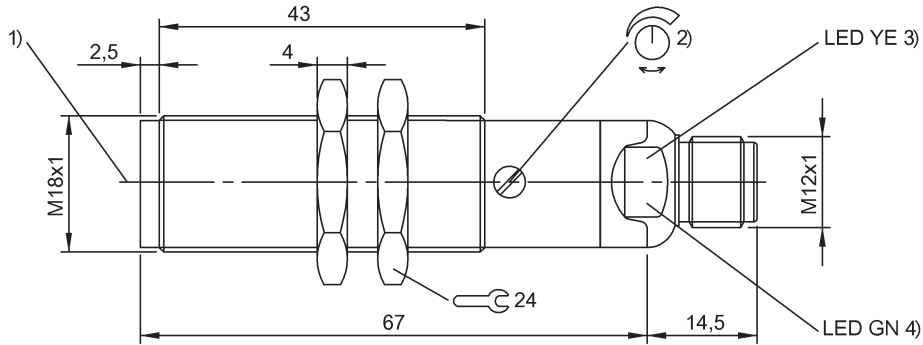


LASER CLASS 1 per IEC 60825-1:  
2003-10



1) Optical axis 2) Sn 3) Output function 4) Stability

- Photoelectric sensor
- Series 18M
- Laser red light
- up to 20 m



LISTED IND. CONT. EQ. 1TD4  
for use in the secondary of  
a class 2 source of supply

**General attributes**

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

**Electrical attributes**

Connection type	Connector
Eff. operating current I <sub>e</sub>	100 mA
Eff. operating voltage U <sub>e</sub> DC	24.0 V
Electrical version	DC, direct current
No-load current max. I <sub>o</sub> at U <sub>e</sub>	35 mA
Operating voltage U <sub>B</sub> max. DC [V]	30.0 V
Operating voltage U <sub>B</sub> min. DC [V]	10.0 V
Rated insulation voltage U <sub>i</sub>	75 V DC
Ripple max. (% of U <sub>e</sub> )	8 %
Switching freq. f max. (at U <sub>e</sub> )	1500 Hz
Switching function	NO-NC (pins 4-2)
Switching output	PNP (2x)
Turn on time t <sub>on</sub> max.	0.33 ms
Voltage drop U <sub>d</sub> max. (at I <sub>e</sub> )	2.0 V

**Mechanical attributes**

Ambient temperature T <sub>a</sub> max.	50 °C
Ambient temperature T <sub>a</sub> min.	-10 °C
Connector type	M12x1-S04
Eff. operating distance S <sub>r</sub>	16000 mm
Housing material	Brass
Length 1	Ø18.0 mm
Length 2	81.5 mm
Mounting type	Nut M18x1
Operating range R <sub>o</sub>	0...16 m
Range S <sub>n</sub>	S <sub>n</sub> = 16 m, adjustable
Sensing face material	PMMA
Style	Cylinder, straight optics
Surface protection	Nickel-plated
Tightening torque max.	22 Nm

**Optical attributes**

Average power P <sub>o</sub> max.	< 390 µW (IEC 60825-1)
Laser Class per IEC 60825-1	1
Light type	Laser red light
Polarizing filter	yes
Principle of optical operation	Retro-reflective sensor
Switching function, optical	NO dark-on - NC light-on
Wavelength	650 nm

**Additional text**

For additional information, refer to user's guide.  
Polarizing filters prevent spurious switching due to reflecting and shiny parts.  
Order accessories separately.  
Operating object (test target): Gray card, 200 x 200, 90 % remission, lateral approach,  
direction of movement vertical to plane of lens axes.

Photoelectric sensor

**BOS 18M-PA-LR10-S4**  
**BOS013M**

**BALLUFF**  
sensors worldwide

