

Technical Description

When in doubt – more power! This is especially true under harsh conditions. This is why our **BOS S30** has a 3A output at 264 V AC/DC and a very long sensing range. It also comes with setup help, test input, alarm output, time functions, and adjustable background suppression up to 1 m.

The same rugged plastic housing series with large wiring chamber is offered with each of the following optical types:

- Thru-Beam
- Retroreflective with polarizing filter
- Diffuse
- Diffuse with background suppression

The supply voltage can be 10...30 V DC or 17...264 V AC/DC in the universal version. All DC versions come standard with PNP and NPN transistor outputs, and have an alarm output and test input. The universal voltage versions have a relay output.

The retro and thru-beam versions use both visible red and infrared light.

Applications

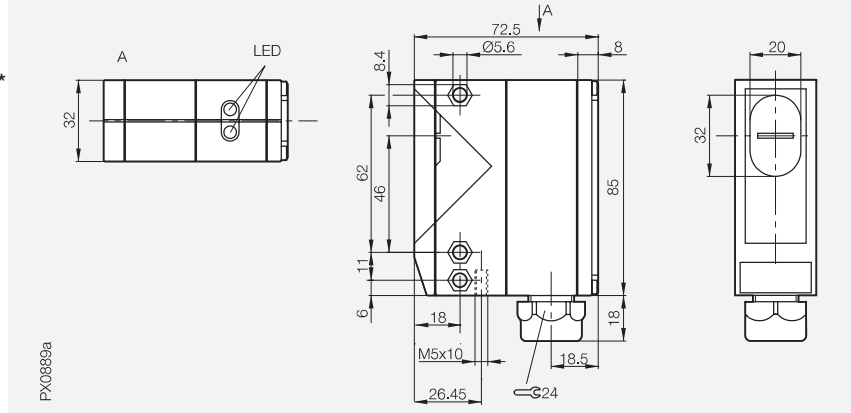
- Conveying
- Machine tools
- Packaging
- Assembly and handling automation
- Gate controls
- Car wash machines
- Inventory control

Features

- Universal voltage model 17...264 V AC/DC with relay output
- DC 10...30 V with transistor output (PNP/NPN)
- Light-on/Dark-on selection
- Reception display for safe range (green LED)
- Function display for output (red LED)
- Defogging lens options
- DC version standard with alarm output and test input
- Version with various time functions (2 times settable)
- Wiring chamber with PG 11 cord seal



Housing size		BOS S30	BOS S30
Diffuse Sensing range		1 m/2 m	1 m/2 m
Retroreflective Sensing range		9 m	9 m
Thru-Beam Sensing range		50 m	50 m



	Diffuse with Background Suppression		
	PNP/NPN, Relay O/● 200...1100 mm	BOS S30-5-M110-1	BOS S30-1-M110-1
	PNP/NPN, Relay O/● 200...1100mm timing functions*	BOS S30-5-M110T-1	BOS S30-1-M110T-1
	Diffuse		
	PNP/NPN, Relay O/● 50... 2000 mm	BOS S30-5-C200-1	BOS S30-1-C200-1
	PNP/NPN, Relay O/● 50... 2000 mm timing functions*	BOS S30-5-C200T-1	BOS S30-1-C200T-1
	Polarized Retroreflective		
	PNP/NPN, Relay O/● 0.3...9m	BOS S30-5-B8-1	BOS S30-1-B8-1
	PNP/NPN, Relay O/● 0.3...9m timing functions*	BOS S30-5-B8T-1	BOS S30-1-B8T-1
	Thru-Beam		
	PNP/NPN, Relay O/● 50m receiver	BLE S30-5-F50-1	BLE S30-1-F50-1
	PNP/NPN, Relay O/● 50m receiver timing functions*	BLE S30-5-F50T-1	BLE S30-1-F50T-1
	PNP/NPN, Relay O/● 50m emitter	BLS S30-5-G50-1	BLS S30-1-G50-1

