

SRF SERIES INSTRUCTION MANUAL

Slot sensor

CONTROLS

YELLOW LED ON – object presence
YELLOW LED OFF – object absent

SENSITIVITY TRIMMER

This trimmer can be used to adjust sensitivity of the sensor.

N.O. / N.C. TRIMMER – OUTPUT

This trimmer can be used to adjust the output status.

WARNING: The trimmer rotation is limited to 270° by a mechanical stop.
Do not apply excessive torque when adjusting.

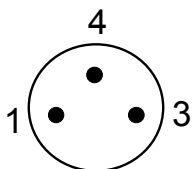
CONNECTIONS

BROWN 1 + 10 ... 30 Vdc

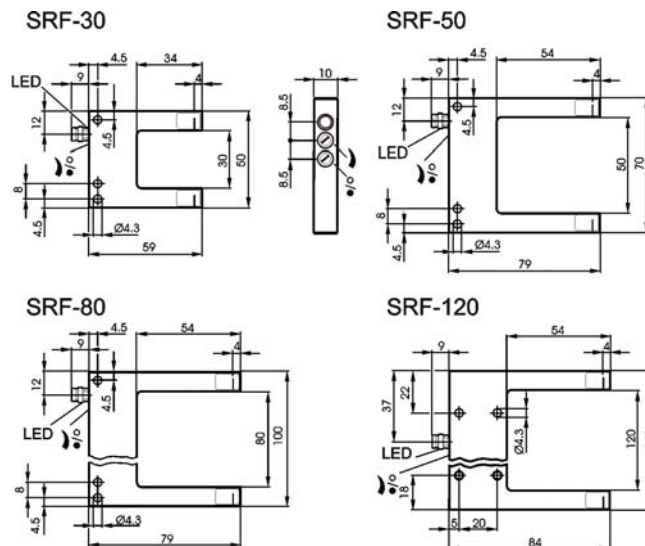
BLACK 4 OUTPUT

BLUE 3 - 0 V

M8 connector



DIMENSIONS



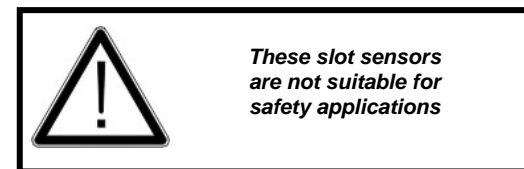
TECHNICAL DATA

	SRF-30	SRF-50	SRF-80	SRF-120
Power supply:	10 ... 30 Vdc; reverse polarity protected			
Ripple:	2 Vpp max.			
Current consumption (output current excluded):	35mA max.			
Outputs:	PNP or NPN / N.O. / N.C. selectable			
Output current:	200 mA max. with short-circuit protection			
Output saturation voltage:	3 V max. PNP / 2.5 V max. NPN			
Response time:	333 μs			
Switching frequency:	1500 Hz			
Hysteresis:	≤0.1 mm	≤0.15 mm	≤0.2 mm	
Resolution:	0.3 mm	0.5 mm		0.8 mm
Repeatability:	0.02 mm	0.04 mm	0.06 mm	0.08 mm
Humidity:	35 ... 85% rH non condensing			
Indicators:	YELLOW LED			
Setting:	sensitivity trimmer and N.O./N.C. trimmer			
Operating temperature:	-10 ... 60°C			
Storage temperature:	-20 ... 70°C			
Dielectric strength:	500 Vac 1 min., between electronics and housing			
Insulating resistance:	>20 MΩ 500 Vdc, between electronics and housing			
Emission type:	LED RED 640 nm			
Ambient light rejection:	5 kLux			
Vibration:	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)			
Shock resistance:	11 ms (30 G) 6 shock for every axis (EN60068-2-27)			
Slot width:	30 mm	50 mm	80 mm	120 mm
Housing:	GDZn			
Lenses:	Glass			
Protection class:	IP67			
Connections:	M8 3 pole connector			
Weight:	36 g.	54 g.	77 g.	118 g.

SETTING

Sensor setting

- Place the object to read in the sensor slot using the reference marks on the tip for alignment.
- Turn the sensitivity with the trimmer in order to obtain the correct reading of the object.



DECLARATION OF CONFORMITY

We DATASENSOR S.p.A. declare under our sole responsibility that these products are conform to the 2004/108/CE, 2006/95/CE Directives and successive amendments.



WARRANTY

DATASENSOR S.p.A. warrants its products to be free from defects. DATASENSOR S.p.A. will repair or replace, free of charge, any product found to be defective during the warranty period of 36 months from the manufacturing date. This warranty does not cover damage or liability deriving from the improper application of DATASENSOR products.

