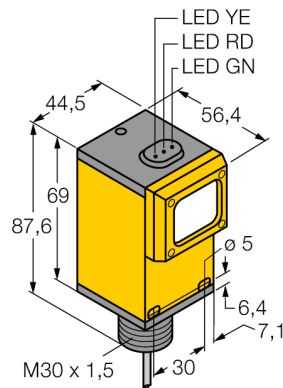
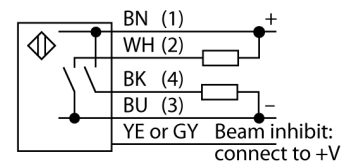


**Photoelectric sensor
retroreflective sensor with polarizing filter
Q45BB6LLP**



- Retroreflective laser sensor with polarizing filter
- 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

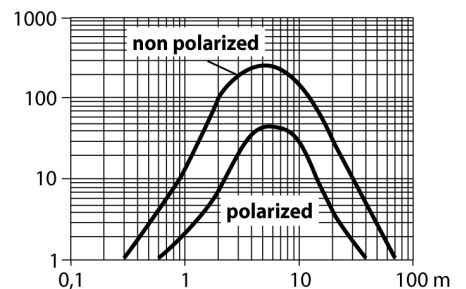


Functional principle

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

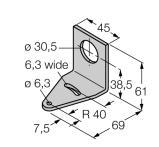
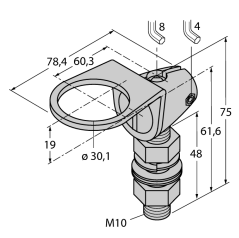
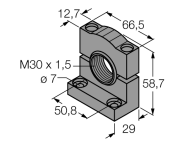
Excess gain in relation to the distance



Type code	Q45BB6LLP
Ident no.	3039551
Operating mode	Retroreflective laser sensor (triangulation) with polarizing filter
Light type	red
Wavelength	655 nm
Laser class	△ 2
Beam diameter	(elliptic) 2.5 mm
Range	600...40000 mm
Ambient temperature	-10...+40 °C
Operating voltage	10...30VDC
Residual ripple	< 10 % U _{ss}
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 87.6 mm
Housing material	plastic, PBT
Lens	acrylic, acrylic
Connection	cable, PVC
Cable length	2 m
Cable cross section	5 x 0.34 mm ²
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

**Photoelectric sensor
retroreflective sensor with polarizing filter
Q45BB6LLP**

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	

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	