

# OAS series

## DATASHEET

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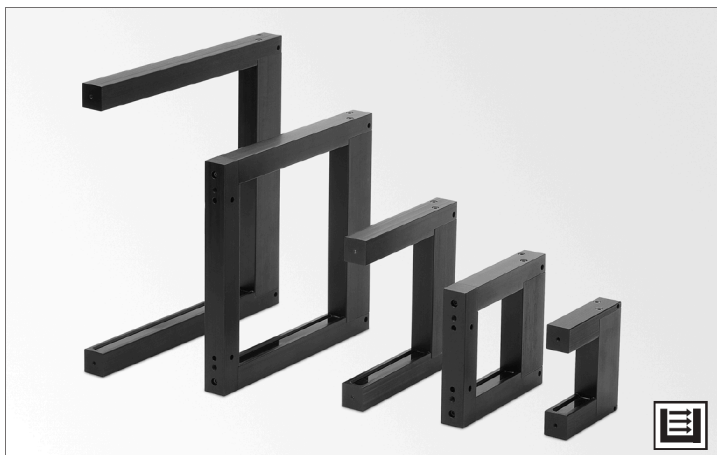
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## OPTICAL FRAME SENSOR SERIES

OAS

### Description

- 50 mm to 250 mm frame width
- Aluminium housing
- Plug connection
- Infrared light source
- Sensitivity adjustment via potentiometer
- Pulse stretching adjustment via potentiometer
- Dynamic or static detection principle
- Output indicator
- High tolerance to hostile environments
- 24 V dc supply voltage
- 3 wire, PNP output
- Fast response time
- High resolution from 0,5 mm



The OAS series consists of self-contained optical frame sensors that are housed in a durable, aluminium frame housing which operates in thru-beam mode. The series is available in a variety of frame sizes, ranging from 50 mm to 250 mm, with (OAST) or without (OAS) cross bar construction.

The complete series is available as 3 wire, PNP transistor output with a 24 V dc supply voltage. All models offer sensitivity adjustment and pulse stretching adjustment via integral potentiometers.

The complete series offers a high switching frequency of 5000 Hz and high resolution ranging from 0,5 mm to 4,0 mm.

The series is protected against reverse polarity of power supplies and output signals. The output is protected against short circuit and inductive loads.

Technical Data						
	040	070	100	150	200	250
Supply voltage	24 V dc					
Voltage tolerance	± 20 %					
Reverse polarity protected	Yes					
Short circuit protected	Yes					
Current consumption	Max. 70 mA					
Maximum output load	200 mA					
Resolution	0,5 mm	1,0 mm	2,0 mm	3,0 mm	3,5 mm	4,0 mm
Operation frequency	5000 Hz					
Response time $t_{ON} / t_{OFF}$	0,1 ms / 0,1 ms					
Reproducibility	< 0,1 mm					
Pulse stretching	0-150 ms, adjustable					
Output indicator	Yellow LED					
Hysteresis	< 0,2 mm					
Light source	Infrared (880 nm)					
Frame opening width	50 mm	70 mm	100 mm	150 mm	200 mm	250 mm
Housing material	Frame housing	Aluminium (black anodised)				
	Lens cover	PMMA				


Environmental Data	
Vibration	10-55 Hz, 0,5 mm
Shock	10 g
Light immunity, @ 15° incidence	> 50 000 lux
Temperature, operation	-10 to +60 °C
Temperature, storage	-40 to +80 °C
Sealing Class	IP 67
Approvals	CE

Available Types							
Type	Frame opening size		Control Feature	Cross Bar		No	Yes
	Width	Height		Output		Order Reference	
OAS 040	50 mm	45 mm	Sensitivity pot. and pulse time pot.	PNP	NC	OAS 040 P1S T3	OAST 040 P1S T3
					NO	OAS 040 P2S T3	OAST 040 P2S T3
OAS 070	70 mm	73 mm			NC	OAS 070 P1S T3	OAST 070 P1S T3
					NO	OAS 070 P2S T3	OAST 070 P2S T3
OAS 100	100 mm	103 mm			NC	OAS 100 P1S T3	OAST 100 P1S T3
					NO	OAS 100 P2S T3	OAST 100 P2S T3
OAS 150	150 mm	153 mm			NC	OAS 150 P1S T3	OAST 150 P1S T3
					NO	OAS 150 P2S T3	OAST 150 P2S T3
OAS 200	200 mm	203 mm			NC	OAS 200 P1S T3	OAST 200 P1S T3
					NO	OAS 200 P2S T3	OAST 200 P2S T3
OAS 250	250 mm	253 mm			NC	OAS 250 P1S T3	OAST 250 P1S T3
					NO	OAS 250 P2S T3	OAST 250 P2S T3

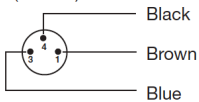
Connections	
	M8 Plug / Cable
Supply +	Pin 1 / Brown
Supply -	Pin 3 / Blue
Output	Pin 4 / Black

