SENSORS

S8 STAINLESS STEEL

Datalogic's latest **SENSORS** for Contrast and transparent object detection now come for the first time in a stainless steel housing continuing the ONE for ALL concept of the S8 series. The sensors have been designed for frequent wash downs with a corrosion-resistant AISI316L stainless steel case which is IP69K rated. The contrast version is the ideal solution to discriminate fine contrast differences known as print registration marks at very high speeds whilst the clear object polarized retro has been designed to resist typical detection difficulties associated with accurately detecting the position of extremely transparent objects typically seen in the FOOD and BEVERAGE and PHARMACEUTICAL industries.

One for ALL concept means one shape with standard fixing holes with models suitable for solving virtually any application, allowing both the OEM and END USER to reduce and standardize the components used giving a real advantage in the development of their automated machines and production lines.

HIGHLIGHTS

W model
- Discriminates fine contrast differences with RGB emission (intelligently selects red, green or blue emission to give maximum discrimination)
- High speed detection at 50µs
- Coaxial optical system design provides stable detection of moving objects to eliminate false detections
- IP69K degree of protection with AISI316L stainless steel housing resists the effects of detergents, disinfectants and high-temperature, high-pressure wash down

T model
- Detects extremely transparent materials like fine plastic films, glass or PET bottles • Coaxial optical system design provides stable detection of moving objects to eliminate false detections
- Auto-adaptive function to improve the reliability the detection even when the sensor face or reflector is contaminated
- IP69K degree of protection with AISI316L stainless steel housing resists the effects of detergents, disinfectants and high-temperature, high-pressure wash down
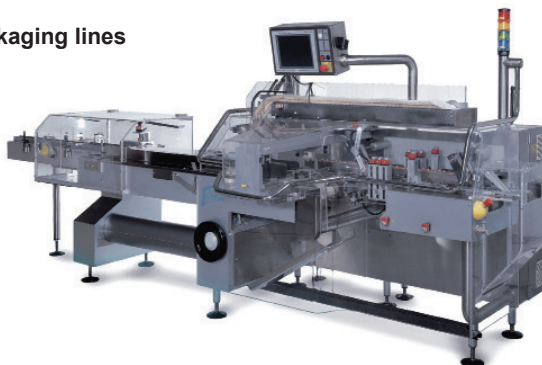
APPLICATIONS

Food & Pharma

Beverage & Bottling

Packaging lines

Subject to reasonable modifications due to technical advances. Printed in Germany

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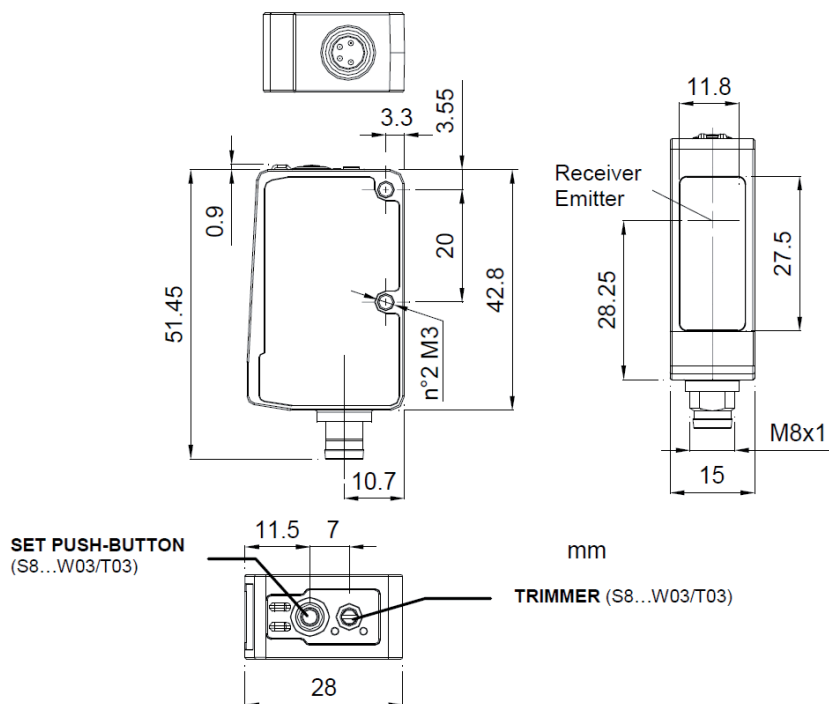
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KEYLOCK FUNCTION

The KEYLOCK function (keyboard lock) enables the operator to deactivate the keyboard avoiding accidental changes in the sensor setting. If at sensor powering the REMOTE wire is connected to +DC for at least 1 second the keyboard lock function is activated and the pushbuttons are no longer active. To deactivate the keyboard lock, the sensor must be turned off and repowered with the REMOTE wire not connected or connected to GROUND.

