

BALLUFF

Laser Diffuse Sensor BOS 26K

... with ultra-high accuracy





**Laser diffuse sensor
BOS 26K – with extremely
high accuracy**

A new problem solver has been added to our BOS 26K family of sensors. This laser version is designed for especially demanding applications.

Features

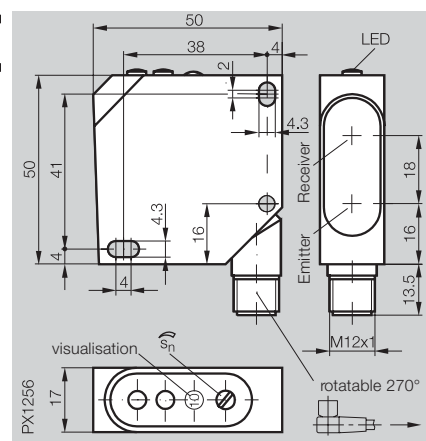
- Extremely high switching accuracy
- Extremely effective background suppression
- Extremely low hysteresis of $< 50 \mu\text{m}$
- Clearly visible light spot allows precise alignment of the sensor

Applications

Thanks to their precise background suppression and extremely low hysteresis, these sensors are particularly suited for detecting objects directly against a background.



Diffuse with background suppression	Range	40...60 mm



Diffuse					
	PNP	40...60 mm	HGA	BOS 26K-PA-1LHA-SA1-S4-C	
	NPN	40...60 mm	HGA	BOS 26K-NA-1LHA-SA1-S4-C	
Electrical data					
Supply voltage U_B			10...30 V DC		
Ripple			10 %		
No-load supply current I_0 max.			≤ 50 mA		
Switching output			PNP- or NPN-Transistor		
Output current			200 mA		
Switching type			light-/dark-on (push-pull)		
Voltage drop U_d at I_e			≤ 2.4 V		
Settings			2-turn potentiometer with indicators		
Optical data					
Emitter, light type			laser, red light		
Wavelength			670 nm		
Laser class			2		
Light spot diameter			see table		
Distance hysteresis (18 %/18 %)			< 50 μm		
Gray value shift (90 %/18 %)			1 %		
Indicators					
Power-on indicator			LED green		
Output function indicator			LED yellow		
Stability indicator			LED red		
Time data					
Response time			0.2 ms		
Frequency of operating cycles f			2.5 kHz		
Mechanical data					
Dimensions			50×50×17 mm		
Connection			M12 connector, 4-pin		
Housing material			impact-resistant ABS		
Optical surface			PMMA		
Weight			40 g		
Ambient data					
Degree of protection per IEC 60529			IP 67		
Polarity reversal protected			yes		
Short circuit protected			yes		
Ambient temperature range T_a			-20...+45 °C		
Ambient light rejection			EN 60947-5-2		

Diffuse values referenced to
Kodak gray card 90 % reflective.

Light spot diameter [mm]

Range	40	45	50	55	60
Light spot Ø	0,25	0,7	1,1	1,5	1,8



Connector orientation

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