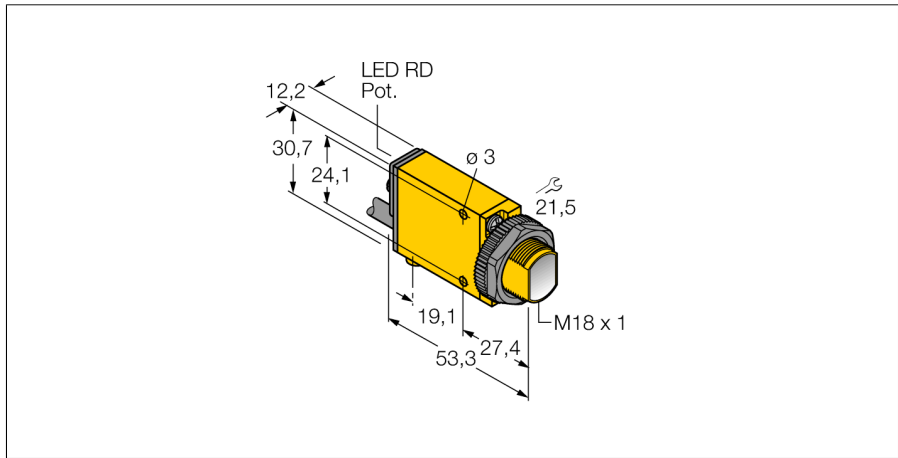
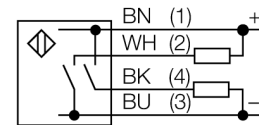


**Photoelectric sensor
retroreflective sensor with polarizing filter
SM312LP**



- Cable, PVC, 2 m
- Protection class IP67
- Sensitivity adjustable via potentiometer
- Alignment indicator
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light/dark operation

Wiring diagram



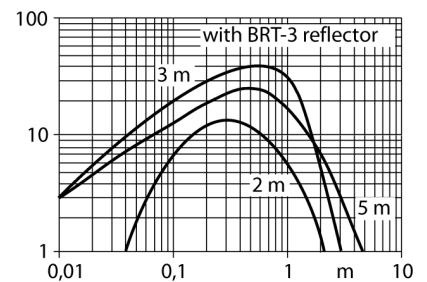
Type code	SM312LP
Ident no.	3049769
Operating mode	retro-reflective sensor with polarisation filter
Light type	red
Wavelength	650 nm
Range	0...3000 mm
Ambient temperature	-20...+70 °C
Operating voltage	10...30VDC
Residual ripple	< 10 % U _s
DC rated operational current	≤ 150 mA
No-load current I ₀	≤ 25 mA
Output function	NO contact, PNP/NPN
Switching frequency	≤ 500 Hz
Readiness delay	≤ 100 ms
Overcurrent release	> 220 mA
Design	rectangular, Mini Beam
Dimensions	53.3 x 12.3 x 30.7 mm
Housing material	plastic, PBT, yellow
Lens	plastic, acrylic
Connection	cable, PVC
Cable length	2 m
Cable cross section	4 x 0.5 mm ²
Protection class	IP67
Switching state	LED red
Excess gain indication	LED red flashing

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



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Accessories

Type code	Ident no.	Description	Dimension drawing
SMB18A	3033200	Mounting bracket, stainless steel, for sensors with 18 mm thread	
SMB18AFAM10	3012558	Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm	
SMB18SF	3052519	Mounting bracket, PTB black steel, for sensors with 18 mm thread	
SMB312B	3025519	Mounting bracket, stainless steel, for MINI-BEAM NAMUR	
SMB3018SC	3053952	Mounting bracket, PTB black, for sensors with 18 mm thread	

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SM312LP**

TURCK

Industrial
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Function accessories

Type code	Ident no.	Description	Dimension drawing
BRT-3	3016164	Round reflector, reflection coefficient 1.0, material acrylic, ambient temperature -20 ... +60 °C	