



- *Visible red LED emission versions*
- *High resolution LASER versions*
- *Versions with 30, 50, 80 and 120 mm slots*
- *Sensitivity adjustment and dark/light selectors*
- *Sturdy metal housing with glass lenses*

## SRF SERIES

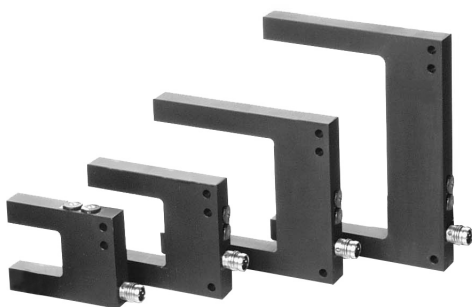
The slot sensors of the **SRF** series are photoelectric devices characterised by an excellent precision thanks to the red LED emission which offers resolutions reaching 0.3 mm or class II LASER emission for resolutions down to 0.03 mm. High precision and reading repeatability are obtained thanks to the Laser emission combined with high switching frequency.

The particular 'U' shape with opposite receiver and emitter units, together with the high resistance of the metal housing, make monitoring extremely simple and rapid, guaranteeing reliable functioning as well as shock and vibration resistance. The SRF series presents versions with 30, 50, 80 and 120 mm slots allowing the best adaptation to the many different applications, including opaque label detection on transparent supports, monitoring of the correct material position and dimension or object counting on conveyor belts. Sensitivity adjustment is easily accomplished thanks to the trimmer positioned on the back side of the sensor. The range offers versions with PNP or NPN output. The light/dark mode can be selected in all models.

# SR SLOT SENSORS

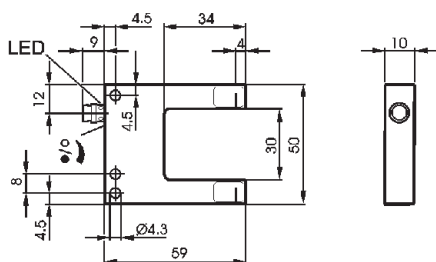
The best resolution, in terms of minimum detectable object, can be obtained rotating completely the sensitivity trimmer in a clockwise direction.

The normally closed output is selected by turning clockwise the output trimmer. The sensor, in this manner, functions in the light mode where the connector LED ON signals the absence of an object to detect. The opposite effect is obtained rotating the trimmer in an anti-clockwise direction and the sensor functions in the dark mode with the LED ON in presence of an object.

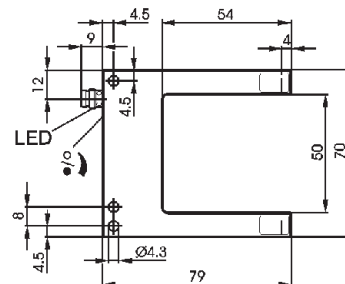


## DIMENSIONS

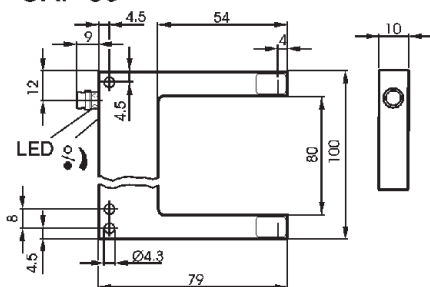
SRF-30



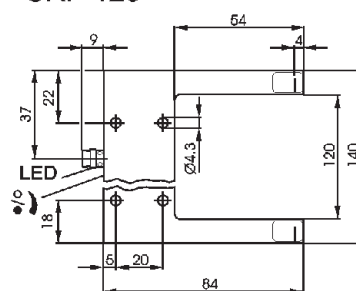
SRF-50



SRF-80

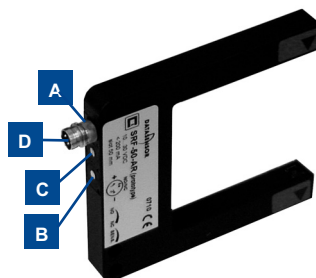


SRF-120



mm

## INDICATORS AND SETTINGS

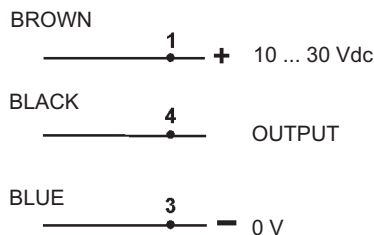


- A** Output status LED
- B** Sensitivity trimmer
- C** Output type selector
- D** M8 connector output

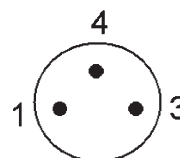
## ACCESSORIES

For dedicated accessories refer to the **ACCESSORIES** section of this catalogue.

