

1) Output function, 2) Optical axis emitter, 3) Optical axis receiver



Basic features

Approval/Conformity	CE cULus
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	35K
Style	Square Straight connection

Display/Operation

Adjuster	no
Display	Output function- LED yellow

Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	1 µF
No-load current I _o max. at Ue	20 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	33.0 kOhm
Protection class	II
Rated insulation voltage U _i	250 V AC
Rated operating current I _e	200 mA
Rated operating voltage U _e DC	24 V
Ready delay t _v max.	100 ms
Residual current I _r max.	50 µA
Ripple max. (% of U _e)	15 %
Switching frequency	100 Hz
Turn-off delay t _{off} max.	5 ms
Turn-on delay t _{on} max.	5 ms
Utilization category	DC -13
Voltage drop U _d max. at I _e	2.5 V

Environmental conditions

Ambient temperature	-5...55 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Photoelectric Sensors
BOS 35K-PO-1UD-S4-C
Order Code: BOS00U9

BALLUFF

Material

Housing material	PA 12
Material sensing surface	PMMA

Mechanical data

Dimension	15 x 60 x 60 mm
Mounting	Screw M4

Optical features

Ambient light max.	10000 Lux
Beam characteristic	Divergent
Light type	LED, red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Switching function, optical	Light-on
Wave length	660 nm

Output/Interface

Switching output	PNP NC Pin 2
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Range/Distance

Range	0...4 m
Rated operating distance S_n	4 m
Temperature drift max. (% of S_r)	10 %

Remarks

Mounting bracket included, order other accessories separately.

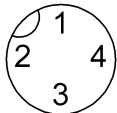
Polarizing filters prevent spurious switching due to reflecting and shiny parts.

Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.

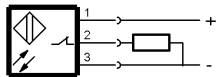
The sensor is functional again after the overload has been eliminated.

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.

Connector Drawings



Wiring Diagrams



Opto Symbols

