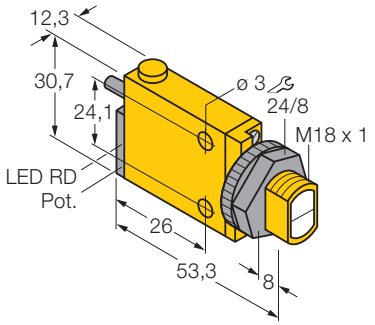
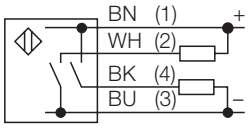
Photoelectric sensor
retro-reflective sensor
SM312LP



Type	SM312LP
Ident-No.	3049769
Operating mode	Retro-reflective sensor with polarising filter
Type of light	red
Wave length	650 nm
Max. sensing range [m]	0... 3 m
Operating temperature	-20 ...+ 70 °C
Rated operational voltage (DC) U_B	10... 30 VDC
Rated operational current (DC) I_e	≤ 150 mA
No-load current I_0	≤ 25 mA
Short-circuit protection	yes, cyclic
Reverse polarity protection	yes
Output function	normally open, PNP/NPN
Switching frequency	≤ 500 Hz
Max. switch-on delay	≤ 100 ms
Overload trip point	>220 mA
Housing style	rectangular; Mini Beam
Dimensions	53,3 x 12,3 x 30,7 mm
Housing material	plastic, PBT
Lens	Kunststoff, Acryl
Wiring	cable
Cable length	2 m
Cable cross section	4 x 0,5 mm^2
Degree of protection	IP67
Switching status indication	LED red
Excess gain indication	LED red flashing

- **compact housing style**
- **Reverse polarity and short-circuit protection**
- **cable, 2 m**
- **light/dark operate**
- **sensitivity adjustable via potentiometer**
- **alignment indication**

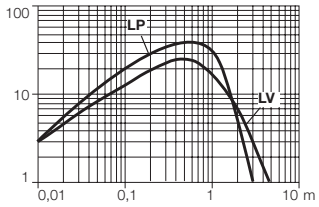
Wiring diagram



With retro-reflective sensors, emitter and receiver are incorporated in one 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. The smaller sensing range and susceptibility to interference through shiny objects when using devices without polarisation filter can be disadvantageous in some applications.

Excess gain curve

Excess gain in relation to the distance



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