## CONNECTIONS



M8 CONNECTOR





## TECHNICAL DATA

		SRF-30-5-P	SRF-30-5-N	SRF-50-5-P	SRF-50-5-N	SRF-80-5-P	SRF-80-5-N	SRF-120-5-P	SRF-120-5-N	SRF-L-30-5-P	SRF-L-30-5-N	SRF-L-50-5-P	SRF-L-50-5-N	SRF-L-80-5-P	SRF-L-80-5-N	SRF-L-120-5-P	SRF-L-120-5-N
<b>Power supply:</b>	10...30 Vdc <sup>1</sup>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Consumption:</b>	35 mA max	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Light emission:</b>	red LED 640 nm <sup>2</sup>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	red LASER 650 nm <sup>3</sup>									•	•	•	•	•	•	•	•
<b>Setting:</b>	sensitivity trimmer <sup>4</sup>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Resolution:</b>	0.06 mm									•							
	0.1 mm											•					
	0.2 mm												•				
	0.3 mm	•	•													•	
	0.5 mm			•	•	•	•										
	0.8 mm							•									
<b>Repeatability:</b>	0.015 mm									•	•	•	•				
	0.02 mm	•	•														
	0.04 mm			•	•												
	0.06 mm					•											
	0.08 mm						•	•									
<b>Power on delay:</b>	0.33 ms	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Slot width:</b>	30 mm	•	•							•							
	50 mm			•								•					
	80 mm					•	•							•			
	120 mm							•	•							•	
<b>Slot depth:</b>	34 mm	•	•							•							
	54 mm			•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Detection point depth:</b>	4 mm	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Indicators:</b>	red LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Output type:</b>	PNP	•		•		•		•		•		•		•		•	
	NPN		•		•		•		•		•		•		•		•
<b>Saturation voltage:</b>	3 V max	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Output current:</b>	200 mA, short-circuit protection	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Response time:</b>	166 µs									•	•	•	•				
	333 µs	•	•	•	•	•	•	•	•								
<b>Switching frequency:</b>	1.5 KHz	•	•	•	•	•	•	•	•								
	3 KHz									•	•	•	•				
<b>Operating mode:</b>	configurable light/dark <sup>5</sup>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Connection:</b>	M8 3-pole connector	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Electrical protection:</b>	class 1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Mechanical protection:</b>	IP65	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Protection devices:</b>	A,B <sup>6</sup>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Housing material:</b>	anodised aluminium	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Lens material:</b>	glass	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Weight:</b>	36 g	•	•							•							
	54 g			•	•							•					
	77 g					•	•							•			
	118 g							•	•							•	
<b>Operating temperature:</b>	-10...+60°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Storage temperature:</b>	-20...+70°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Reference standard:</b>	EN 60947-5-2,	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	EN 60825-1, CDRH21 CFR 1040.10									•	•	•	•				

## SELECTION TABLE

slot sensors		
model	slot	output
SRF-30-5-P	30 mm	PNP
SRF-30-5-N	30 mm	NPN
SRF-50-5-P	50 mm	PNP
SRF-50-5-N	50 mm	NPN
SRF-80-5-P	80 mm	PNP
SRF-80-5-N	80 mm	NPN
SRF-120-5-P	120 mm	PNP
SRF-120-5-N	120 mm	NPN
SRF-L-30-5-P	30 mm	PNP
SRF-L-50-5-P	50 mm	PNP
SRF-L-80-5-P	80 mm	PNP
SRF-L-120-5-P	120 mm	PNP

## TECHNICAL NOTES

<sup>1</sup> Limit values

<sup>2</sup> Average life of 100.000 h with  $T_A = +25^\circ\text{C}$

<sup>3</sup> Class 1 EN60825-1, CDRH21 CFR 1040.10

<sup>4</sup> 270° trimmer

<sup>5</sup> Dark/light selector

<sup>6</sup> A - reverse polarity protection

B - overload and short-circuit protection



## MODEL SELECTION AND ORDER INFORMATION

MODEL	SLOT	EMISSION TYPE	USCITA	ORDER N°
SRF-30-5-P	30 mm	red LED	PNP	95B020050
SRF-30-5-N	30 mm	red LED	NPN	95B020090
SRF-50-5-P	50 mm	red LED	PNP	95B020060
SRF-50-5-N	50 mm	red LED	NPN	95B020100
SRF-80-5-P	80 mm	red LED	PNP	95B020070
SRF-80-5-N	80 mm	red LED	NPN	95B020110
SRF-120-5-P	120 mm	red LED	PNP	95B020080
SRF-120-5-N	120 mm	red LED	NPN	95B020120
SRF-L-30-5-P	30 mm	red LASER	PNP	95B020130
SRF-L-50-5-P	50 mm	red LASER	PNP	95B020140
SRF-L-80-5-P	80 mm	red LASER	PNP	95B020150
SRF-L-120-5-P	120 mm	red LASER	PNP	95B020160

## ACCESSORY SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	ORDER N°
CS-B1-01-G-03	3 m M8 3-pole axial connector	95A251490
CS-B1-01-G-05	5 m M8 3-pole axial connector	95A251510
CS-B2-01-G-03	3 m M8 3-pole radial connector	95A251500
CS-B2-01-G-05	5 m M8 3-pole radial connector	95A251520

# SLOT SENSORS



**Distributed by:**

### HEADQUARTERS

#### DATASENSOR SpA

via Lavino, 265 - 40050 Monte San Pietro, BO - Italy  
 Tel. +39 051/6765611 • Fax +39 051/6759324  
[www.datasensor.com](http://www.datasensor.com) • e-mail [info@datasensor.com](mailto:info@datasensor.com)

Datasensor SpA endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use Datasensor SpA can guarantee only the data indicated in the instruction manual supplied with the products.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## IDEC:

[SRF-50-5-P](#) [SRF-L-80-5-P](#) [SRF-30-5-P](#) [SRF-30-5-N](#) [SRF-50-5-N](#) [SRF-80-5-N](#) [SRF-80-5-P](#) [SRF-L-30-5-P](#) [SRF-L-120-5-P](#) [SRF-L-50-5-P](#) [SRF-120-5-P](#) [SRF-120-5-N](#)