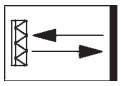
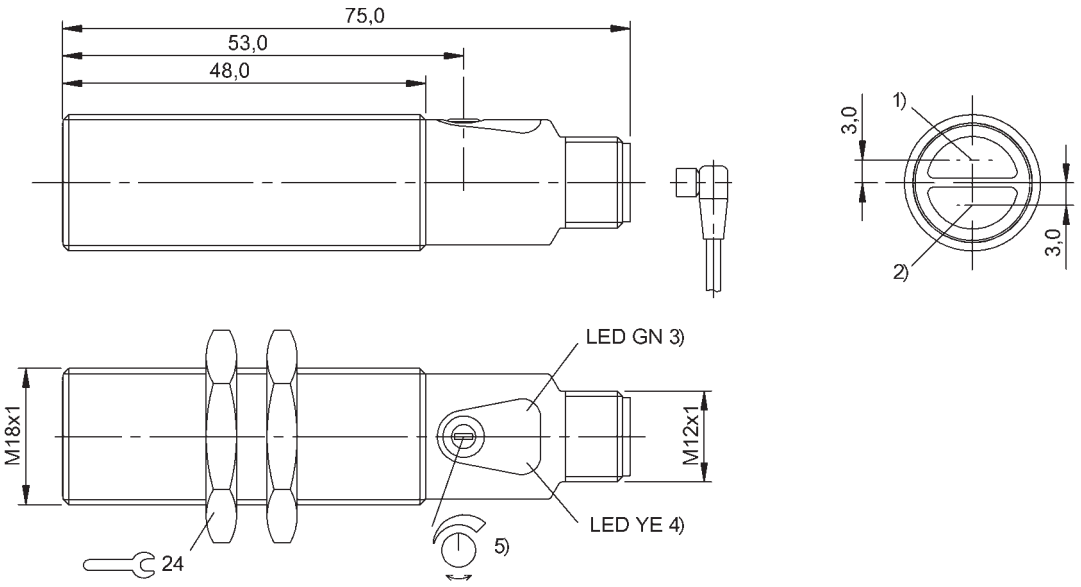
Photoelectric sensor

BOS 18M-PA-PR20-S4S
BOS01FJ

BALLUFF
sensors worldwide





1) Optical axis receiver 2) Optical axis emitter 3) Power 4) Light reception/Limit range 5) Sn

- **Photoelectric sensor**
- **Series 18M**
- **LED, red light**
- **up to 10 m**

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

General attributes

Adjuster	Potentiometer 270° (1x)
Approvals / Conformity	cULus CE
Basic standard	IEC 60947-5-2
Enclosure Type per IEC 60529	IP67
Indicator	Power - LED GN Light receipt - LED YE Limit range - LED YE, flash.
Polarity reversal protected	yes
Protection Class	II
Reference reflector	BOS R-1
Series	Series 18M
Setting	Switching distance (Sn)
Short circuit protected	yes

Electrical attributes

Connection type	Connector
Eff. operating current Ie	100 mA
Eff. operating voltage Ue DC	24.0 V
Electrical version	DC, direct current
Load capacitance max. (at Ue)	0.10 µF
No-load current max. Io at Ue	30 mA
Operating voltage UB max. DC [V]	30.0 V
Operating voltage UB min. DC [V]	10.0 V
Rated insulation voltage Ui	75 V DC
Ripple max. (% of Ue)	15 %
Switching freq. f max. (at Ue)	400 Hz
Switching function	NO-NC (pins 2-4)
Switching output	PNP (2x)
Turn on time ton max.	1.25 ms
Voltage drop Ud max. (at Ie)	2.5 V

Mechanical attributes

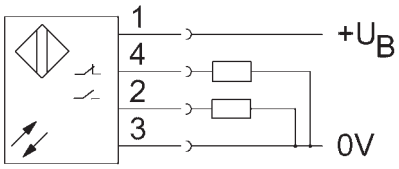
Ambient temperature Ta max.	55 °C
Ambient temperature Ta min.	-5 °C
Connector type	M12x1-S04
Eff. operating distance Sr	7000 mm
Housing material	Brass
Length 1	Ø18.0 mm
Length 2	75.0 mm
Mounting type	Nut M18x1
Operating range Ro	0...7 m
Range Sn	Sn = 7 m, adjustable
Sensing face material	Glass
Style	Cylinder, straight optics
Surface protection	Nickel-plated
Tightening torque max.	15/30 Nm

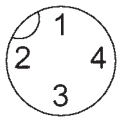
Optical attributes

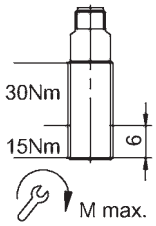
LED group acc. IEC 62471	Risk group 1
Light type	LED, red light
Polarizing filter	yes
Principle of optical operation	Retro-reflective sensor
Switching function, optical	NO dark-on - NC light-on
Wavelength	626 nm

Additional text

Order accessories separately.
For additional information, refer to user's guide.
Polarizing filters prevent spurious switching due to reflecting and shiny parts.
The sensor is functional again after the overload has been eliminated.


1
4
2
3
+U_B
0V


1
2
4
3


30Nm
15Nm
6
M max.