

BOS 11K Series

...the versatile solution for packaging and conveying



Balluff BOS 11K

The new photoelectric standard in conveyor control

The key value of Balluff's BOS 11K is its compact housing, enabling it to fit easily into densely installed machinery. It is designed for small-parts conveying equipment, and the BOS 11K helps engineers reduce a machine's overall footprint on the factory floor.

The threaded T-body "snout-mount" allows for rapid installation, cutting mounting time and labor cost. That's important when there are many sensors to install on several machines to build on a tight schedule. And if a sensor ever needs replacement after it's in service, the same quick-mount system boosts productivity by cutting unplanned downtime.

The versatile BOS 11K is available in diffuse, retroreflective, polarized retroreflective, and thru-beam sensing modes. This covers most common applications and reduces the variety of housing styles on a machine or in the plant. In addition, the BOS 11K is UL/CUL-listed and fully protected against damage from short circuits, polarity reversal, and voltage spikes. If the sensor falls into one of these states, the user-friendly status and diagnostic LEDs make for easy troubleshooting.

BOS 11K - the versatile, dependable, and economical photoelectric solution for packaging and conveying.

BOS 11K shown with Balluff's flexible BMS mounting system. Refer to back page for more info.



- Compact size facilitates machine footprint reduction
- 18 mm "Snout" mounting cuts assembly time
- Quick change-out minimizes unplanned downtime
- Innovative "T-Block" body style streamlines machine build
- Application flexibility helps to decrease inventory

Diagnostic LEDs



No Power



Power On
No Target




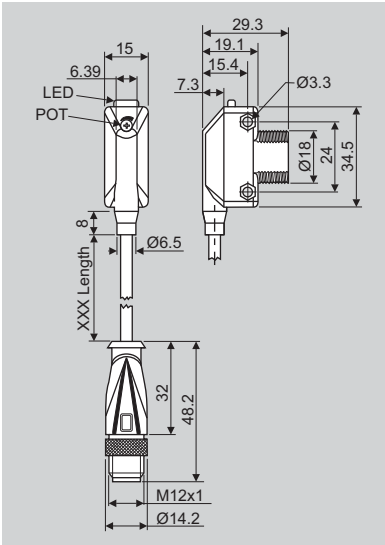
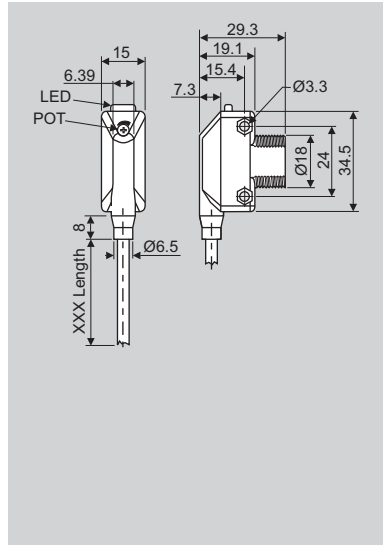
Power On
With Target



Weak Signal
(Yellow Flashing)



Short-Circuit/
Overload
(Green Flashing)

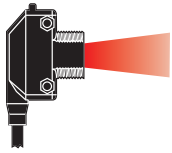
Series	BOS 11K	BOS 11K
Connector Type	M12 Connector	Cable
		
Diffuse		
PNP Light-on/Dark-on 10-450mm (Infrared)	BOS 11K-PA-ID10-00,15-S4	BOS 11K-PA-ID10-02
NPN Light-on/Dark-on 10-450mm (Infrared)	BOS 11K-NA-ID10-00,15-S4	BOS 11K-NA-ID10-02
Retroreflective		
PNP Light-on/Dark-on 6.5m (Infrared)		BOS 11K-PA-RR10-02
NPN Light-on/Dark-on 6.5m (Infrared)		BOS 11K-NA-RR10-02
Retroreflective, Polarized		
PNP Light-on/Dark-on 3.5m (Visible Red)	BOS 11K-PA-PR10-00,15-S4	BOS 11K-PA-PR10-02
NPN Light-on/Dark-on 3.5m (Visible Red)	BOS 11K-NA-PR10-00,15-S4	BOS 11K-NA-PR10-02
Thru-Beam		
PNP Light-on/Dark-on 20m, Receiver	BOS 11K-PA-IE11-00,15-S4	BOS 11K-PA-IE11-02
NPN Light-on/Dark-on 20m, Receiver	BOS 11K-NA-IE11-00,15-S4	BOS 11K-NA-IE11-02
Emitter 20m (Infrared)	BOS 11K-X-IS11-00,15-S4	BOS 11K-X-IS11-02
Supply voltage U_B	10...30 Vdc	
Voltage ripple	Max 10%	
Voltage drop U_d	≤ 2 Vdc	
Load current capacity	100 mA max. per output	
Current consumption (closed/open)	≤ 25 mA	
Leakage current	≤ 100 μ A per output	
Reverse polarity protection	Yes	
Short circuit protection	Yes	
Output function	PNP or NPN	
Emitter light source	Infrared (950nm), Visible Red (626nm)	
Ambient temperature range	-20°C to +55°C	
Switching frequency f	500 Hz (Diffuse, Retro) / 150 Hz (Thru-Beam)	
Response time	≤ 1 ms	
Switching current	Max. 100 mA	
Sensitivity adjustment	Yes (Diffuse, Retro) / No (Thru-Beam)	
Function indication	Power - Green, Output - Yellow	
Environmental protection (per IEC529)	IP 67	
Housing material	ABS	
Sensing face material	PMMA	
Connection	M12 Quick Disconnect	Fixed Cable (2 m)
No. of wires x gauge	N/A	4 x 26 AWG
Approvals	CE, cULus	
Recommended connector	C04 A or C04 B	N/A

