

S12M SERIES INSTRUCTION MANUAL

CONTROLS

OUTPUT LED

The yellow LED indicates the output status.

TRIMMER (S12M-5-B/C/F)

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

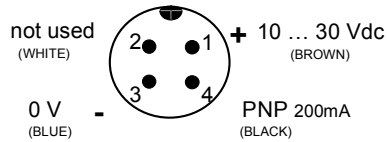
WARNING: The trimmer rotation is limited to 270° by a mechanical stop. Do not apply excessive torque when adjusting (max 20 Nmm).

POWER ON LED (S12M-x-G)

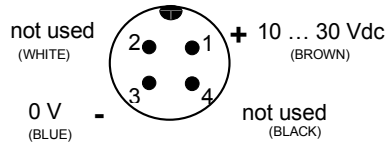
The yellow LED indicates that the sensor is operating.

CONNECTIONS

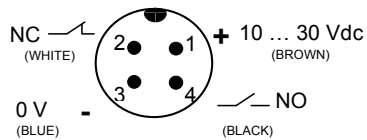
S12M-5-B/C/K



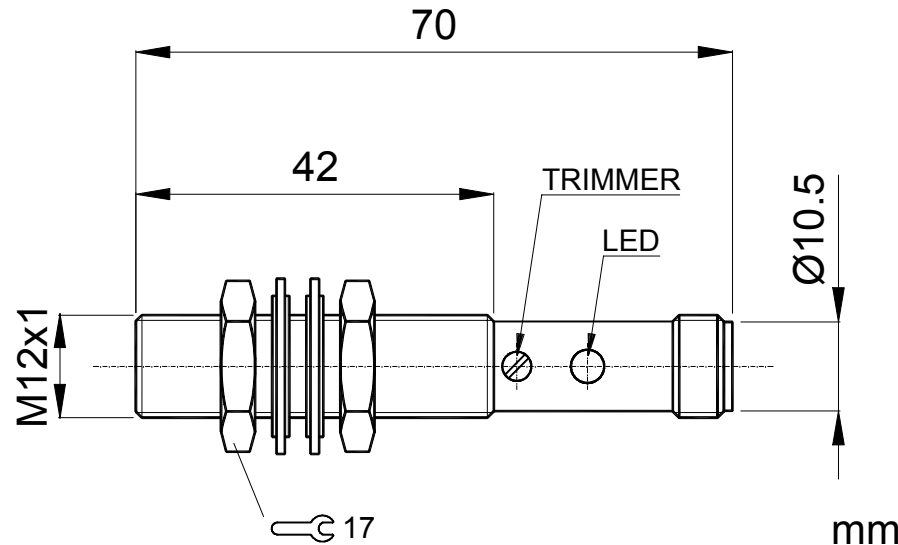
S12M-5-G



S12M-5-F



DIMENSIONS



SETTING

The following procedures are valid for LIGHT mode operation.

Alignment S12M-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.

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 S12M-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.

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 S12M-5-C

Position the sensor and turn the sensitivity trimmer at minimum: 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.



Alignment S12M-5-K

The operating distance range of these sensors is factory preset: please consider this feature when positioning.

TECHNICAL DATA

Power supply:	10 ... 30 Vdc limit values
Ripple:	2 Vpp max.
Current consumption (output current excluded):	20 mA max.
Output:	PNP; 30 Vdc max. (short-circuit protection)
Output current:	200 mA max.
Output saturation voltage:	1.6 V max.
Response time:	3.3 ms max. 1 ms max. mod. F
Switching frequency:	150 Hz max. 500 Hz max. mod. F
Indicators:	OUTPUT LED (YELLOW) / POWER ON LED (YELLOW) mod. G
Setting:	sensitivity trimmer mod. B/C/F
Operating temperature:	-15 ... 55 °C
Storage temperature:	-25 ... 70 °C
Electric shock protection:	Class 1
Operating distance (minimum):	B: 0.1...1 m on R2 C: 10... 400 mm K: 10...100 mm F/G: 0... 5 m
Emission type:	INFRARED (880 nm) mod. C / RED (660 nm) mod. B/K/G/F
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/ Connector:	Nickel-plated brass
Lenses:	PMMA
Protection class:	IP67
Connections:	metal M12 4-pole connector
Weight:	30 g. max.

TAB.1: S12M-5-B max. operating distance table (meters)

		REFLECTOR					
		R1	R2	R3	R4	R5	R6
B		0.6	1	0.7	1.2	1.2	1.5

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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