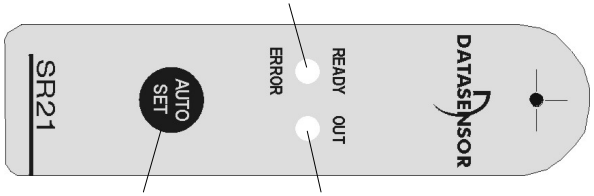
SR21 SERIES
INSTRUCTION MANUAL

Slot sensor

CONTROL PANEL

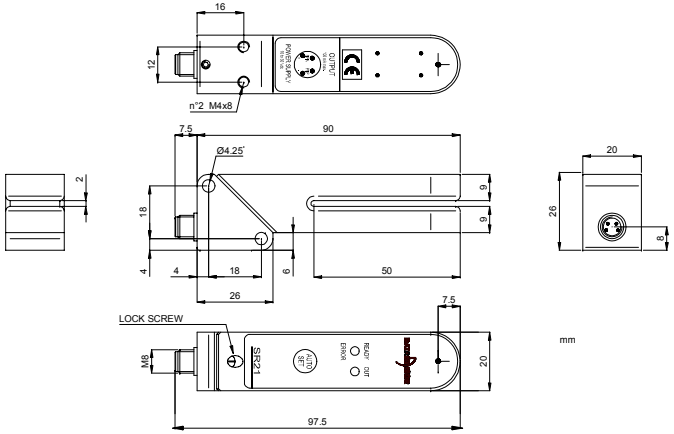
BI-COLOUR LED
GREEN (READY): operative state indicator
RED (ERROR): error indicator



AUTO SET PUSHBUTTON: automatic setting

LED YELLOW (OUT): output state indicator

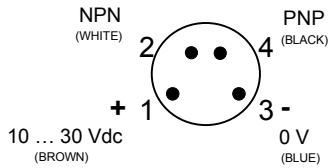
DIMENSIONS



NOTE
To install the sensor with 90° connector, unscrew the lock screw and rotate the block counterclock-wise, when finished tightrn the lock screw completely.

CONNECTIONS

M8 Connector



(the connector is viewed from the external side of the housing)

TECHNICAL DATA

Power supply:	10 … 30 Vdc; protected against inversion of polarity
Ripple:	2 Vpp max.
Consumption (output current excluded):	55 mA max.
Output:	NPN and PNP on different pins; pull up/down resistance = 10KΩ
Output current:	100 mA max. with short-circuit protection
Saturation voltage:	1 V max. with NPN 2 V max. with PNP (values at peak output current)
Response time:	66 µs max. (SR21-AH/AR/AV) 33 µs max. (SR21-AS)
Switching frequency:	7.5 kHz max. (SR21-AH/AR/AV) 15 kHz max. (SR21-AS)
T rise:	1 µs (NPN; R = 1 KΩ)
	120 µs (NPN; C = 4,7 nF) internal pull up 10KΩ
T fall:	1 µs (PNP; R = 1 KΩ)
	120 µs (PNP; C = 4,7 nF) internal pull down 10KΩ
Humidity:	35 … 85% rH non condensing
Indicators:	Bi-colour LED READY/ERROR (green/red) OUT LED (yellow)
Keyboard:	AUTO SET pushbutton
Retention data:	EEPROM non-volatile memory
Operating temperature:	0 … 55°C
Storage temperature:	-20 … 70°C
Electrical shock protection:	Class 1
Emission frequency:	20 Khz ±10% modulated light
Emission type:	880 nm infrared (SR21-AR/AV/AS) red/green visible (SR21-AH)
Ambient light rejection:	according to EN 60947-5-2
Slot width:	2 mm
Detectable object limits:	max. thickness 1.5mm min. width 1mm (SR21-AH/AR) min. width 0.5mm (SR21-AV/AS)
Housing material:	ZAMA
Lens material:	Glass
Protection class:	IP65
Connections:	M8 4 pole connector
Weight:	115 g.

SETTING

Sensor setting

1) Place the label or the mark to read in the sensor slot using the reference marks on the tip for alignment.
2) Press and hold the AUTO SET pushbutton till the green READY LED turns OFF, this starts the acquisition phase of the object to read which must not be removed till the green LED blinks.
3) When the green READY LED blinks, put the label support or the mark background in the sensor slot using the reference marks on the tip for alignment.
4) Press and hold the AUTO SET pushbutton till green READY LED turns OFF, this starts the acquisition phase of the object to read which must not be removed till the green LED blinks.
5) The green READY LED continuously ON indicates the setting is completed and the sensor is ready.

Error messages

- Alternate blinking of the green READY LED and the red ERROR LED indicates that the contrast between the label/support or mark/background is insufficient, or that the setting is incorrect. Repeat the sensor setting operation.
- The red ERROR LED blinking indicates the output is in protection mode because of a short circuit. As soon as the cause of the short circuit is removed, the output reactivates and red LED turns OFF.
- The red ERROR LED continuously ON indicates the sensor is damaged and must be replaced.

DECLARATION OF CONFORMITY
We DATASENSOR S.p.A. declare under our sole responsibility that these products are conform to the 89/336 CEE, 73/23 CEE 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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