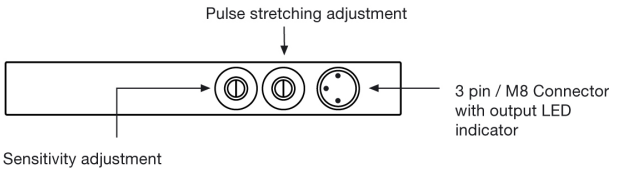
Product Data

Technical Data	040	070	100	150	200	250
Supply Voltage	24 V dc					
Reverse polarity protected	Yes					
Short circuit protected	Yes					
Power consumption	Max. 70 mA					
Máx. output load	200 mA					
Switching frequency	5000 Hz					
Response time t_{on}/t_{off}	0,1 ms / 0,1 ms					
Pulse stretching	0 – 150 ms, adjustable					
Light source	Infrared (880 nm)					
Output indicator	Yellow LED					
Resolution	0,5 mm	1,0 mm	2,0 mm	3,0 mm	3,5 mm	4,0 mm
Hysteresis	< 0,2 mm					

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

Available Models	Model	Output
OAS PxS OAST PxS	P1S	PNP, NC
	P2S	PNP, NO
OAS NP3S OAST NP3S	NP3S	NPN/PNP, NC/NO

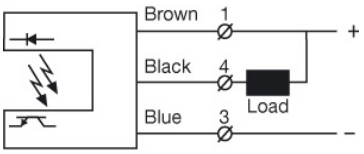
Illustration



Note: NP3S model has one extra potmeter for NC/NO selection

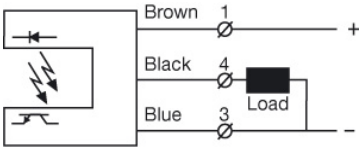
Connection

Wiring Diagrams



Load as NPN

OAS/T NxS
OAS/T NP3S
Transistor NPN



Load as PNP

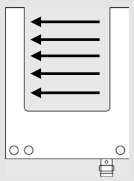
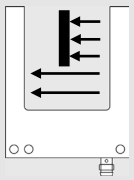
OAS/T PxS
OAS/T NP3S
Transistor PNP

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

Sensor plug

Adjustments

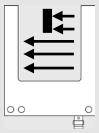
Output Logic

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 beams.	
3	Select target object with smallest dimensions and most translucent surface.	
4	The target object should be placed at the opposite end from the potentiometers, blocking the last few beams (please refer to diagram) 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.	

Pulse Stretching Adjustment

The pulse stretching can be adjusted vía an integral potentiometer.

Static Detection Principle	The static detection principle is recommended for applications where the object/s are permanently present. Example: presence and measurement of the length of parts (wires, pipes...). For static detection, turn potentiometer fully counter clockwise.
Dynamic Detection Principle	The dynamic detection principle is recommended for applications where the object/s are traveling at high speed through the sensor detection area. Example: counting free falling, small parts (nuts, screws…). The pulse length can be adjusted from 0 to 150 ms, by turning the potentiometer clockwise. For minimum pulse length, turn the potentiometer fully clockwise.

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Warning
This device is not to be used for Personnel Protection in Machine Guarding Safety applications. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel machine guarding stand-alone safety applications.

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