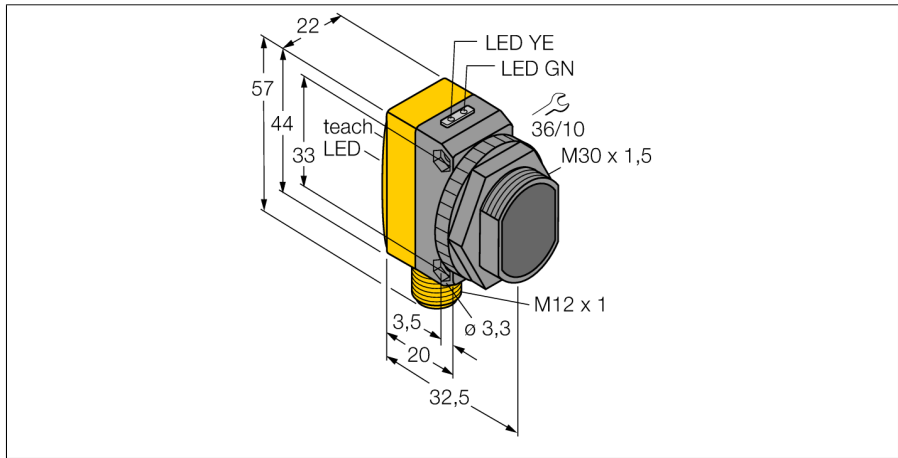


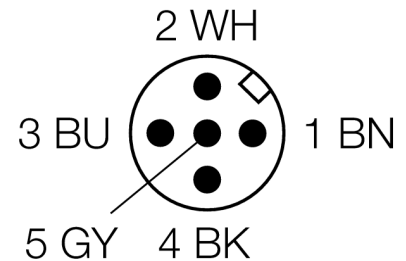
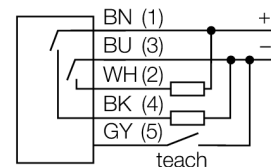
**Photoelectric sensor
retroreflective sensor with polarizing filter
QS30LLPQ**



- Male M12 x 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 code	QS30LLPQ
Ident no.	3002994
Operating mode	Retroreflective laser sensor (triangulation) with polarizing filter
Light type	red
Wavelength	650 nm
Laser class	▲ 1
Beam diameter	3 mm
Range	200...18000 mm
Ambient temperature	-10...+50 °C
Operating voltage	10...30VDC
Residual ripple	< 10 % U _{ss}
DC rated operational current	≤ 150 mA
No-load current I ₀	≤ 35 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, PNP/NPN
Switching frequency	≤ 1000 Hz
Readiness delay	≤ 1 s
Design	rectangular, QS30
Dimensions	35 x 22 x 57 mm
Housing material	plastic, ABS, yellow
Lens	plastic, acrylic
Connection	male, M12 x 1
Protection class	IP67
MTTF	28 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED green
Switching state	LED yellow
Error indication	LED green flashing
Excess gain indication	LED 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.

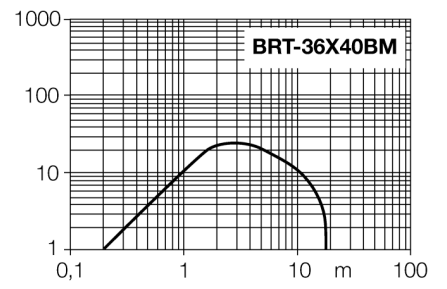
Excess gain curve

Excess gain in relation to the distance

**Photoelectric sensor
retroreflective sensor with polarizing filter
QS30LLPQ**

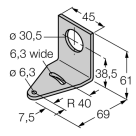
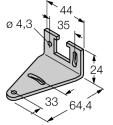
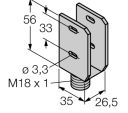
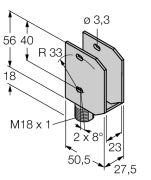
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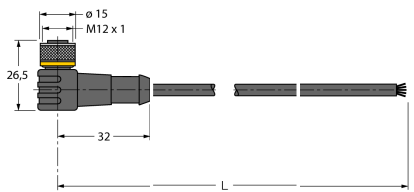


**Photoelectric sensor
retroreflective sensor with polarizing filter
QS30LLPQ**

Accessories

Type code	Ident no.	Description	Dimension drawing
SMB30A	3032723	Mounting bracket, stainless steel, for sensors with 30 mm thread	
SMBQS30L	3002809	Mounting bracket, stainless steel, for QS30 series	
SMBQS30Y	3002811	Protective housing, stainless steel, for QS30 series	
SMBQS30YL	3072741	Protective housing with safety glass panel, stainless steel, for QS30 series	

Wiring accessories

Type code	Ident no.	Description	Dimension drawing
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	

**Photoelectric sensor
retroreflective sensor with polarizing filter
QS30LLPQ**

Wiring accessories

Type code	Ident no.	Description	Dimension drawing
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	

Function accessories

Type code	Ident no.	Description	Dimension drawing
BRT-TVHG-2X2	3057260	Rectangular reflective foil, reflection coefficient 0.8, ambient temperature -20 ... +60 °C, 4 sheets	