See wiring diagrams on back page.

Diffuse values based upon standard white 100 mm x 100 mm reference card.
Retroreflective values based upon BOS R-1 Reflector.

➔ For beam diagrams, wiring, CAD drawings and more, visit www.balluff.com/11K

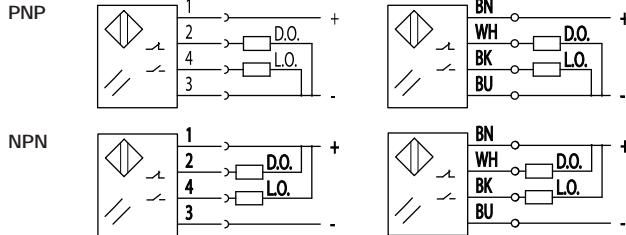
Diffuse Sensing Mode



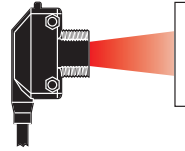
Advantages

- One sensor to mount
- No reflector required
- Adjustable sensing range

Wiring Diagrams



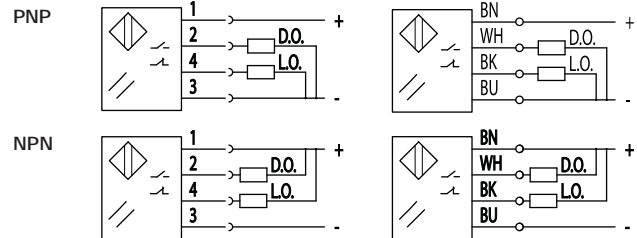
Retroreflective and Polarized Retroreflective Sensing Modes



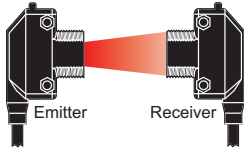
Advantages

- One sensor to mount
- Adjustable sensing range
- Good for translucent objects

Wiring Diagrams



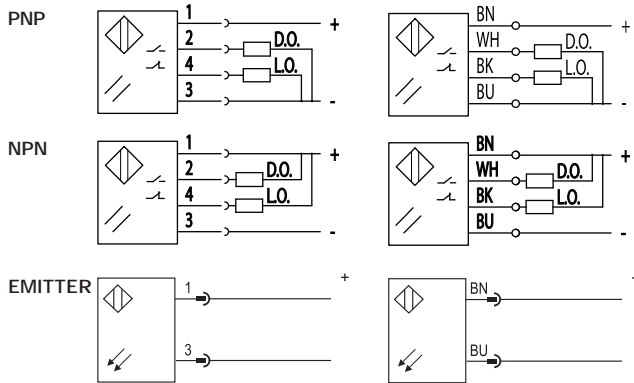
Thru-Beam Sensing Mode



Advantages

- Long range
- See targets independent of color
- "Burns-through" contaminants

Wiring Diagrams



Recommended Reflectors



BOS 18R - Standard
BOS R1 - High Efficiency



BOS R26 - Standard
BOS R9 - High Efficiency

BMS Mounting System



To download this brochure, visit
www.balluff.com/bms

BOS 11K →

IP Classifications	Definitions
IP 64	Protected against splashing water from any direction
IP 65	Protected against water jets
IP 66	Protected against powerful water jets
IP 67	Protected from the effects of temporary immersion
IP 68	Protected from the effects of continuous immersion
IP 69K	Protected from the effects of high pressure steam cleaning

www.balluff.com/11K

USA
Balluff Inc.
8125 Holton Drive
Florence, KY 41042
Phone: (859) 727-2200
Toll-free: 1-800-543-8390
Fax: (859) 727-4823
E-Mail: balluff@balluff.com

Canada
Balluff Canada, Inc.
2840 Argentia Road, Unit #2
Mississauga, Ontario L5N 8G4
Phone: (905) 816-1494
Toll-free: 1-800-927-9654
Fax: (905) 816-1411
E-Mail: balluff.canada@balluff.ca

Mexico
Balluff de Mexico S.A. de C.V.
Prol. Av. Luis M. Vega #109
Col. Ampliación Cimatarío
Querétaro, QRO 76030
Phone: (+52 442) 212-4882, 224-3583, 224-3171
Fax: (+52 442) 214-0536
E-Mail: balluff.mexico@balluff.com