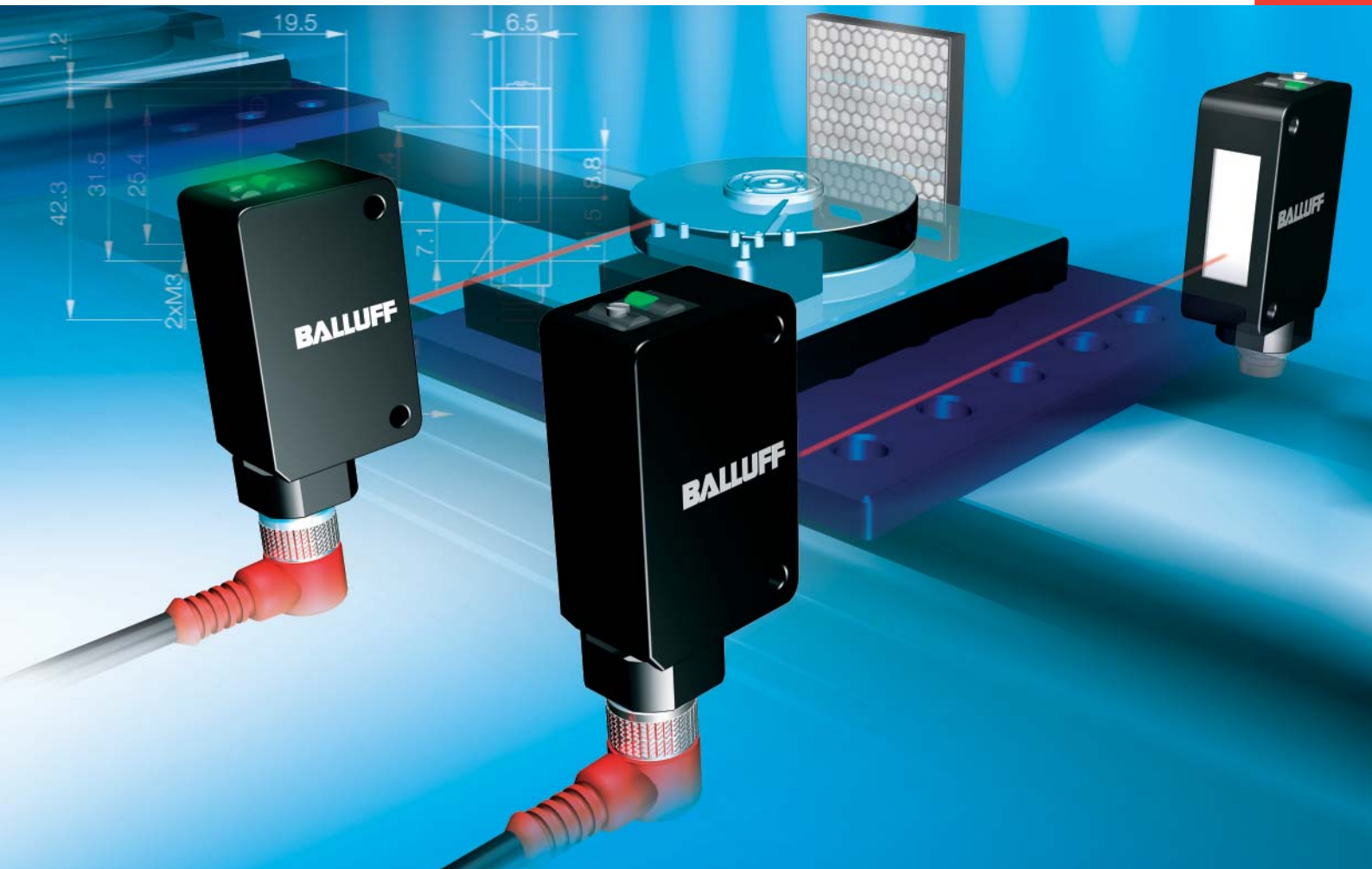


BALLUFF

Series BOS 5K

... simply good





BOS 5K – simply good

... just the essentials

The new Series BOS 5K stands out with:

- a small, compact design
- concentration on the essential basic functions
- attractive positioning in the lower price segment
- potentiometer for easy adjustment
- wide range of accessories including mounting brackets, diaphragms and reflectors

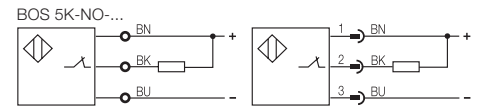
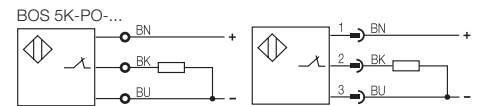
Series BOS 5K includes diffuse, retro-reflective and thru-beam models.

Choose from cable or connector, PNP or NPN output and light-on or dark-on.

