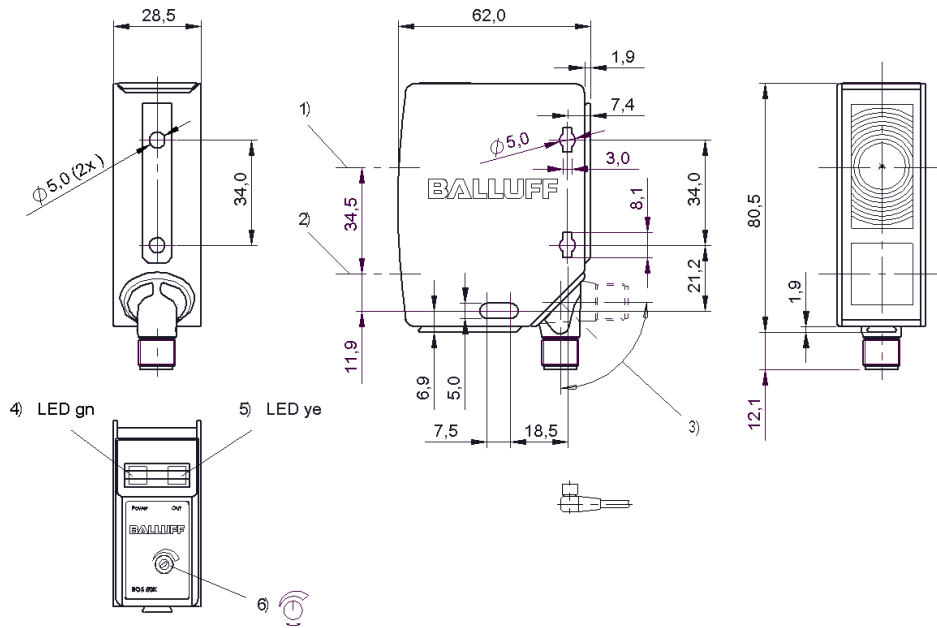


## BOS 50K-PS-RH12-S4 BOS018N



1) Optical axis receiver 2) Optical axis emitter 3) rotatable 270° 4) Power/short-circuit 5) Output function/Error 6) Sn



### Display/Operation

Adjuster	Potentiometer 10-turn (1x)
Setting	Rated switching distance (Sn)

### Electrical connection

Connection	M12x1-Connector, 4-pole, A-coded
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Short-circuit protection	yes

### Electrical data

Hysteresis H max. (% of Sr)	5.0 %
Load capacitance max. at Ue	0.1 µF
No-load current I <sub>o</sub> max. at Ue	50 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Protected against miswiring	yes
Rated insulation voltage U <sub>i</sub>	250 V AC
Rated operating current I <sub>e</sub> DC	100 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Ready delay t <sub>v</sub> max.	300 ms
Repeat accuracy max. (% of Sr)	5.0 %
Residual current I <sub>r</sub> max.	10 µA
Switching frequency	500 Hz
Turn-off delay t <sub>off</sub> max.	1 ms
Turn-on delay t <sub>on</sub> max.	1 ms

Utilization category	DC -13
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	2.5 V

### Environmental conditions

Ambient temperature	-10...60 °C
Protection class	II
Protection type IEC 60529	IP67

### General data

Approval/Conformity	CE cULus
Basic standard	IEC 60947-5-2
Series	50K
Style	Square Connection can be rotated

### Material

Housing material	PC ABS
Material sensing surface	Glass

### Mechanical data

Dimension	28.5 x 80.5 x 62 mm
Distance deviation 6 % max. (% of Sr)	25.0 %
Fastening detail	Screw M5

## BOS 50K-PS-RH12-S4 BOS018N

### Optical data

Ambient light max.	10000 Lux
Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light type	LED Red light
Special optical feature	Background suppression
Wave length	630 nm

### Output/Interface

Switching output	PNP Normally open (NO)
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### Range/Distance

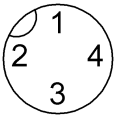
Distance deviation 18 % max. (% of Sr)	8 %
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Measuring range	200...2000 mm
Range	200...2000 mm
Rated operating distance $S_n$	2 m, Adjustable
Ripple max. (% of $U_e$ )	10 %
Temperature drift max. (% of $S_r$ )	10 %

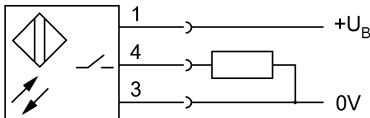
### Remarks

The sensor is functional again after the overload has been eliminated. Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.  
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.  
For additional information, refer to user's guide.  
Order accessories separately.

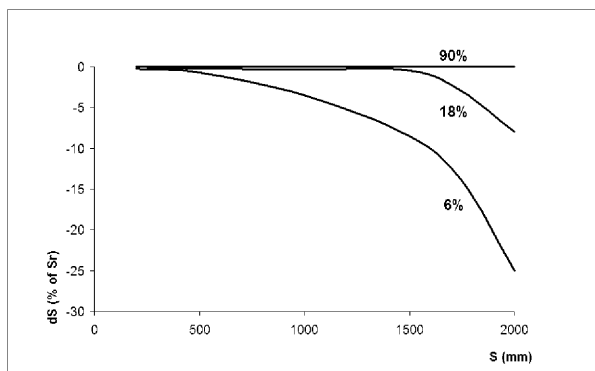
### Connector view



### Wiring Diagram



### Diagram



BOS 50K-PS-RH12-S4  
BOS018N

## Symbols for Optoelectronic Sensors

