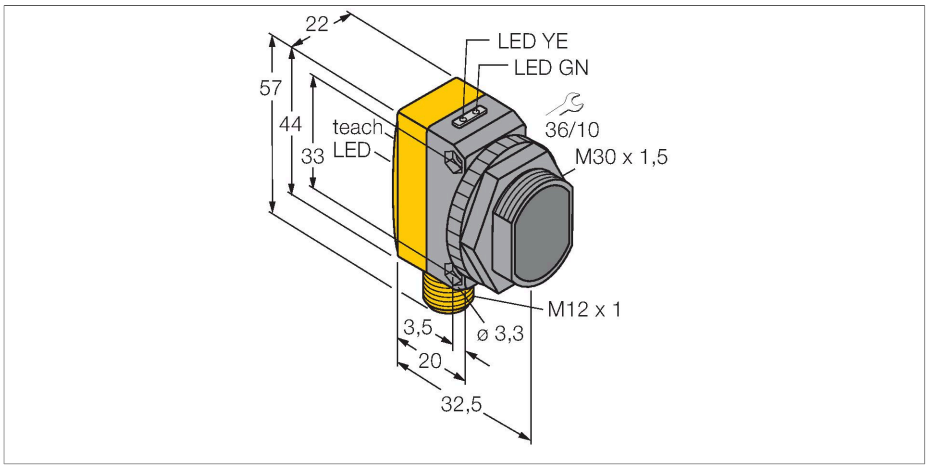
QS30LLPQ
Photoelectric Sensor – Retroreflective Sensor with Polarizing Filter



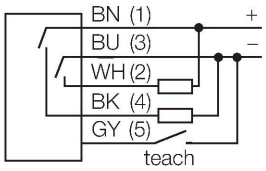
Technical data

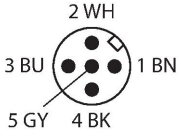
Type	QS30LLPQ
ID	3002994
Optical data	
Function	Retroreflective Sensor
Operating mode	Polarized
Reflector included in delivery	no
Light type	Red polarized
Wavelength	650 nm
Laser class	⚠ 1
Beam diameter	3 mm
Range	200…18000 mm
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	< 10 % U_{ss}
DC rated operational current	≤ 150 mA
No-load current	≤ 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
Setting option	Push Button Remote Teach

Features

- 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

Wiring diagram





Functional principle

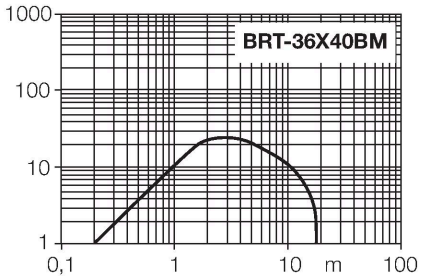
Retro-reflective sensors incorporate emitter and receiver in the same compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages

Technical data

Mechanical data	
Design	Rectangular with thread, QS30
Dimensions	Ø 30 x 35 x 22 x 57 mm
Housing material	Plastic, Thermoplastic material, Yellow
Lens	plastic, Acrylic
Electrical connection	Connector, M12 × 1, PVC
Number of cores	5
Ambient temperature	-10…+50 °C
Protection class	IP67
Special features	Laser Pushbutton Teach input
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	Bargraph, red, flashing
Tests/approvals	
MTTF	28 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE

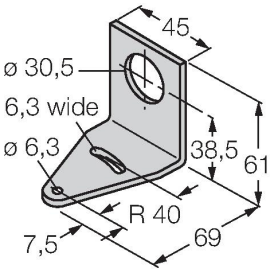
of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device.

Excess gain curve
Excess gain in relation to the distance



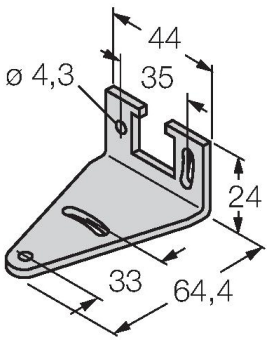
Accessories

SMB30A 3032723



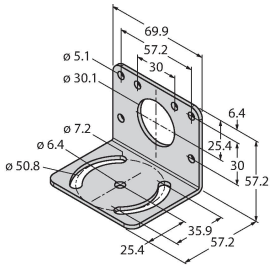
Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread

SMBQS30L 3002809



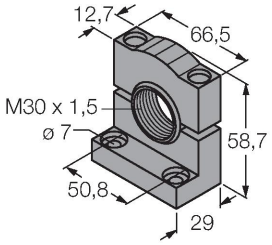
Mounting bracket, stainless steel, for QS30 series

SMB30MM 3027162



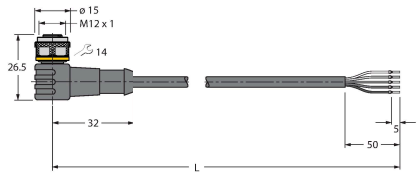
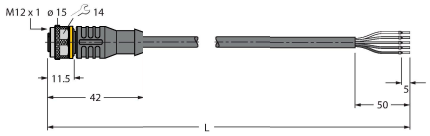
Mounting bracket, rectangular, stainless steel, for sensors with 30 mm thread, wide holes for accurate alignment

SMB30SC 3052521



Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable

Accessories

Dimension drawing	Type	ID	
	WKC4.5T-2/TEL	6625028	Connection cable, female M12, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com
	RKC4.5T-2/TEL	6625016	Connection cable, female M12, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com

Accessories

Dimension drawing	Type	ID	
	BRT-TVHG2X2	3057260	Rectangular reflective foil, reflection coefficient 0.8, ambient temperature -20 … +60 °C, 4 sheets