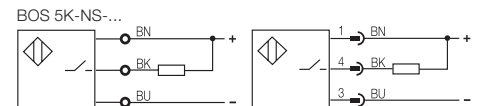
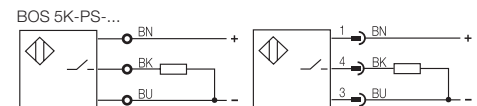
Wiring diagrams

Diffuse, Diffuse small beam, Retroreflective, Thru-beam Receiver

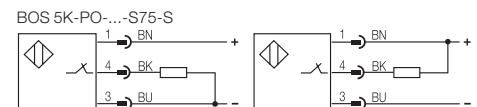
N.C. Pin 2, light-on



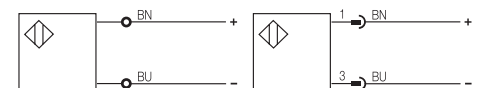
N.O. Pin 4, dark-on



N.C. Pin 4, light-on



Thru-beam Emitter



Diffuse BOS 5K



Diffuse BOS 5K small beam



Retroreflective BOS 5K







Thru-beam BOS 5K



	Diffuse BOS 5K	Diffuse BOS 5K small beam	Retroreflective BOS 5K	Thru-beam BOS 5K
Range	900 mm	50...200 mm	0.1...4 m	10 m
Light type	Infrared	Red light	Polarized red light	Infrared
Application examples				



	Connector type	Cable type	Light type	Range	Output
	Diffuse				
	BOS 5K-PS-ID10-S75	BOS 5K-PS-ID10-01	Infrared	900 mm	PNP
	BOS 5K-NS-ID10-S75	BOS 5K-NS-ID10-01	Infrared	900 mm	NPN
	BOS 5K-PO-ID10-S75	BOS 5K-PO-ID10-01	Infrared	900 mm	PNP
	BOS 5K-NO-ID10-S75	BOS 5K-NO-ID10-01	Infrared	900 mm	NPN
	BOS 5K-PO-ID10-S75-S		Infrared	900 mm	PNP
	BOS 5K-NO-ID10-S75-S		Infrared	900 mm	NPN
	Diffuse small beam				
	BOS 5K-PS-RD11-S75	BOS 5K-PS-RD11-01	Red light	50...200 mm	PNP
	BOS 5K-NS-RD11-S75	BOS 5K-NS-RD11-01	Red light	50...200 mm	NPN
	BOS 5K-PO-RD11-S75	BOS 5K-PO-RD11-01	Red light	50...200 mm	PNP
	BOS 5K-NO-RD11-S75	BOS 5K-NO-RD11-01	Red light	50...200 mm	NPN
	BOS 5K-PO-RD11-S75-S		Red light	50...200 mm	PNP
	BOS 5K-NO-RD11-S75-S		Red light	50...200 mm	NPN
	Retroreflective				
	BOS 5K-PS-RR10-S75	BOS 5K-PS-RR10-01	Polarized red light	0.1...4 m	PNP
	BOS 5K-NS-RR10-S75	BOS 5K-NS-RR10-01	Polarized red light	0.1...4 m	NPN
	BOS 5K-PO-RR10-S75	BOS 5K-PO-RR10-01	Polarized red light	0.1...4 m	PNP
	BOS 5K-NO-RR10-S75	BOS 5K-NO-RR10-01	Polarized red light	0.1...4 m	NPN
	BOS 5K-PO-RR10-S75-S		Polarized red light	0.1...4 m	PNP
	BOS 5K-NO-RR10-S75-S		Polarized red light	0.1...4 m	NPN
	Thru-beam (emitter and receiver included in scope of delivery)				
	BOS 5K-PS-IX10-S75	BOS 5K-PS-IX10-01	Infrared	10 m	PNP
	BOS 5K-NS-IX10-S75	BOS 5K-NS-IX10-01	Infrared	10 m	NPN
	BOS 5K-PO-IX10-S75	BOS 5K-PO-IX10-01	Infrared	10 m	PNP
	BOS 5K-NO-IX10-S75	BOS 5K-NO-IX10-01	Infrared	10 m	NPN
	BOS 5K-PO-IX10-S75-S		Infrared	10 m	PNP
	BOS 5K-NO-IX10-S75-S		Infrared	10 m	NPN