Supply voltage U _B	10...30 V DC	17...264 V AC/DC
Voltage drop U _d at I _e	1.5 V	0 V
Rated isolation voltage U _i	75 V DC	250 V AC
Rated operational current I _e	≤ 200 mA	
No-load supply current I ₀	≤ 40 mA	4VA
Short circuit protected	yes	no
Permissible capacitance	0.3 µF	
On/Off delay	≤ 1 ms	≤ 20 ms
Frequency of operating cycles	500 Hz	10 Hz
Utilization category	DC 13	140 V AC/DC 13
Output	PNP/NPN	Relay 3A, 250 V AC/24 V DC
Output function	O/● in wiring chamber	
Emitter light source	infrared 880nm	
Permissible ambient light	3000 Lux	
Sensitivity adjustment	1-turn Potentiometer	
Output function indication	yes	
Stability indication	yes	
Ambient temperature range T _a	-20...+55 °C	
Degree of protection per IEC 529	IP 67	
Housing material	Polycarbonate	
Material of sensing face	PMMA	
Connection	terminals	
No. of wires × conductor cross section		
Weight	160 g	

O/● = Light-On/Dark-On

*For DC only.

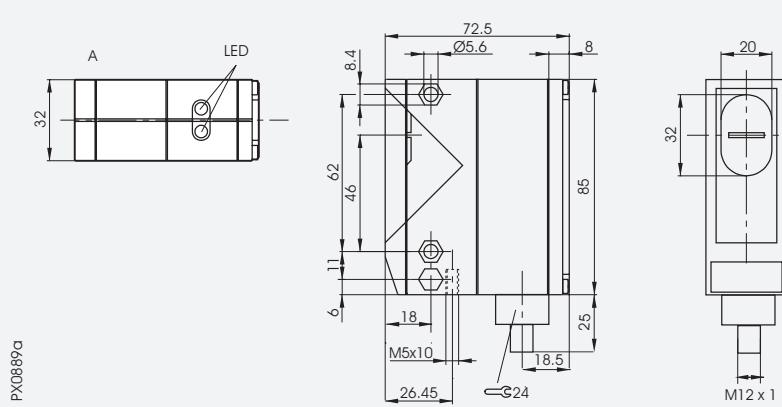
Note: See reflectors section for additional reflectors.
Diffuse values referenced to Kodak white card 90 % reflection.
Retroreflective values referenced to R1 reflector.

* Time delay range from 0.6 to 165.

Block Style Optical Sensors

BOS S30 DC,
Quick Disconnect

Housing size	BOS S30
Diffuse Sensing range	1 m/2 m
Retroreflective Sensing range	9 m
Thru-Beam Sensing range	50 m



