 1.4, material acrylic, ambient temperature -20 ... +60 °C

