Product Data

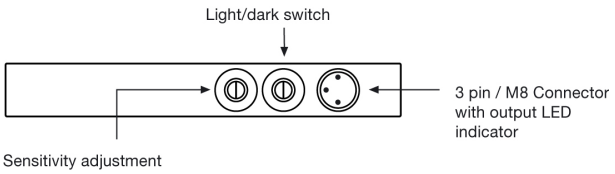
Technical Data		OFS 002 / 005 / 010	OFS 020 / 030 / 050 / 080	OFS 120 / 220
Supply Voltage		10-35 V dc		
Reverse polarity protected		Yes		
Short circuit protected		Yes		
Power consumption		Max. 35 mA		
Max. output load		200 mA		
Voltage drop		Max. 2,5 V		
Switching frequency		2,5 kHz	5 kHz	2,5 kHz
Response time t_{on}/t_{off}		0,2 ms / 0,2 ms	0,1 ms / 0,1 ms	0,2 ms / 0,2 ms
Start up time		6 ms		
Light source	OFS	Infrared (880 nm)		
	OFSR	-	Visible red (660 nm)	
	OFSH	-	High power infrared (880 nm)	-
Output indicator		Yellow LED		
Resolution	OFS	0,4 mm		
	OFSR	-	0,4 mm	
	OFSH	-	1,5 mm	-
Hysteresis		< 0,2 mm		

Environmental Data	
Light immunity	> 50.000 lux
Temperature, operation	-10 to +60 ºC
Sealing class	IP 67
Approvals	CE

Available Models

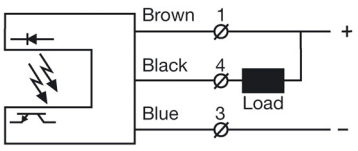
	Model	Output
OFS xxx OFSR xxx OFSH xxx	(N1S)	NPN, NC
	(N2S)	NPN, NO
	(N3S)	NPN, NC/NO
	(P1S)	PNP, NC
	(P2S)	PNP, NO
	(P3S)	PNP, NC/NO

Illustration



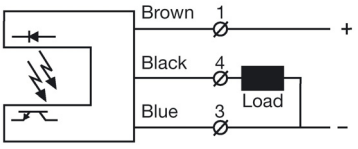
Connection

Wiring Diagrams



NxS

OFS xxx OFSR xxx OFSH xxx	Transistor NPN



PxS

OFS xxx OFSR xxx OFSH xxx	Transistor PNP

Connection Wires/Pins

	3 pin, M8 plug / Cable
Supply +	Pin 1 / Brown
Supply -	Pin 3 / Blue
Output	Pin 4 / Black

Sensor plug

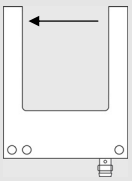
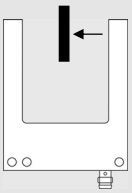
Adjustments

Output Mode Selection — Only (N3S) / (P3S) model

The output mode can be selected via an integral switch. Refer to Output Logic table for output mode reference.

Light Operated (N.C.)	Enables the output to be inactive when there is an object present.	Turn potentiometer to full clockwise position
Dark Operated (N.O.)	Enables the output to be active when there is an object present.	Turn potentiometer full counter clockwise position

Output Logic

Detection	Output Mode	Output status	Yellow LED
Object absent 	Dark operated (N.O.)	Open	Off
	Light operated (N.C.)	Closed	On
Object present 	Light operated (N.C.)	Open	Off
	Dark operated (N.O.)	Closed	On

Sensitivity Adjustment

Maximum sensitivity can be used for most applications and is advised for applications with contaminated environments e.g. dirt, water and dust. Increase the sensitivity to maximum by turning the potentiometer to full clockwise position.

Sensitivity adjustment may be required in applications where objects to be detected are small or translucent. Proceed with the following steps:

1	Adjust the sensitivity to maximum by turning the potentiometer to full clockwise position.
2	Check if there is no object present interrupting the beam.
3	Select target object with smallest dimensions and most translucent surface.
4	Place target object blocking the light beam. If the output status changes, adjustment is not required. If the output status has not changed proceed to step 5.
5	Decrease the sensitivity by turning the potentiometer counter clockwise until the output is activated.
6	Remove target object. Observe the output status has changed.

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Made in Denmark

Warning

This product is not a safety system and must not be used as such.
It is not designed for personnel safety applications, and must not be used as a stand alone personnel safety system.

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