

1) Output function 2) Operating voltage 3) Sensitivity, light/dark 4) Optical axis



## Display/Operation

Adjuster	Key
Setting	Light-on/dark-on Sensitivity (Sn) Teach mode Stand./Dyn./Ref.

## Electrical connection

Connection	Connector, M8x1-Male, 4-pole
Short-circuit protection	yes

## Electrical data

No-load current $I_0$ max. at $U_e$	30 mA
Operating voltage $U_b$	10...30 VDC
Polarity reversal protected	yes
Rated operating current $I_e$	100 mA
Rated operating voltage $U_e$ DC	24 V
Residual ripple max. (% of $U_e$ )	12 %
Switching frequency	4000 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
IP rating per DIN 40050	IP69K
IP rating per IEC 60529	IP67

## General data

Approval/Conformity	CE cULus
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric Sensor
Reference reflector	BOS R-22
Series	6K
Style	Square Connection 90°

## Material

Housing material	ABS
Material sensing surface	PMMA

## Mechanical data

Dimension	12 x 41.5 x 21.6 mm
Fastening detail	Screw M3

## Optical data

Ambient light max.	5000 Lux
Average power $P_o$ max.	390 $\mu$ W
Beam characteristic	Collimated
Laser class per IEC 60825-1	1
Light spot size	$\varnothing$ 2 mm at 2.5 m
Light type	Laser Red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Pulse duration $t$ max.	3000 $\mu$ s
Pulse frequency	5 kHz
Special optical feature	Coaxial optics
Switching function optical	Dark-on/Light-on

Wave length 650 nm

### Output/Interface

Input function	Same function as button Key disable on/off
Switching output	PNP Normally open/Normally closed (NO/NC)

### Range/Distance

Range	0...4 m
Rated operating distance Sn	4 m, Adjustable

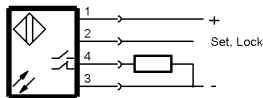
### Remarks

Do not press key using a pointed tool.  
 Order accessories separately.  
 For additional information, refer to users 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.  
 When using as a UL product the ambient temperature Ta max. must not exceed 50°C.  
 Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.  
 The sensor is functional again after the overload has been eliminated.

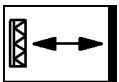
### Connector view



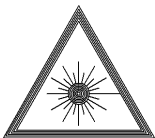
### Wiring Diagram



### Symbols for Optoelectronic Sensors



### Warning Symbols



LASER CLASS 1 per IEC 60825-1