SRF

DATALOGIC

ULTIMATE PRECISION USING LED OR LASER EMISSIONS FOR HIGH RESOLUTION

- Visible red emission models
- High resolution LASER models
- Sensitivity adjustment trimmer and dark/light selectors
- Industrial metal housing with glass lenses

APPLICATIONS

- Packaging and labeling machinery
- Automotive
- Packaging lines

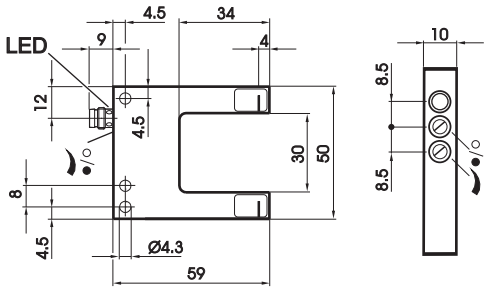
		SRF-30/50/80/120
Slot width		30 mm (SRF-30)
		50 mm (SRF-50)
		80 mm (SRF-80)
		120 mm (SRF-120)
Slot depth		34 mm (SRF-30)
		54 mm (SRF-50/80/120)
Switching frequency		1,5 kHz
		5 kHz (class 2 LASER)
Light emission		red LED
		red LASER (class 2)
Setting		trimmer
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	•
	NPN	•
	NPN/PNP	
	relay	
	other	
Connection	cable	
	connector	•
	pig-tail	
Approximate dimensions (mm)		10x50x59 (SRF-30)
		10x70x79 (SRF-50)
		10x100x79 (SRF-80)
		10x140x84 (SRF-120)
Housing material		Aluminium
Mechanical protection		IP67

TECHNICAL DATA

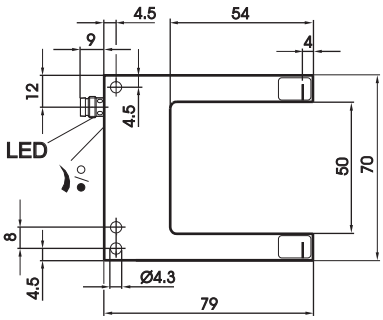
Power supply	10 ... 30 Vdc (reverse polarity protection)
Ripple	2 Vpp max.
Consumption (output current excluded)	35 mA max. 20 mA max. (Laser mod.)
Light emission	red LED 640 nm red Laser 650 nm
Setting	sensitivity trimmer and N.O./N.C. trimmer
Operating mode	LIGHT/DARK configurable
Indicators	yellow LED
Output	PNP or NPN; NO; NC
Output current	200 mA max.
Saturation voltage	3 V max. PNP, 2,5 V max. NPN
Response time	333 µs 100 µs (Laser mod.)
Switching frequency	1,5 kHz 5 kHz (Laser mod.)
Connection	M8 3-pole connector
Dielectric strength	500 Vac, 1 min between electronics and housing
Insulating resistance	>20 MΩ, 500 Vdc between electronics and housing
Electrical protection	class 1
Mechanical protection	IP67
Ambient light rejection	5 kLux
Vibrations	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, 50, 80, 120 mm
Resolution	0,3 mm (mod. SRF...30), 0,5 mm (mod. SRF...50/80), 0,8 mm (mod. SRF...120) 0,05 mm (Laser mod. SRF...30), 0,08 mm (Laser mod. SRF...50), 0,1 mm (Laser mod. SRF...80), 0,15 mm (Laser mod. SRF...120)
Housing material	Gd-Zn Alloy
Lens material	glass
Operating temperature	-10 ... 60 °C
Storage temperature	-20 ... 70 °C
Weight	36 g (mod. SRF...30), 54 g (mod. SRF...50), 77 g (mod. SRF...80), 118 g (mod. SRF...120) 66 g (Laser mod. SRF...30), 110 g (Laser mod. SRF...50), 135 g (Laser mod. SRF...80), 210 g (Laser mod . SRF...120)

