



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

- Photoelectric sensor
- Series 12M
- LED, red light
- up to 100 mm



UL LISTED IND. CONT. EQ. 77HA
for use in the secondary of
a class 2 source of supply

General attributes

Adjuster	Key (1x)
Approvals / Conformity	cULus CE
Basic standard	IEC 60947-5-2
Enclosure Type per IEC 60529	IP67
Indicator	Stability - LED GN Output function - LED YE
Input function	Key disable on/off Same function as key
Polarity reversal protected	yes
Protection Class	II
Series	Series 12M
Setting	Light-on/dark-on Switching distance (Sn)
Short circuit protected	yes
Trademark	GLOBAL

Electrical attributes

Connection type	Connector
Eff. operating current I _e	100 mA
Eff. operating voltage U _e DC	24.0 V
Electrical version	DC, direct current
Load capacitance max. (at U _e)	0.30 µF
No-load current max. I _o at U _e	25 mA
Operating voltage UB max. DC [V]	30.0 V
Operating voltage UB min. DC [V]	10.0 V
Ripple max. (% of U _e)	10 %
Switching freq. f max. (at U _e)	1000 Hz
Switching function	NO/NC
Switching output	PNP (1x)
Turn on time t _{on} max.	0.50 ms
Voltage drop U _d max. (at I _e)	2.4 V

Mechanical attributes

Ambient temperature Ta max.	60 °C
Ambient temperature Ta min.	-20 °C
Connector type	M12x1-S04
Detection range S _d	10...60 mm
Dist. dev. 18 % max. (% of S _r)	3 % with 90 % rem., S=10...50 mm
Eff. operating distance S _r	60 mm
Housing material	Brass
Length 1	Ø12.0 mm
Length 2	74.0 mm
Minimum operating distance	10 mm
Mounting type	Nut M12x1
Range S _n	S _n = 60 mm, adjustable
Sensing face material	PMMA
Style	Cylinder, straight optics
Surface protection	Nickel-plated
Tightening torque max.	10 Nm

Optical attributes

Light spot size, typical	5 mm x 5 mm at 50 mm
Light type	LED, red light
Optical special feature	Background suppression
Principle of optical operation	Light scanner, triangulation
Switching function, optical	NO/NC: light-on/dark-on
Wavelength	660 nm

Additional text

The sensor is functional again after the overload has been eliminated.
Only for NFPA 79 applications (machines with a supply voltage of maximum 600 volts).
Device shall be connected only by using any R/C (CYJV2) cord, having suitable ratings.
For additional information, refer to user's guide.
Order accessories separately.
Do not press key using a pointed tool.
Reference object (target): Gray card, 200 x 200 18 % remission, axial approach.

Photoelectric sensor

BOS 12M-PU-1HA-S4-C
BOS007T

BALLUFF

sensors worldwide