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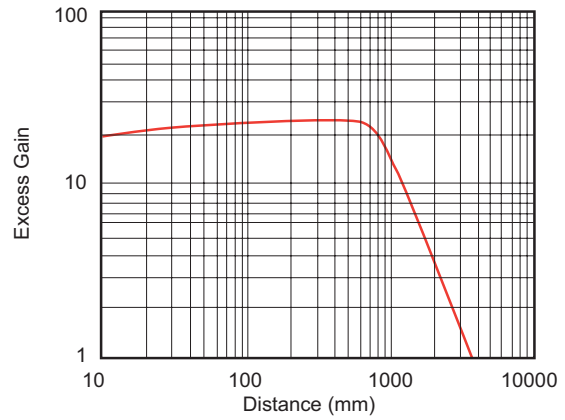
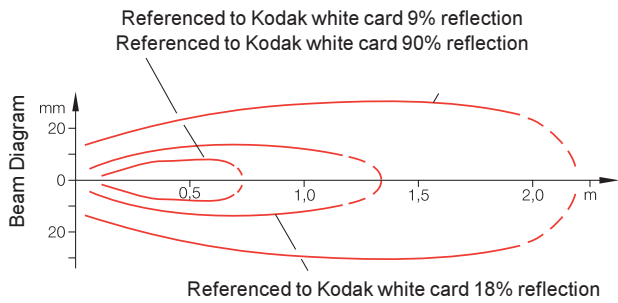
Diffuse with Background Suppression		
	PNP/NPN, Relay O/● 200...1100mm	BOS S30-5-M110-2P
	PNP/NPN, Relay O/● 200...1100mm timing functions*	BOS S30-5-M110T-2P
Diffuse		
	PNP/NPN, Relay O/● 2m	BOS S30-5-C200-2P
	PNP/NPN, Relay O/● 2m timing functions*	BOS S30-5-C200T-2P
Polarized Retroreflective		
	PNP/NPN, Relay O/● 9m	BOS S30-5-B8-2P
	PNP/NPN, Relay O/● 9m timing functions*	BOS S30-5-B8T-2P
Thru-Beam		
	PNP/NPN, Relay O/● 50m receiver	BLE S30-5-F50-2P
	PNP/NPN, Relay O/● 50m receiver timing functions*	BLE S30-5-F50T-2P
	PNP/NPN, Relay O/● 50m emitter	BLS S30-5-G50-2P
Supply voltage U_B		10...30 V DC
Voltage drop U_d at I_e		1.5 V
Rated isolation voltage U_i		75 V DC
Rated operational current I_e		≤ 200 mA
No-load supply current I_0		≤ 40 mA
Short circuit protected		yes
Permissible capacitance		0.3 μF
On/Off delay		≤ 1 ms
Frequency of operating cycles		500 Hz
Utilization category		DC 13
Output		PNP/NPN
Output function		O/● in wiring chamber
Emitter light source		infrared 880nm
Permissible ambient light		3000 Lux
Sensitivity adjustment		1-turn Potentiometer
Output function indication		yes
Stability indication		yes
Ambient temperature range T_a		-20...+55 °C
Degree of protection per IEC 529		IP 67
Housing material		Polycarbonate
Material of sensing face		PMMA
Connection		M12 connector
No. of wires × conductor cross section		
Weight		160 g
O/● = Light-On/Dark-On		

Note: Diffuse values referenced to Kodak white card 90 % reflection.

For defogging lens option:
add M to the end of the part number

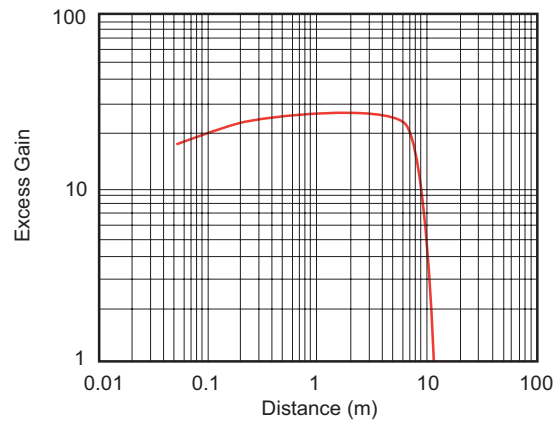
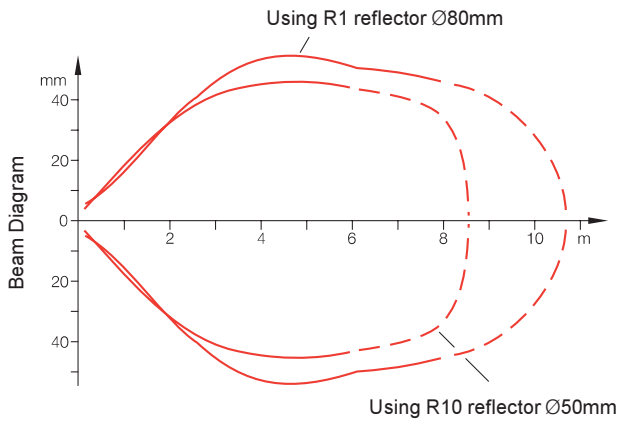
* Time delay range from 0.6 to 165.

Diffuse BOS S30...C200...



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Polarized retroreflective BOS S30...B8...



Thru-beam BLE/BLS...S30...F/G50...

