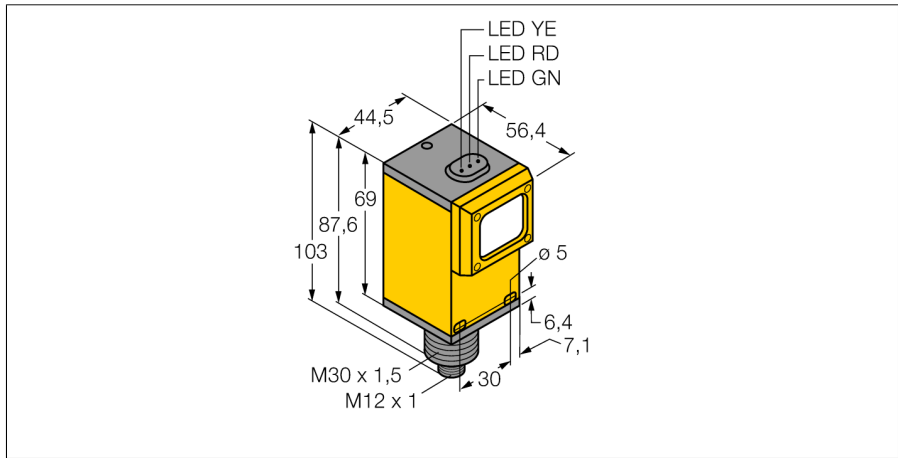
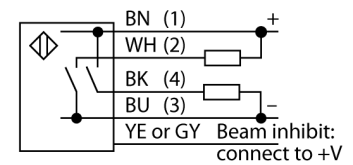


**Photoelectric sensor
retroreflective sensor
Q45BB6LLQ6**

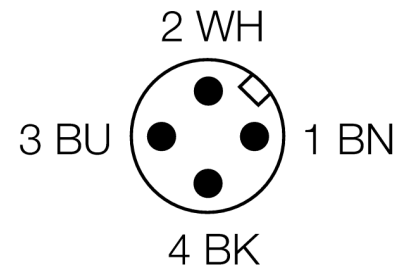


- Retroreflective laser sensor
- Laser class 2
- Reflector BRT-2X2 included in delivery
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light or dark operation, adjusted via switch

Wiring diagram



Type code	Q45BB6LLQ6
Ident no.	3041032
Operating mode	retro-reflective sensor
Light type	red
Wavelength	655 nm
Laser class	▲ 2
Beam diameter	(elliptic) 2.5 mm
Range	300...70000 mm
Ambient temperature	-10...+40 °C
Operating voltage	10...30VDC
Residual ripple	< 10 % U _s
DC rated operational current	≤ 250 mA
No-load current I ₀	≤ 50 mA
Short-circuit protection	yes/ cyclic
Reverse polarity protection	yes
Output function	NO contact, PNP/NPN
Switching frequency	≤ 250 Hz
Readiness delay	≤ 100 ms
Overcurrent release	> 220 mA
Design	rectangular, Q45
Dimensions	56.4 x 44.5 x 102.6 mm
Housing material	plastic, PBT
Lens	acrylic, acrylic
Connection	male, M12 x 1
Protection class	IP67
MTTF	20 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

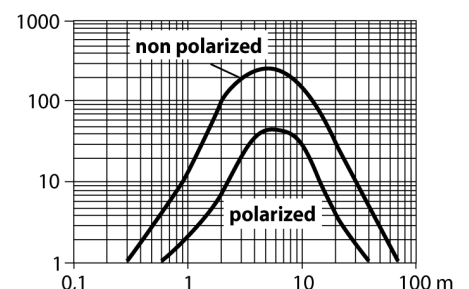


Functional principle

Retro-reflective sensors incorporate emitter and receiver in a single 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. A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.

Excess gain curve

Excess gain in relation to the distance

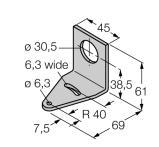
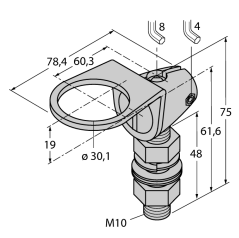
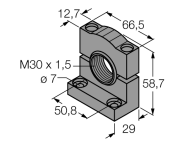


**Photoelectric sensor
retroreflective sensor
Q45BB6LLQ6**

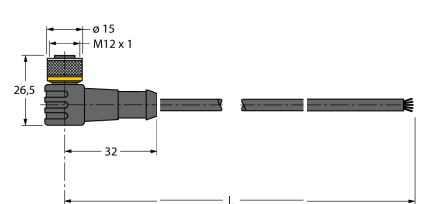
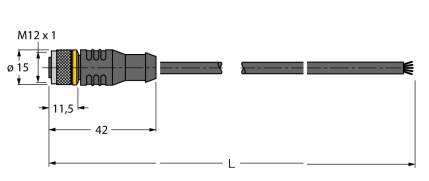
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Industrial
Automation

Accessories

Type code	Ident no.	Description	Dimension drawing
SMB30A	3032723	Mounting bracket, stainless steel, for sensors with 30 mm thread	
SMB30FAM10	3011185	Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm	
SMB30SC	3052521	Mounting bracket, PBT black; for 30 mm thread; with 4 screws M5 x 0.8	

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	
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	

**Photoelectric sensor
retroreflective sensor
Q45BB6LLQ6**

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Industrial
Automation

Function accessories

Type code	Ident no.	Description	Dimension drawing
BRT-2X2	3040071	Rectangular reflector, reflection coefficient 1.8, material acrylic, ambient temperature max. 50 °C	