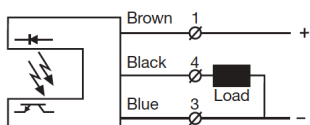
**3 pin, M8**

Sensor Plug (Male)



Cable Plug (Female)

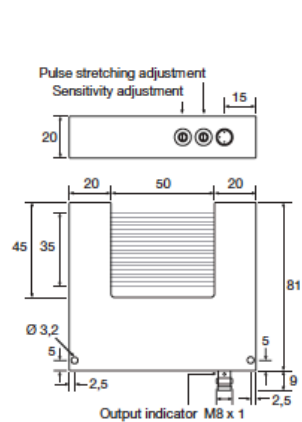


Wiring Diagrams	
 <p style="text-align: center;"><b>PxS</b></p>	

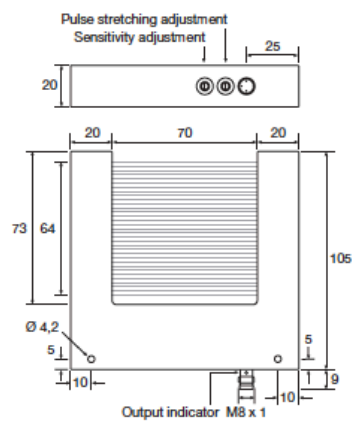


**Dimensions and Descriptions**

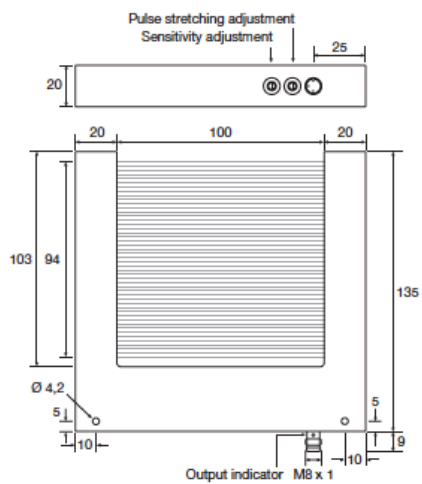
**OAS**



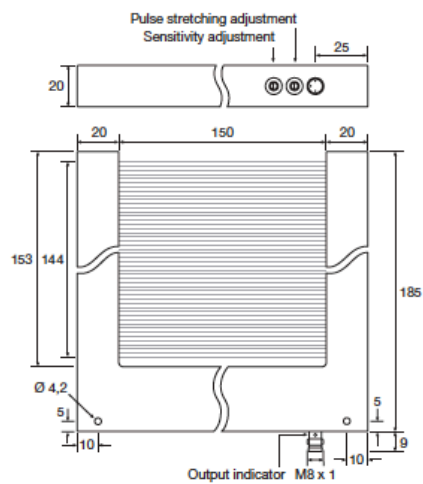
