

SRF SERIES INSTRUCTION MANUAL

Slot sensor

CONTROLS

RED LED ON - object presence
RED 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.

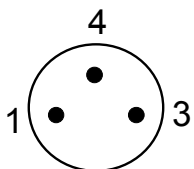
CONNECTIONS

BROWN 1 + 10 ... 30 Vdc

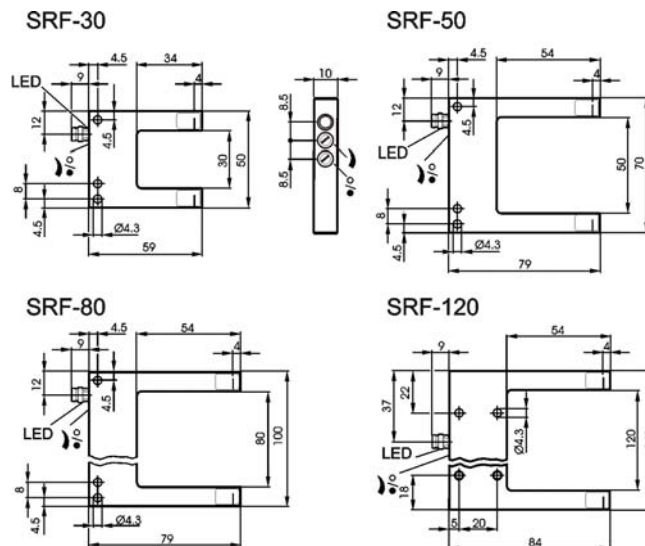
BLACK 4 OUTPUT

BLUE 3 0 V

M8 connector



DIMENSIONS



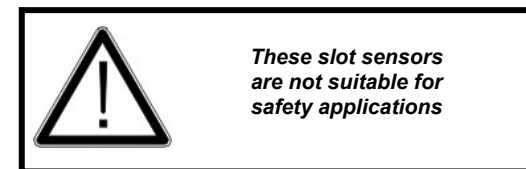
TECHNICAL DATA

	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:	N.O./N.C. selectable			
Output current:	200 mA max. with short-circuit protection			
Output saturation voltage:	3 V max. PNP 2.5 V 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:	Red LED			
Setting:	sensitivity trimmer and N.O./N.C. trimmer			
Operating temperature:	-10 ... 60°C			
Storage temperature:	-20 ... 70°C			
Electrical shock protection:	Class 1			
Emission type:	RED 640 nm			
Ambient light rejection:	10 kLux	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:	Aluminium			
Lenses:	Glass			
Protection class:	IP65			
Connections:	M8 3 pole connector			
Weight:	36 g.	54 g.	77 g.	118 g.

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.



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.

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826002001 Rev.A



INSTRUCTION MANUAL

CLASS 2 EN 60825-1 (2001)
LASER PRODUCT

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RED LED OFF – object absent

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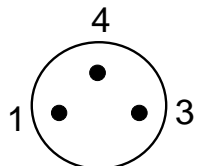
CONNECTIONS

BROWN 1 + 10 ... 30 VDC

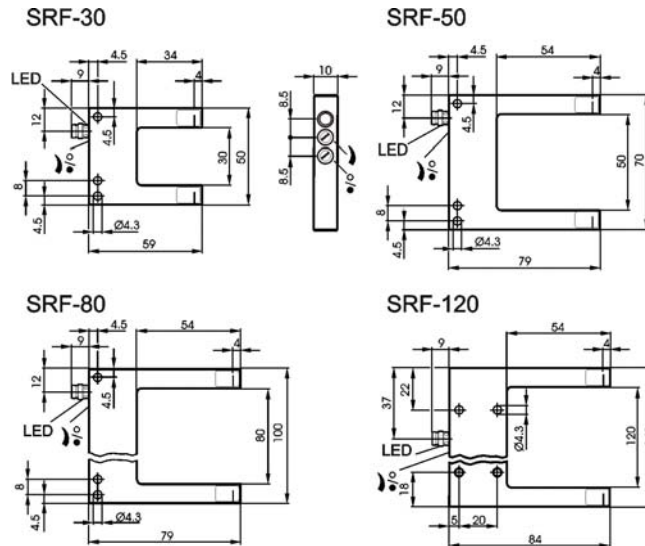
BLACK 4 PNP OUTPUT

BLUE 3 0 V

M8 connector



DIMENSIONS



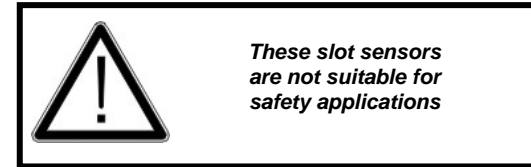
TECHNICAL DATA

	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):	35mA max.			
Outputs:	N.O./N.C. selectable			
Output current:	200 mA max. with short-circuit protection			
Output saturation voltage:	< 3 V max. PNP			
Response time:	166 µs			
Switching frequency:	3000 Hz			
Emission type:	RED LASER (λ = 645...665 nm): Class 2 EN 60825-1 (2001), Class II CDRH 21 CFR PART 1040.10 Pulsed emission: pot. max ≤ 5 mW; pulse duration = 5 µs; frequency max = 32 KHz			
Hysteresis:	0.01 mm			
Resolution:	0.06 mm	0.1 mm	0.2 mm	0.3 mm
Repeatability:	0.015 mm			
Humidity:	35 ... 85% rH non condensing			
Indicators:	Red 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:				
Ambient light rejection:	10 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:	Aluminium			
Lenses:	Glass			
Protection class:	IP65			
Connections:	M8 3 pole connector			
Weight:	36 g.	54 g.	77 g.	116 g.

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SAFETY PRECAUTIONS

All the electric and mechanical safety regulations have to be respected during sensor functioning.

The sensor has to be protected against mechanical damage.

Apply the labels supplied in a visible position near the laser emission beam.

Do not stare directly into the laser beam!
Do not point the laser beam towards people!
Eye irradiation superior to 0,25 seconds is dangerous.
Please refer to the Class 2 Standard (EN60825-1).
These sensors can not be used for safety applications!



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