THRESHOLD AUTO-ADJUSTMENT FUNCTION

The sensor provides threshold auto-adjustment function. If received signal decreases due to a dirty optical lens or reflector, the sensor adjusts automatically the commutation threshold to avoid continuous cleaning of optical parts (after 1 minute of low signal). If the received signal is too low to be adjusted from the sensor the output stays turned on meaning it is necessary to clean the sensor lens and reflector.
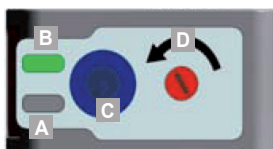
DIMENSIONS

3.3
3.55
0.9
51.45
20
42.8
n°2 M3
10.7

11.8
Receiver
Emitter
28.25
27.5
M8x1
15

mm

SET PUSH-BUTTON (S8...W03/T03)
11.5
7
TRIMMER (S8...W03/T03)
28

INDICATORS AND SETTINGS

PUSH BUTTON VERSION
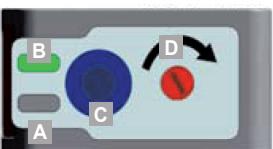
Delay On / Light On

B
D
C
A

Delay Off / Dark On

B
D
A
C

A Output status LED

B Ready LED

C SET push-button

D Delay trimmer (W)
Light/Dark trimmer (T)

REMOTE VERSION

B
A

A Output status LED

B Ready LED

CONNECTIONS AND INSTALLATION

REMOTE (WHITE)
N.O. OUTPUT (BLACK)
2 ● ● 4
1 ● ● 3
12...30 VDC + (BROWN)
− 0V (BLUE)
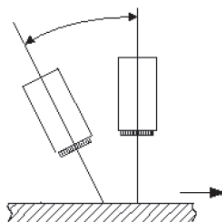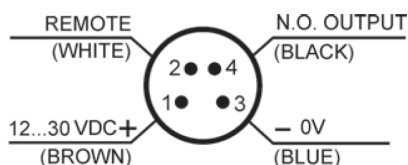
The sensor can be positioned by means of the two mounting holes using two screws (M3x18 or longer, 0.8Nm maximum tightening torque) with washers. Various adjustable fixing brackets are available to ease the mounting of the S8 (please refer to the accessories listed in the general catalogue). The operating distance is measured from the front surface of the sensor optics.
S8W - Mark detection on reflective surfaces is improved by adjusting the angle of the beam direction to between 5° and 20° from the surface axis.

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TECHNICAL DATA OF MODELS WITH LED EMISSION

TECHNICAL NOTES

[1] Average life of 100.000 h with TA = +25 °C
[2] A - reverse polarity protection
   B - overload and short-circuit protection

		S8-MR-5-T53-xx	S8-MR-5-T50-xx	S8-MR-5-W03-xx	S8-MR-5-W00-xx
Polarized RRX for transparent:	0 ... 2000 mm	●	●		
Constrast sensor operating distance:	9 ± 3 mm			●	●
Power supply:	12 ... 30 Vdc	●	●	●	●
Ripple:	≤ 2 Vpp	●	●	●	●
Consumption:	15 mA max.	●			
	30 mA max.		●	●	●
Light emission: [1]	red LED 660 nm	●	●		
	blue LED 465nm/green LED 520nm/red LED 630nm			●	●
Spot dimension:	3 x 1 mm			●	●
	refer to diagrams	●		●	
Setting:	SET push-button	●		●	
	remote by white wire	●	●	●	●
	monoturn delay selection trimmer			●	
	monoturn dark/light selection trimmer	●			
Indicators:	yellow OUTPUT LED	●	●	●	●
	green READY LED		●	●	●
Output type:	PNP or NPN, N.O./N.C.	●	●	●	●
Output current:	≤ 100 mA	●	●	●	●
Saturation voltage:	≤ 2 V	●	●	●	●
Response time:	50 µs			●	●
	250 µs	●	●		
Max. switching frequency:	10 kHz			●	●
	2 kHz	●	●		
Connection:	M8 4-pole connector	●	●	●	●
Mechanical protection:	IP67, IP69K	●	●	●	●
Protection devices:	A, B[2]	●	●	●	●
Dielectric strength:	▣ 1500 VAC 1 min. between electronics and housing	●	●	●	●
Insulating resistance:	>20 MΩ500 VDC between electronics and housing	●	●	●	●
Housing material:	INOX AISI 316L	●	●	●	●
Lens material:	window in PMMA	●	●	●	●
	lens in PC	●	●	●	●
Weight:	70 g. max.	●	●	●	●
Operating temperature:	-10 ... +55°C	●	●	●	●
Storage temperature:	-20 ... +70°C	●	●	●	●
Reference standard:	EN 60947-5-2	●	●	●	●

