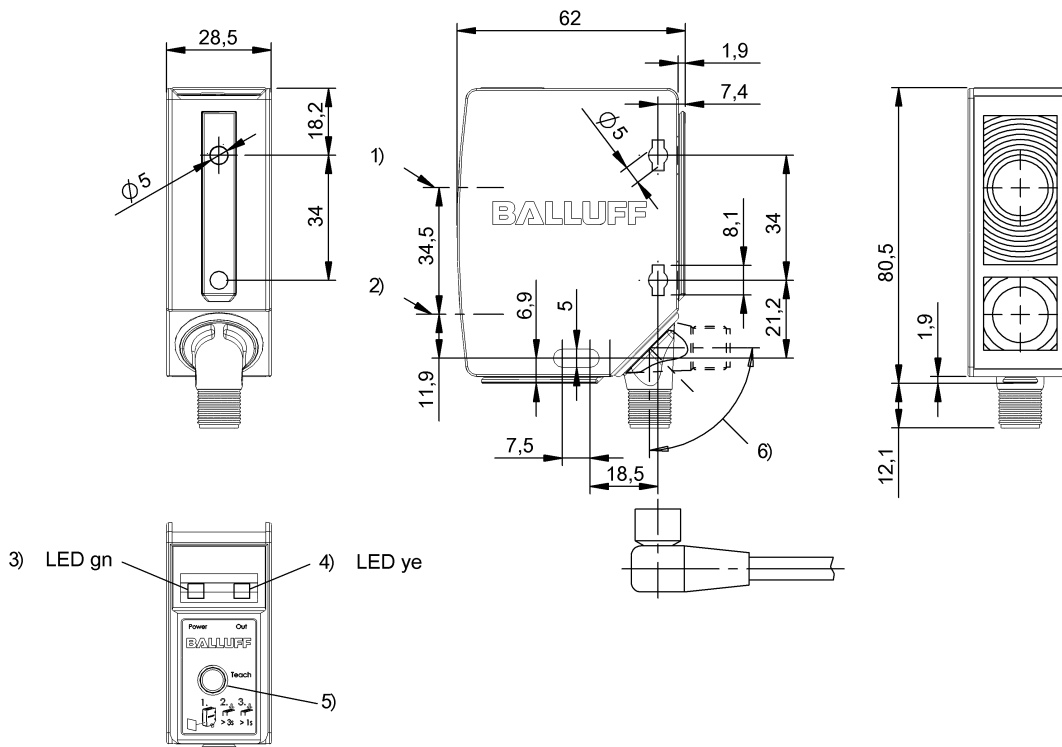


## BOS 50K-PI-RD11-S4 BOS01JJ



1) Optical axis receiver 2) Optical axis emitter 3) Operating voltage 4) Light reception 5) Teach-In button 6) rotatable 270°



LISTED IND. CONT. EQ. 81U2  
for use in the secondary of  
a class 2 source of supply



### Display/Operation

Adjuster	Key (1x)
Setting	Rated switching distance (Sn) Light-on/dark-on

### Electrical connection

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

### Electrical data

Baud rate	38.4 kBaud
Hysteresis H max. (% of Sr)	15.0 %
Load capacitance max. at Ue	0.3 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.	100 ms
Repeat accuracy max. (% of Sr)	5.0 %
Residual current I <sub>r</sub> max.	10 µA
Switching frequency	200 Hz
Turn-off delay t <sub>off</sub> max.	2.5 ms
Turn-on delay t <sub>on</sub> max.	2.5 ms
Utilization category	DC-13
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	0.7 V

### Environmental conditions

Ambient temperature	-5...55 °C
Protection class	II
Protection type IEC 60529	IP67

### General data

Approval/Conformity	CE cULus
Basic standard	IEC 60947-5-2
Function class, smart sensor	Binary data channel Teach channel Diagnostics Identification
Series	50K

## BOS 50K-PI-RD11-S4 BOS01JJ

Style Square  
Connection can be rotated

Process data cycle min. 4.8 ms  
Process data in Teaching active/inactive  
Limit range yes/no  
Switching state active/inactive  
Process data out Switching state active/inactive  
Limit range yes/no  
Teaching active/inactive  
Switching output PNP Normally open/Normally closed (NO/NC)

### Material

Housing material PC  
ABS  
Material sensing surface Glass

### Mechanical data

Dimension 28.5 x 80.5 x 62 mm  
Fastening detail Screw M5

### Optical data

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

### Output/Interface

Interface IO-Link 1.1  
Interface setting option Key disable on/off  
Sensor name in application  
Switching state, 4 values  
Teach method 2-point/dyn.  
BDC mode 1-pt./2-pt./window

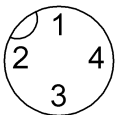
### Range/Distance

Measuring range 1...3500 mm  
Range 1...3500 mm  
Rated operating distance  $S_n$  3.5 m, Adjustable  
Ripple max. (% of  $U_e$ ) 15 %  
Temperature drift max. (% of  $S_r$ ) 10 %

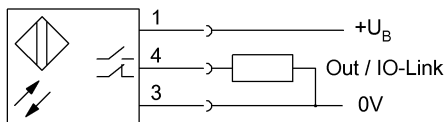
### Remarks

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.  
Order accessories separately.  
For additional information, refer to user's guide.  
Do not press key using a pointed tool.

### Connector view

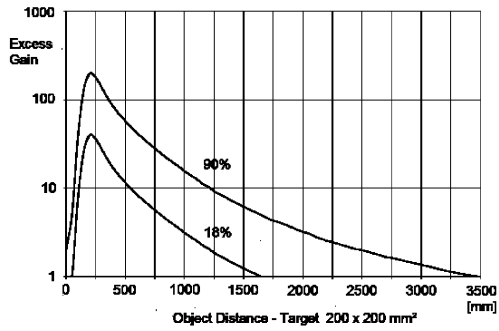


### Wiring Diagram



BOS 50K-PI-RD11-S4  
BOS01JJ

## Diagram



## Symbols for Optoelectronic Sensors