DIMENSIONS

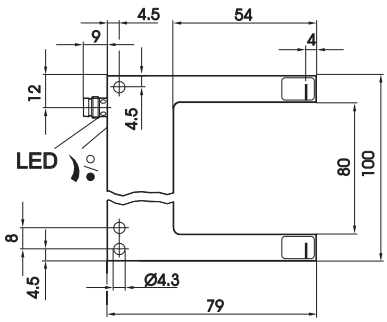
SRF-30



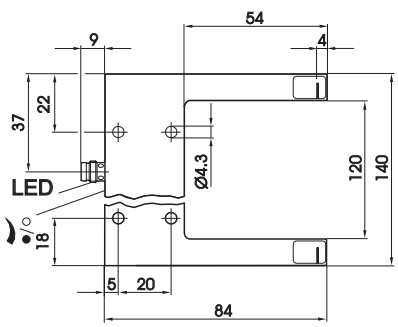
SRF-50



SRF-80

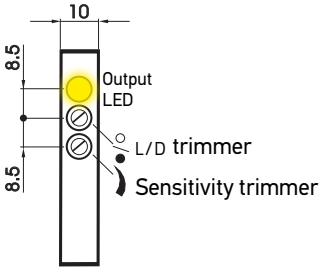


SRF-120



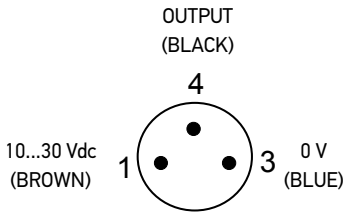
INDICATORS AND SETTINGS

ALL MODELS



CONNECTIONS

M8 CONNECTOR



MODEL SELECTION AND ORDER INFORMATION

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER No.
Fork sensor (30 mm)	Red LED	M8 Connector	PNP	SRF-30-5-P	95B020050
			NPN	SRF-30-5-N	95B020090
	LASER		PNP	SRF-L-30-5-P	95B020130
Fork sensor (50 mm)	Red LED	M8 Connector	PNP	SRF-50-5-P	95B020060
			NPN	SRF-50-5-N	95B020100
	LASER		PNP	SRF-L-50-5-P	95B020140
Fork sensor (80 mm)	Red LED	M8 Connector	PNP	SRF-80-5-P	95B020070
			NPN	SRF-80-5-N	95B020110
	LASER		PNP	SRF-L-80-5-P	95B020150
Fork sensor (120 mm)	Red LED	M8 Connector	PNP	SRF-120-5-P	95B020080
			NPN	SRF-120-5-N	95B020120
	LASER		PNP	SRF-L-120-5-P	95B020160

CABLES

TYPE	DESCRIPTION	LENGTH	MODEL	ORDER No.
Axial M8 connector	3-pole, Grey, P.V.C.	3 m	CS -B1-01-G-03	95A251490
		5 m	CS -B1-01-G-05	95A251510
Radial M8 connector		3 m	CS -B2-01-G-03	95A251500
		5 m	CS -B2-01-G-05	95A251520

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SRF SERIES
INSTRUCTION MANUAL

Slot sensor

CONTROLS

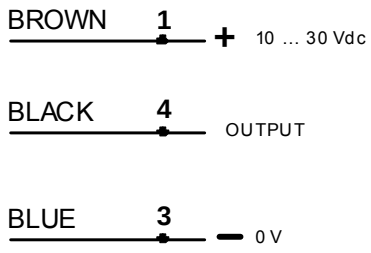
YELLOW LED ON – object presence
YELLOW LED OFF – object absent

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

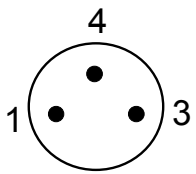
N.O. / N.C. TRIMMER – OUTPUT
This trimmer can be used to adjust the output status.

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

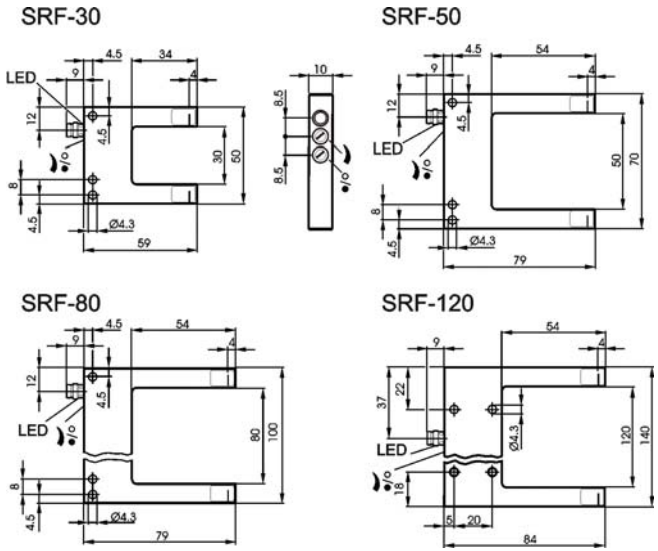
CONNECTIONS



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

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.

These slot sensors are not suitable for safety applications

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The sensors are NOT safety devices, and so MUST NOT be used in the safety control of the machines where installed.

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Helpful links at www.datalogic.com: **Contact Us, Terms and Conditions, Support**.

The warranty period for this product is 36 months. See General Terms and Conditions of Sales for further details.

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