DATASENSOR S.p.A. Via Lavino 265
40050 Monte S. Pietro - Bologna - Italy
Tel: +39 051 6765611 Fax: +39 051 6759324
http://www.datasensor.com e-mail: info@datasensor.com



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826002002 Rev.B



SRF-L laser Slot sensor laser

INSTRUCTION MANUAL



CONTROLS

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YELLOW LED OFF – object absent

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This trimmer can be used to adjust sensitivity of the sensor.

N.O. / N.C. TRIMMER – OUTPUT

This trimmer can be used to adjust the output status.

WARNING: The trimmer rotation is limited to 270° by a mechanical stop.
Do not apply excessive torque when adjusting.

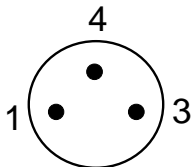
CONNECTIONS

BROWN 1 + 10 ... 30 VDC

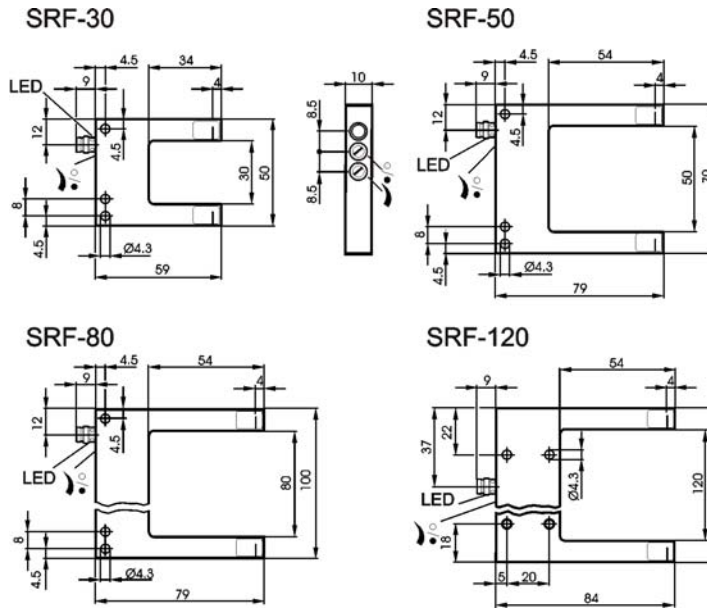
BLACK 4 OUTPUT

BLUE 3 0 V

M8 connector



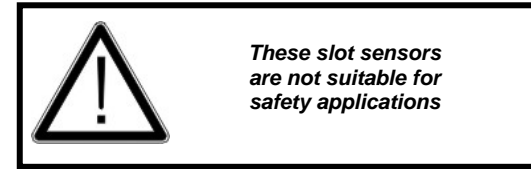
DIMENSIONS



SETTING

Sensor setting

- 1) Place the object to read in the sensor slot using the reference marks on the tip for alignment.
- 2) Turn the sensitivity with the trimmer in order to obtain the correct reading of the object.



TECHNICAL DATA

	SRF-L-30	SRF-L-50	SRF-L-80	SRF-L-120
Power supply:	10 ... 30 Vdc; reverse polarity protected			
Ripple:	2 Vpp max.			
Current consumption (output current excluded):	20mA max.			
Outputs:	PNP or NPN / N.O. / N.C. selectable			
Output current:	200 mA max. with short-circuit protection			
Output saturation voltage:	3 V max. PNP / 2.5 V max. NPN			
Response time:	100 µs			
Switching frequency:	5000 Hz			
Hysteresis:	20 µm	25 µm	30 µm	50 µm
Resolution:	0.05 mm	0.08 mm	0.1 mm	0.15 mm
Repeatability:	10 µm			
Humidity:	35 ... 85% rH non condensing			
Indicators:	YELLOW LED			
Setting:	sensitivity trimmer and N.O./N.C. trimmer			
Operating temperature:	-10 ... 60°C			
Storage temperature:	-20 ... 70°C			
Dielectric strength:	500 Vac 1 min., between electronics and housing			
Insulating resistance:	>20 MΩ 500 Vdc, between electronics and housing			
Emission type:	red laser (650 nm) Class 1 EN 60825-1 (1994)			
Ambient light rejection:	5 kLux			
Vibration:	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)			
Shock resistance:	11 ms (30 G) 6 shock for every axis (EN60068-2-27)			
Slot width:	30 mm	50 mm	80 mm	120 mm
Housing:	GDZn			
Lenses:	Glass			
Protection class:	IP67			
Connections:	M8 3 pole connector			
Weight:	66 g.	110 g.	135 g.	210 g.

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