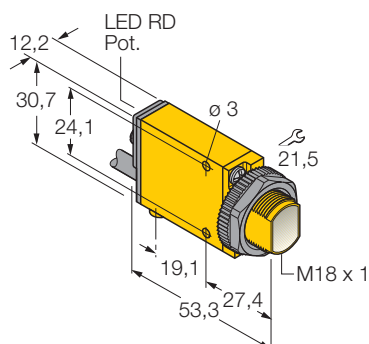


photoelectric sensor receiver SM31R

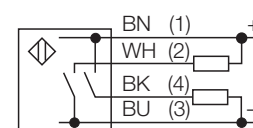
TURCK

Industrial
Automation



- compact housing style
- reverse polarity and short-circuit protection
- connection cable, 2 m
- Light/dark operation
- sensitivity adjustable via potentiometer
- alignment indication

Wiring diagram

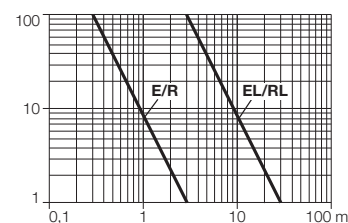


Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque targets. An excellent contrast between light and dark conditions and an extremely high excess gain are typical of this sensing mode, thus allowing operation over larger distances and under difficult conditions.

Excess gain curve

Excess gain in relation to the distance



Type	SM31R
Ident-No.	3025622
Operating mode	opposed mode sensor (receiver)
Range	0... 3000 mm
Ambient temperature	-20...+ 70°C
Operating voltage	10... 30 VDC
DC rated operational current	≤ 150 mA
No-load current I_0	≤ 25 mA
Output function	NO contact, pnp/npn
Switching frequency	≤ 500Hz
Readiness delay	≤ 100 ms
Overcurrent release	>220 mA
Housing	rectangular, Mini Beam
Dimensions	53.3x 12.3x 30.7mm
Housing material	Plastic, PBT
Lens	plastic, acrylic
Electrical connection	cables
Cable length	2 m
Cable cross section:	4 x 0.5mm ²
Protection class	IP67
Switching state	LED red
Excess gain indication	LED red flashing