



SL5 SERIES INSTRUCTION MANUAL

CONTROLS

OUTPUT LED

The yellow LED indicates the output status.

STABILITY LED

The green LED ON indicates that the received signal has a reserve greater than 30% compared to the output switching value.

TRIMMER

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

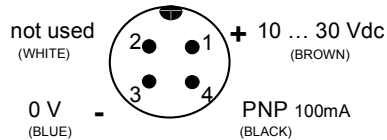
WARNING: The trimmer rotation is limited to 270° by a mechanical stop. Do not apply excessive torque when adjusting (max 40 Nmm).

POWER ON LED

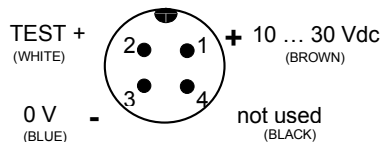
The green LED indicates that the sensor is operating.

CONNECTIONS

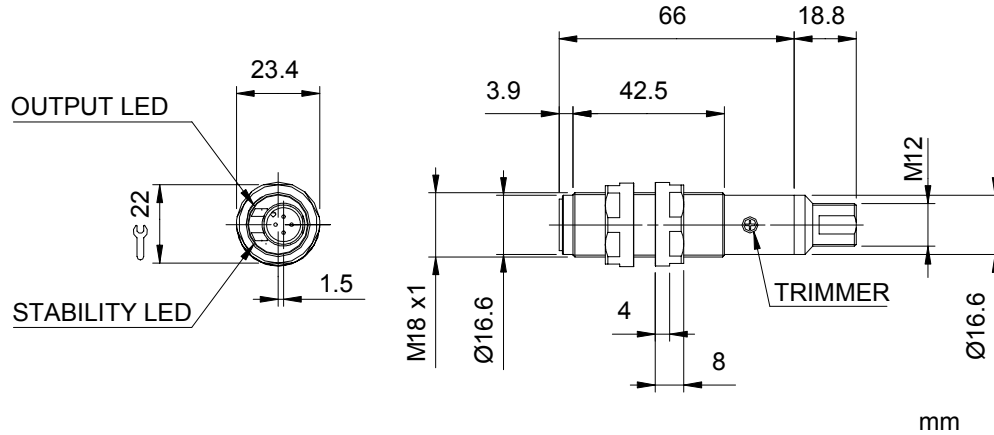
SL5-5-B/C/F



SL5-5-G



DIMENSIONS



TECHNICAL DATA

Power supply:	10 ... 30 Vdc
Ripple:	2 Vpp max.
Current consumption (output current excluded):	35 mA max.
Output:	PNP - short-circuit protection at 100 mA
Output current:	100 mA max.
Output saturation voltage:	2 V max.
Output leakage:	50µA a 30 Vdc
Response time:	330 µs max.
Switching frequency:	1.5 kHz max.
Indicators:	OUTPUT LED (YELLOW) / STABILITY LED (GREEN) / POWER ON LED (GREEN) mod. G
Setting:	sensitivity trimmer mod. B/C/F
Operating temperature:	-10 ... 50 °C
Storage temperature:	-25 ... 70 °C
Electric shock protection:	Class 2
Operating distance (minimum):	B: see TAB.1 C: 0 ... 35 cm F/G: 0 ... 60 m
Resolution:	0.2 mm at 50 mm mod.C
Emission type:	red laser (650 nm) Class 1 EN 60825-1
Ambient light rejection:	according to EN 60947-5-2
Vibration:	10 ... 55 Hz, 1.5 mm amplitude in each X, Y, Z axis for 2 hours
Shock resistance:	500 ms (approx. 50 G) 3 shock in each 3 axis
LIGHT/DARK selection:	LIGHT mode mod. C and DARK mode mod. B/F
Housing:	ABS UL 94V-O (TYPE 1 ENCLOSURE)
Connector/Gland:	Polycarbonate
Lenses:	PMMA plastic
Protection class:	IP67
Connections:	M12 4-pole connector
Weight:	30 g. max.

SETTING

Alignment SL5-5-B

Position the sensor and reflector on opposite sides. Turn the sensitivity trimmer to maximum. 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 both LEDs switch ON. If necessary, reduce sensitivity in order to detect very small targets. In order to improve alignment, repeat the procedure detailed above whilst progressively reducing the sensitivity.

Alignment SL5-5-F/G

Position the sensors on opposite sides. Turn the sensitivity trimmer to maximum. 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 both LEDs switch ON. If necessary, reduce sensitivity using the trimmer, in order to detect very small targets. In order to improve alignment, repeat the procedure detailed above whilst progressively reducing the sensitivity.

Alignment SL5-5-C

Position the sensor and turn the sensitivity trimmer at minimum: the green LED is ON and the yellow LED is OFF. Place the target opposite the sensor. Turn the sensitivity trimmer clockwise until the yellow LED turns ON (Target detected state, pos.A). Remove the target, the yellow LED turns OFF. Turn the trimmer clockwise until the yellow LED turns ON (Background detected state, pos.B). The trimmer reaches maximum if the background is not detected. Turn the trimmer to the intermediate position C, between the two positions A and B. The green LED must be ON.



TEST FUNCTION (SL5-5-G)

The TEST+ input can be used to inhibit the emitter and verify that the system is correctly operating. The receiver output should switch when the test is activated while the beam is uninterrupted. The inputs activating voltage range is 10 ... 30 Vdc.

TAB.1: SL5-5-B max. operating distance table (meters)

REFLECTOR						
R1	R2	R3	R4	R6	R7	R8
5	12	8	12	14	7	3

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.

DATASENSOR S.p.A. Via Lavino 265
40050 Monte S. Pietro - Bologna - Italy
Tel: +39 051 6765611 Fax: +39 051 6759324
http://www.datasensor.com e-mail: info@datasensor.com



DATASENSOR S.p.A. cares for the environment: 100% recycled paper. DATASENSOR S.p.A. reserves the right to make modifications and improvements without prior notification.