ODATALOGIC

S3Z LASER SERIES INSTRUCTION MANUAL



CONTROLS

OUTPUT LED

The vellow LED indicates the output status.

STABILITY LED (S3Z...B01/F01)

The green LED ON indicates that the received signal has a safety margin greater than 20% compared to the output switching value.

POWER ON LED (S3Z...G00)

The green LED indicates that the sensor is operating.

TRIMMER (S3Z...B01/F01)

The trimmer can be used to adjust sensitivity; the operating distance increases turning the trimmer clockwise.

ADJUSTMENT SCREW (S3Z...M01)

This control can be used to adjust the cutoff distance (6 turns screw); the operating distance increases turning the control clockwise

LIGHT/DARK TRIMMER

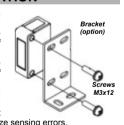
This switch can be used to set light or dark operation mode.

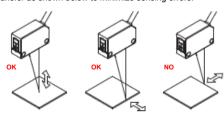
WARNING (only for S3Z...B01/F01):

The trimmer rotation is limited to 250° by a mechanical stop. Do not apply excessive torque when adjusting (max 0.05 Nm).

INSTALLATION

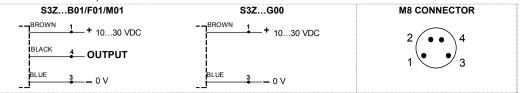
- Do not apply excessive impact on the sensor during the installation process, so as to prevent damage or deterioration in the degree of protection.
- To install the sensor, tighten the mounting screws to a torque of 0.5 Nm or less.
- Install Background suppression type sensor head perpendicular to the object transfer as shown below to minimize sensing errors.





CONNECTIONS

The connections are compliant to the EN 60947-5-2 standard.



TECHNICAL DATA

	S3ZB01	S3ZF01/G00	S3ZM01	
Power supply:	12 24 VDC (operat	ing limit 1030VDC); (Class 2 L	JL508) reverse polarity protected	
Ripple:	p-p 10% max.			
Current consumption	35mA max.	30mA max. mod.F01	35mA max.	
(output current excluded):		15mA max. mod.G00		
Output:	LIGH [*]	T or DARK; PNP or NPN (short-	circuit protection)	
Output current:	100 mA max.			
Output saturation voltage:	1.5	1.5 V max.		
Response time:		250 us max.		
Switching frequency:		2KHz max.		
Indicators:	OUTPUT LED (YELLOW); STABILITY LED (GREEN) mod. B01/F01 POWER ON LED (GREEN) mod. G00			
Setting:	Trim	mer (250°)	6 turns screw	
Detection Mode Setting:		LIGHT/DARK Trimme	r	
Operating temperature:	-10 +55 °C (-10 +50 °C UL Listed)			
Storage temperature:	-25 +70 °C no freezing or condesation			
Operating distance (minimum):	0.310 m on R2	030 m	20250mm (white paper 200x200 mm)	
Insulating strength:	500 Vac 1 min., between electronics and housing			
Insulating resistance:	>20 MΩ 500 Vdc, between electronics and housing			
Adjustable setting range:	40300 r		40300 mm	
Difference on White 90% / Gray 18%:	10%		10%	
Minimum sensing object (typical):	Ø6 mm @ 3 m (opaque)	Ø6 mm @ 3 m (opaque)	Ø0.2 mm @ 170 mm (copper wire)	
Facination to a control of the contr	Red Laser diode(Emission wavelength: 650nm)			
Emission type:	IEC/JIS CLASS1 *; Maximum output: 7mW			
Ambient light rejection:	according to EN 60947-5-2			
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)			
Housing:	Body PBT / indicators cover PC			
Lenses:	PMMA			
Protection class:	IP67			
Connections:	2 m cable Ø 3.5 mm / M8-4 pole connector **			
Weight:	50 g. max. cable versions / 10 g. connector versions			

- This product complies with FDA regulations 21CFR 1040.10 and 1040.11 based on Notice No.50.
- Use a UL Listed (CYJV/CYJV7) mating connector/cord assembly when using connector type as UL/c-UL listed products.

Alianment S3Z...B01

Position the sensor and reflector on opposite sides.

the yellow LED (OUT) is switched ON and OFF in both vertical and horizontal positions, and fix the sensor in the centre between these points. Optimum operation is obtained when the

If necessary, reduce sensitivity using the trimmer, in order to detect very small or transparent targets. In order to improve alignment, repeat the procedure detailed above whilst progressively reducing the sensitivity.

Alignment S3Z...F01/G00

Position the sensors on opposite sides.

Find the points where the yellow LED (OUT) is switched ON and OFF in both vertical and horizontal positions, and fix the sensor in the centre between these points.

Optimum operation is obtained when the green LED is ON

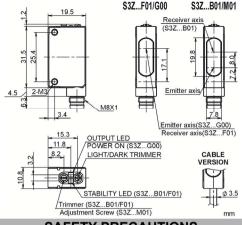
SETTING

Alianment S3Z...M01

Referring to the table below, adjust the distance of the photoelectric sensor Turn the sensitivity trimmer to maximum. Find the points where when necessary. The table explains the status of operation LED when the operation mode is set to light ON.

9	Step	Distance control	Adjusting procedure	
e t	1		Install a photoelectric sensor and the sensing object. Turn the control counter-clockwise until the operation LED turns OFF. Then turn clockwise until the operation LED turns ON (point A).	
i	2	B T	Remove the sensing object, then the operation LED turns OFF. Turn clockwise until the operation LED turns ON, the background is detected (point B).	
	3	B T	Set the middle point between point A and B as point C.	

DIMENSIONS



SAFETY PRECAUTIONS

CAUTION - use of controls or adjustments or performance of procedures other than those specified in this mannual may result in hazardous radiation

ATTENTION - L'utilisation des commandes, ainsi que les modifications de réglages ou de procédures d'exécution autres que ceux specifiés dans ce mode d'emploi peut entraîner une exposition à des ravonnements dangereux. This product emits a visible laser beam. Do not stare into the beam directly, Furthermore, do not look the laser which is reflected at a mirror-like object. About safety standards of laser product, IEC60825-1 "Safety of laser products" has been stipulated by the IEC (International Electortechnical Commission). This product is classified as "CLASS1 product" according to IEC60825-1 (2007). Use a UL Listed (CYJV/CYJV7) mating connector/cord assembly when using connector type as UL/c-UL listed products.

CAUTION - This Product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50. dated June 24. 2007, issued by CDRH (Center of Devices and Radiological Health) under FDA (Food and Drug Administration).

ATTENTION - Ce produit est conforme

FDA (Food and Drug Administration).



aux normes 21 CFR 1040.10 et 1040.11, à l'exception des dérogations relatives au document « Laser Notice No.50 » du 24 juin 2007 émis par CDRH (Center of Devices and Radiological Health) de la

Labels: Following "Warning label" and "Certification/ Identification label" are affixed on this product according to IEC 60825-1 and laser regulation of FDA. When this product will be incorporated into final device system which is exported to the USA, make sure that Certification/Identification label is affixed.

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.

Under current Italian and European laws, Datalogic is not obliged to take care of product disposal at the end of its life. Datalogic recommends disposing of the product in compliance with local laws or contacting authorised waste collection centres.

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