Please specify in ordering code

Output: **P** for PNP, **N** for NPN

Connection: **S75** for connector

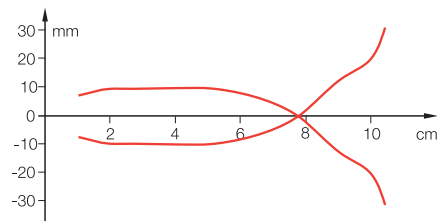
01 for 1 m cable

Example: BOS 5K-**PS**-ID10-**S75**
BOS 5K-**NS**-ID10-**01**

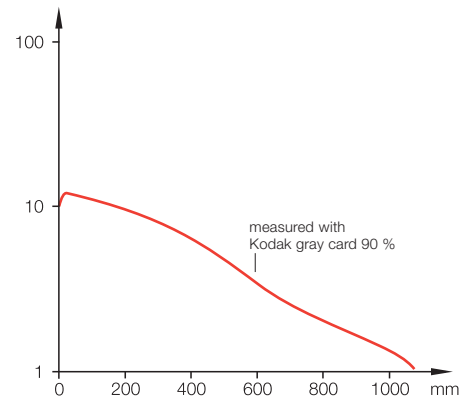
	Range	BOS 5K-S-ID10-__	BOS 5K-O-ID10-__	BOS 5K-O-ID10-__-S	BOS 5K-S-RD11-__	BOS 5K-O-RD11-__	BOS 5K-O-RD11-__-S	BOS 5K-S-RR10-__	BOS 5K-O-RR10-__	BOS 5K-O-RR10-__-S	BOS 5K-S-IX10-__	BOS 5K-O-IX10-__	BOS 5K-O-IX10-__-S
Diffuse	0.9 m	■	■	■									
Diffuse small beam	0.05...0.2 m				■	■	■						
Retroreflective (with R11 reflector)	0.1...4 m							■	■	■			
Thru-beam (emitter and receiver)	10 m										■	■	■
Electrical data													
Supply voltage U_B	10...30 V DC	■	■	■	■	■	■	■	■	■	■	■	■
Ripple	≤ 2 V DC	■	■	■	■	■	■	■	■	■	■	■	■
No-load supply current I_0 max.	≤ 30 mA	■	■	■	■	■	■	■	■	■			
	Emitter ≤ 15 mA										■	■	■
	Receiver ≤ 20 mA										■	■	■
Output	PNP or NPN	■	■	■	■	■	■	■	■	■	■	■	■
Output current	≤ 100 mA	■	■	■	■	■	■	■	■	■	■	■	■
Switching type	dark-on		■	■									
	light-on	■			■	■	■	■	■	■	■	■	■
Voltage drop U_d at I_o	≤ 1.2 V DC	■	■	■	■	■	■	■	■	■	■	■	■
Settings	Potentiometer 270°	■	■	■	■	■	■	■	■	■	■	■	■
Optical data													
Light type	Infrared	■	■	■							■	■	■
	Red light				■	■	■						
	Polarized red light							■	■	■			
Display													
Supply voltage indicator	LED yellow	■	■	■	■	■	■	■	■	■	■	■	■
Stability indicator	LED green	■	■	■	■	■	■	■	■	■	■	■	■
Time data													
Response time	≤ 1 ms	■	■	■	■	■	■	■	■	■	■	■	■
Mechanical data													
Connection	Connector M8x1, 4-pin	■	■	■	■	■	■	■	■	■	■	■	■
	Cable	■	■	■	■	■	■	■	■	■	■	■	■
Housing material	PC/PBT	■	■	■	■	■	■	■	■	■	■	■	■
Lens material	PC	■	■	■	■	■	■	■	■	■	■	■	■
	PMMA							■	■	■			
Weight	with connector 10 g	■	■	■	■	■	■	■	■	■	■	■	■
	with cable 80 g	■	■	■	■	■	■	■	■	■	■	■	■
Ambient data													
Degree of protection	IP 67	■	■	■	■	■	■	■	■	■	■	■	■
Short circuit protected		■	■	■	■	■	■	■	■	■	■	■	■
Permissible ambient light	Sunlight max. 10,000 Lux	■	■	■	■	■	■	■	■	■	■	■	■
	Artificial light max. 5,000 Lux	■	■	■	■	■	■	■	■	■	■	■	■
Ambient temperature range T_a	-25...+55 °C	■	■	■	■	■	■	■	■	■	■	■	■



Diffuse
BOS 5K-__-ID10-__



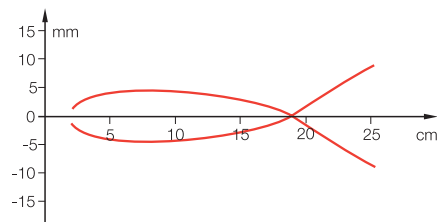
Range measured with lateral travel and Kodak gray card 90 %.