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DETECTION DIAGRAMS
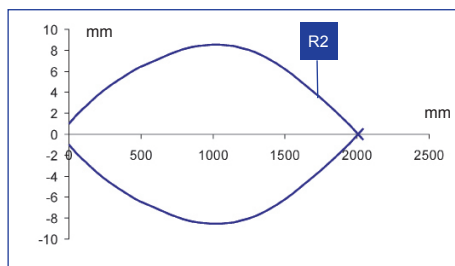
Coaxial polarized retroreflex for transparents - T53
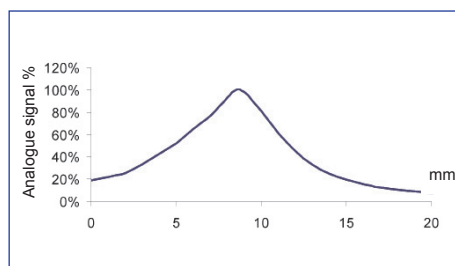
Contrast sensor

MODEL SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	SETTING	OUTPUT	ORDER N°
S8-MR-5-T53-PP	Stainless Steel Polarised Retro for Clear Object	Push button	PNP	950801300
S8-MR-5-T53-NN	Stainless Steel Polarised Retro for Clear Object	Push button	NPN	950801310
S8-MR-5-T50-PH	Stainless Steel Polarised Retro for Clear Object	Remote wire	PNP	950801320
S8-MR-5-T50-NH	Stainless Steel Polarised Retro for Clear Object	Remote wire	NPN	950801330
S8-MR-5-W03-PP	Stainless Steel Contrast Sensor with RGB Emission	Push button	PNP	950801340
S8-MR-5-W03-NN	Stainless Steel Contrast Sensor with RGB Emission	Push button	NPN	950801350
S8-MR-5-W00-PH	Stainless Steel Contrast Sensor with RGB Emission	Remote wire	PNP	950801360
S8-MR-5-W00-NH	Stainless Steel Contrast Sensor with RGB Emission	Remote wire	NPN	950801370

ACCESSORY SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	ORDER N°
ST-5072	fixing bracket	95ACC1470
R4K	IP69K plastic reflector 51 x 61 mm	95A151220
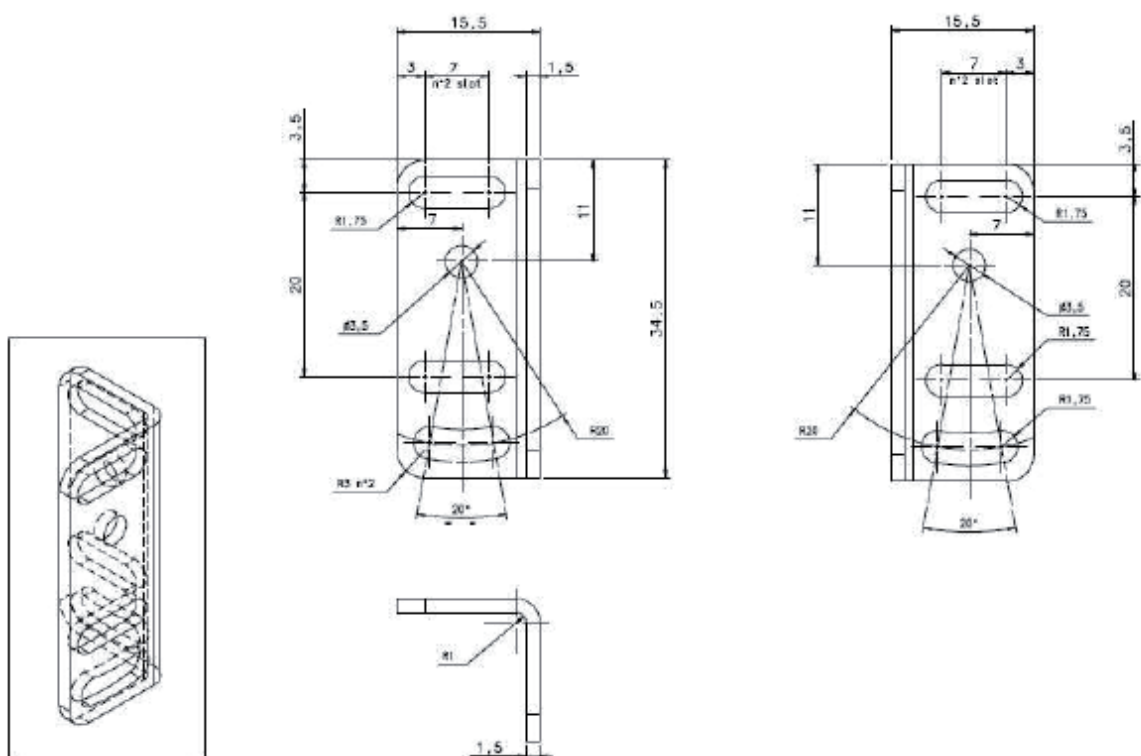
The company endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products.

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