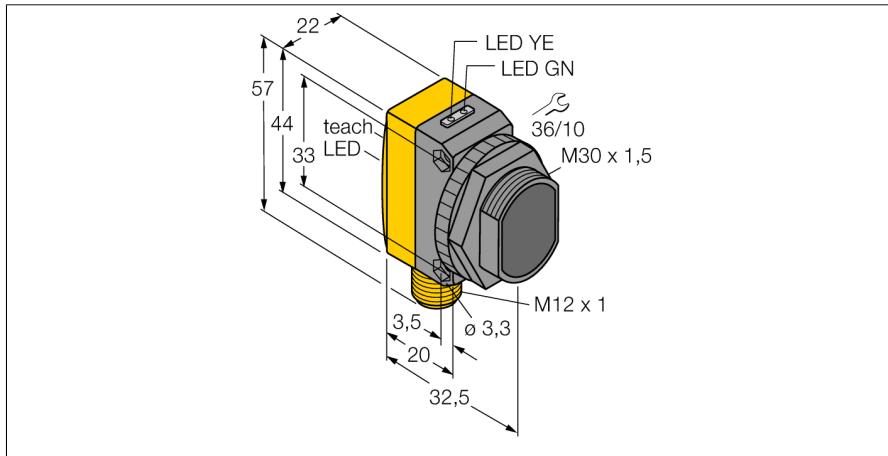


Photoelectric Sensor

retroreflective sensor with polarizing filter

QS30LLPQ



- Male M12 × 1, 5-pin
- Protection class IP67
- Compact design
- Rectangular profile
- LED all-round visible
- Reflector BRT-36X40BM included in delivery
- Self-adhesive reflector foil BRT-THVG-2X2 included in delivery
- Excess gain, max. setting for long range
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light or dark operation

Type designation QS30LLPQ
Ident no. 3002994

Function Retroreflective Sensor
Reflector included in delivery no
Light type Red polarized
Wavelength 650 nm
Laser class Δ 1
Beam diameter 3 mm
Range 200...18000 mm
Ambient temperature -10...+50 °C

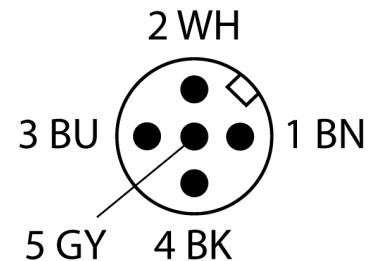
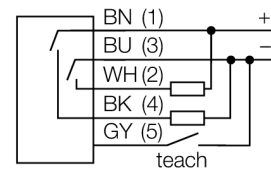
Operating voltage 10...30 VDC
Residual ripple < 10 % U_{ss}
DC rated operational current ≤ 150 mA
No-load current I₀ ≤ 35 mA
Short-circuit protection yes
Reverse polarity protection yes
Output function NO contact, PNP/NPN
Switching frequency ≤ 1000 Hz
Readiness delay ≤ 1 s
Readiness delay ≤ 1000 ms
Response time typical < 0.5 ms

Approvals CE

Design Rectangular with thread, QS30
Dimensions 35 mm x 22 mm x 57 mm
Housing diameter 30 mm
Housing material Plastic, Thermoplastic, Yellow
Lens acrylic
Electrical connection Connectors, M12 × 1, PVC
Core cross-section 5 mm²
Protection class IP67
MTTF 28 years acc. to SN 29500 (Ed. 99) 40 °C

Special features Laser
Pushbutton
Teach input
LED, Green
LED, Yellow
LED green Flashing
Bar graph, red, flashing

Wiring Diagram



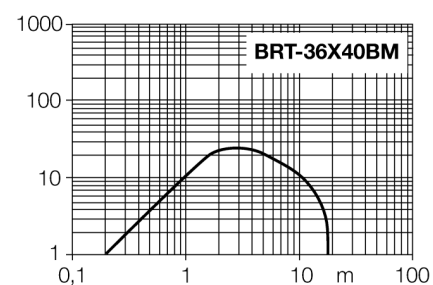
Functional principle

Retro-reflective sensors incorporate emitter and receiver in the same compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device.

Excess gain curve

Excess gain in relation to the distance

Photoelectric Sensor
retroreflective sensor with polarizing filter
QS30LLPQ

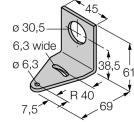
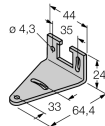
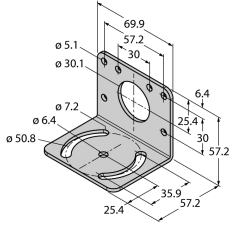
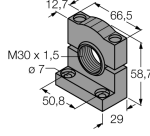


Photoelectric Sensor

retroreflective sensor with polarizing filter

QS30LLPQ

Accessories

Type code	Ident no.	Description	Dimension drawing
SMB30A	3032723	Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread	
SMBQS30L	3002809	Mounting bracket, stainless steel, for QS30 series	
SMB30MM	3027162	Mounting bracket, rectangular, stainless steel, for sensors with 30 mm thread, wide holes for accurate alignment	
SMB30SC	3052521	Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable	

Function accessories

Type code	Ident no.	Description	Dimension drawing
BRT-TVHG2X2	3057260	Rectangular reflective foil, reflection coefficient 0.8, ambient temperature -20 ... +60 °C, 4 sheets	