

1) Light reception, 2) Stability, 3) Sn, light/dark, 4) Optical axis receiver, 5) Optical axis emitter



Basic features

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	6K
Style	Square Connection 90°

Display/Operation

Adjuster	button
Display	LED yellow: Light received Stability - LED green
Setting	Factory setting (Reset) Light-on/dark-on Rated switching distance (Sn)

Electrical connection

Connection	Connector, M8x1-Male, 4-pin
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

Input function	Same function as button Key disable on/off
No-load current I_o max. at U_e	30 mA
Operating voltage U_b	10...30 VDC
Protection class	II
Rated operating current I_e	100 mA
Rated operating voltage U_e DC	24 V
Residual current I_r max.	50 µA
Switching frequency	1000 Hz
Turn-off delay t_{off} max.	0.5 ms
Turn-on delay t_{on} max.	0.5 ms
Voltage drop U_d max. at I_e	2.4 V

Environmental conditions

Ambient temperature	-20...60 °C
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
Protection degree	IP67

Material

Housing material	ABS
Material sensing surface	PMMA

Mechanical data

Dimension	12 x 42 x 21 mm
Mounting	Screw M3

Photoelectric Sensors
BOS 6K-PU-1LHA-SA1-S75-C
Order Code: BOS00A2



Optical features

Average power Po max.	1 mW
Beam characteristic	Focused
Laser class per IEC 60825-1	2
Light spot size	Ø 0.7 mm at focal point
Light type	Laser red light
Principle of optical operation	Diffuse sensor, triangulation
Pulse duration t max.	3000 µs
Pulse frequency	5 kHz
Special optical feature	Background suppression
Switching function, optical	Light/dark switching

Wave length 650 nm

Output/Interface

Switching output PNP normally open/normally closed (NO/NC)

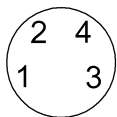
Range/Distance

Distance deviation 18 % max. (% of Sr) 7 % to 90 % rem.
Range 30...110 mm
Rated operating distance Sn 110 mm Adjustable

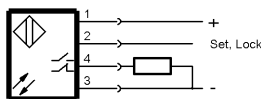
Remarks

Do not press key using a pointed tool.
 Order accessories separately.
 For additional information, refer to user's guide.
 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.
 The sensor is functional again after the overload has been eliminated.
 Reference object (target): gray card, 200 x 200, 18 % remission, axial approach.

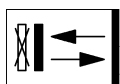
Connector Drawings



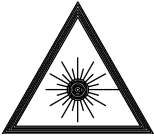
Wiring Diagrams



Opto Symbols



Warning Symbols



LASER BEAM - DO NOT STARE INTO THE LIGHT BEAM!

LASER CLASS 2 per IEC60825-1: 2003-10