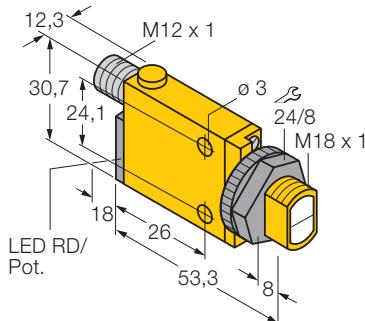


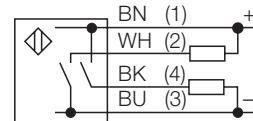
# Photoelectric sensor receiver SM31RQD



<b>Type</b>	SM31RQD
Ident-No.	3026839
<b>Operating mode</b>	Opposed mode (receiver)
Operating temperature	-20 ...+ 70 °C
<b>Rated operational voltage (DC) <math>U_B</math></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
<b>Housing style</b>	rectangular; Mini Beam
Dimensions	71,3 x 12,3 x 30,7 mm
Housing material	plastic, PBT
Lens	Kunststoff, Acryl
Wiring	connector, M12 x 1
Degree of protection	IP67
<b>Switching status indication</b>	LED red
Excess gain indication	LED red flashing

- compact housing style
- Reverse polarity and short-circuit protection
- connector M12 x 1
- light/dark operate
- sensitivity adjustable via potentiometer
- alignment indication

## Wiring diagram



Opposed mode sensors consist of a separate emitter and receiver. These are installed directly 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