**OAS 040**



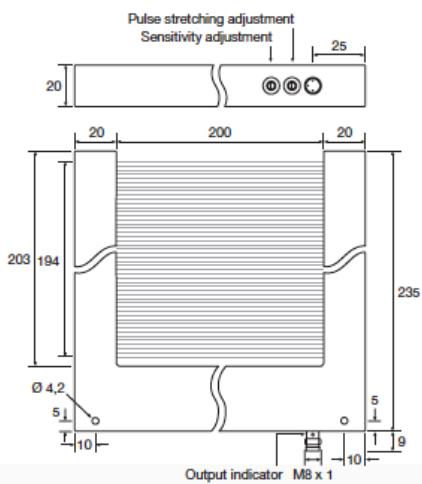
**OAS 070**



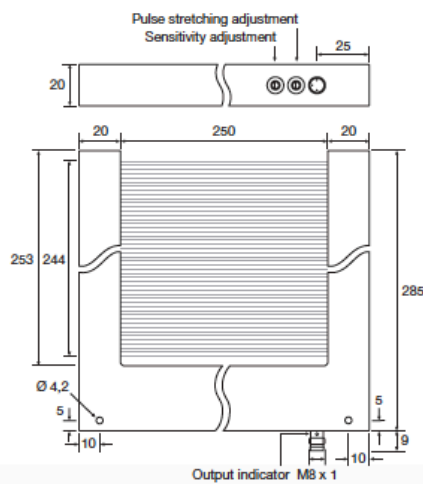
**OAS 100**



**OAS 150**



**OAS 200**

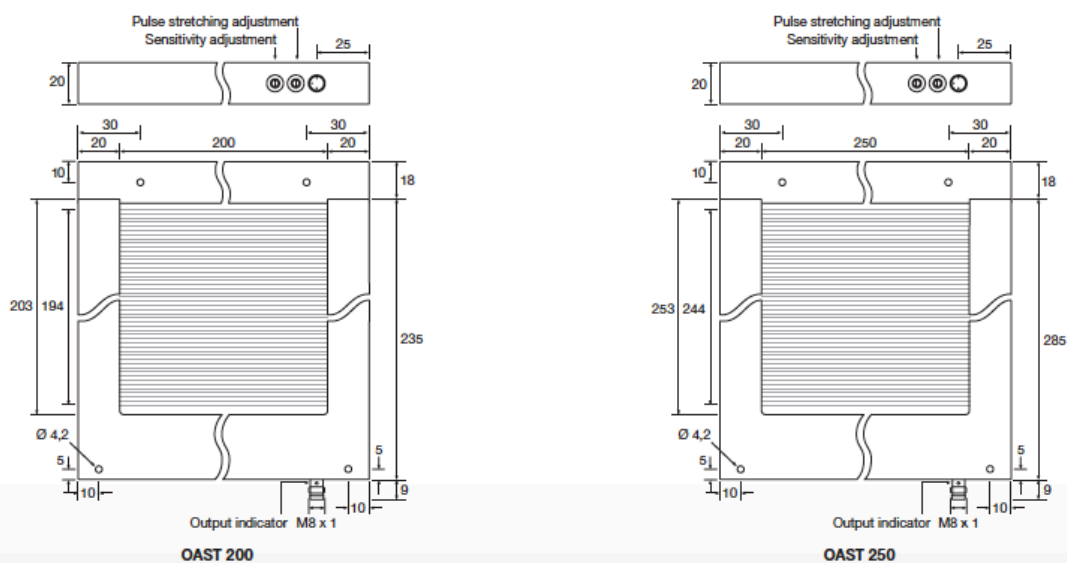
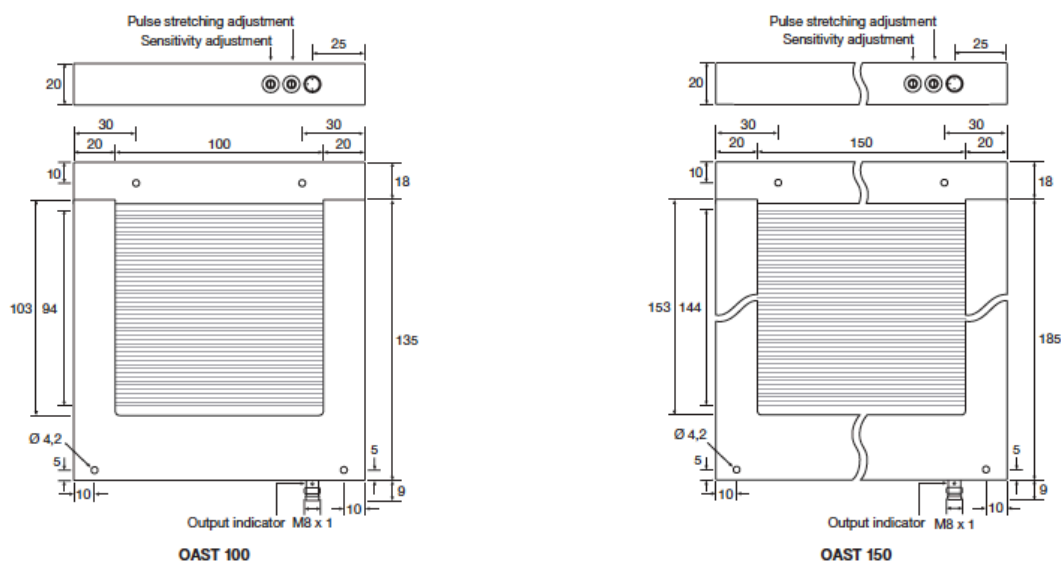
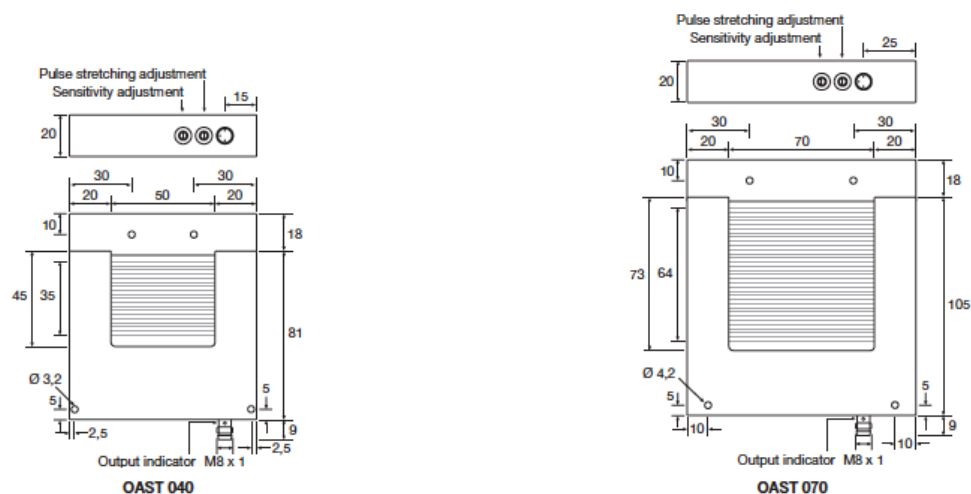


**OAS 250**

(Units in mm)

# Dimensions and Descriptions

## OAST



(Units in mm)