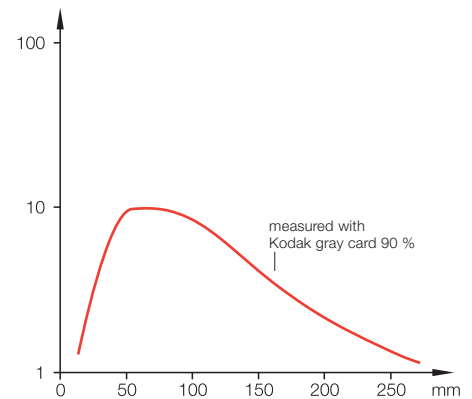
Function reserve



Diffuse small beam
BOS 5K-__-RD10-__



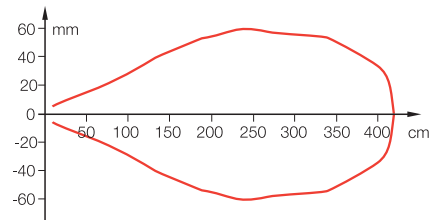
Range measured with lateral travel and Kodak gray card 90 %.



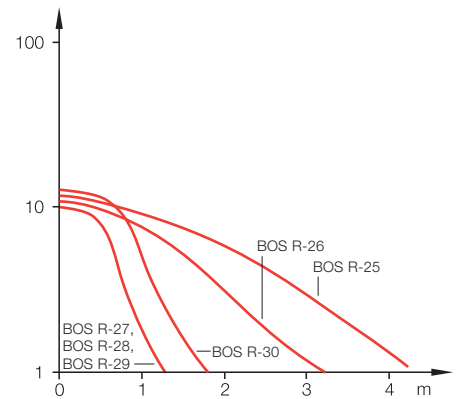
Function reserve



Retroreflective
BOS 5K-__-RR10-__



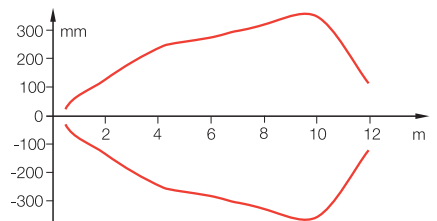
Range measured using lateral travel and R1 reflector.



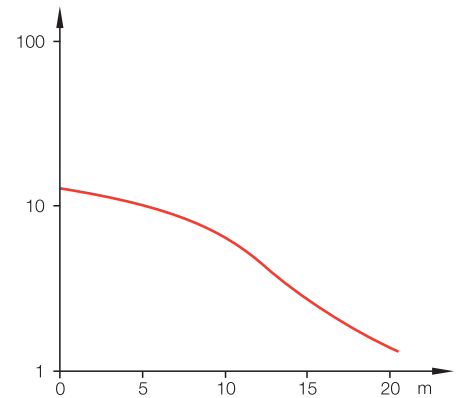
Function reserve



Thru-beam
BOS 5K-__-IX10-__



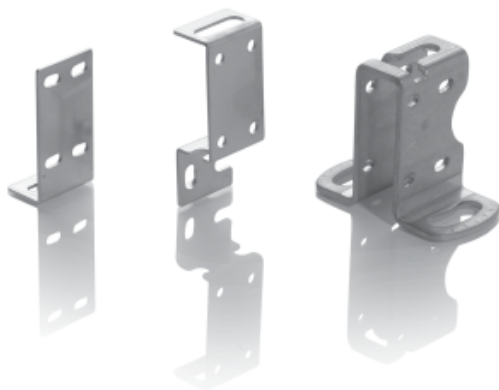
With the thru-beam sensor, the maximum possible offset between emitter and receiver is measured.



Function reserve

Mounting Brackets

BOS 5-HW1
BOS 5-HW2
BOS 5-HW3
(from left to right)



Connectors

BKS-S 74
BKS-S 75
(from left to right)



**Reflectors,
Reflector Brackets**

BOS R-1
BOS R-25
BOS 5-HW4
BOS R-26
BOS 5-HW5
BOS R-9
BOS 5-HW6
BOS R-27
BOS R-28
BOS R-29
BOS R-30
(from left
to right)



Vertical Slit Aperture

BOS 5-BL1
BOS 5-BL2
BOS 5-BL3

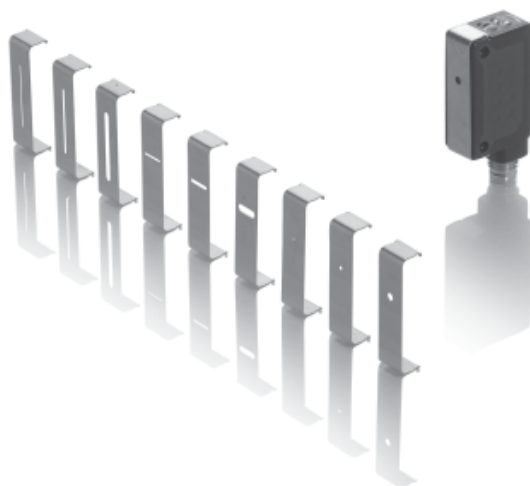
Horizontal Slit Aperture

BOS 5-BL4
BOS 5-BL5
BOS 5-BL6

Circular Aperture

BOS 5-BL7
BOS 5-BL8
BOS 5-BL9

(from left to right)



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