

S62 SERIES INSTRUCTION MANUAL

CONTROLS

OUTPUT LED (yellow) (S62..A/B/C/F)

The yellow LED ON indicates the output status.

STABILITY LED (green) (S62..A/B/C/F)

The green LED permanently ON indicates a stable operating condition, where the signal received has a safety margin higher than 30% respect to the output switching value.

The sensor is ready to function correctly.

POWER ON LED (green) (S62..G)

The green LED ON indicates the powering status and the laser emission presence.

SENSIBILITY TRIMMER (ADJ.) (S62..A/B/C/F)

A mono-turn trimmer adjusts the sensitivity and the sensor operating distance.

Please refer to "SETTING" paragraph for the correct use procedure.

DARK/LIGHT TRIMMER (S62..RX/PN)

The LIGHT/DARK mode is selected using a mono-turn trimmer.

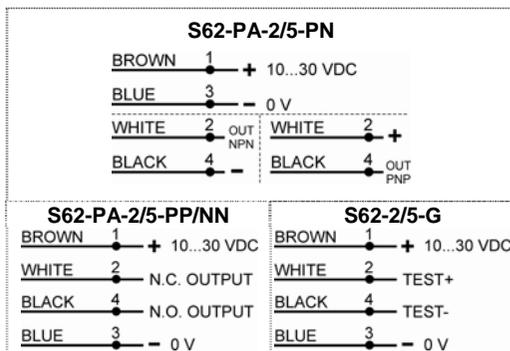
LIGHT MODE: clockwise rotation

DARK MODE: counter-clockwise rotation.

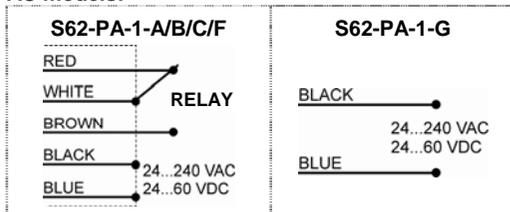
WARNING: the maximum mechanical rotation range of the trimmer is 240°. Do not force over of the maximum and minimum positions.

CONNECTIONS

DC models:



AC models:



TECHNICAL DATA

| | S62-PA-2/5 | S62-PA-1 |
|--|---|---|
| Power supply: | 10 ... 30 VDC- Class 2 (UL508) | 24...240 VAC / 24...60 VDC |
| Ripple: | 2 Vpp max. | 10 % max |
| Current consumption (output current excluded): | < 30 mA | < 3 VA |
| Outputs: | S62..PP/NN: PNP or NPN N.A./N.C. 30 VDC S62..PN: NPN/PNP; 30 VDC max (short-circuit protection) | Electromechanical SPDT 250 VAC / 30 VDC |
| Output current: | 100 mA max (overload and overvoltage protection) | 2 A max. (resistive load) |
| Output saturation voltage: | ≤ 2 V | - |
| Response time: | S62...A/B/C: 500 μs max. S62...F/G: 1 ms | 25 ms |
| Switching frequency: | S62...A/B/C: 1 kHz S62...F/G: 500Hz | 20Hz |
| Emission type: | RED (640 nm) (S62..A/B/C/G) | |
| Operating distance (typical values): | S62..B: 0.1...8 m on R2 (Ø63 mm reflector) (EG = 2) S62..A: 13m on R2 (Ø63 mm reflector) (EG = 2) S62...C01: 90 cm on 90% White target (EG = 2) S62...C11: 200 cm on 90% White target (EG = 2) S62...F/G: 0...25 m | |
| Indicators: | S62...A/B/C/F: OUTPUT LED (YELLOW) / STABILITY LED (GREEN) S62...G: POWER ON LED (GREEN) | |
| Adjustment: | Mono-turn sensitivity adjustment trimmer Mono-turn light/dark trimmer (S62..RX/PN) | |
| Operating temperature: | -10 ... 55 °C | |
| Storage temperature: | -20 ... 70 °C | |
| Dielectric strength: | 500 VAC, 1 min between electronics and housing | |
| Insulating resistance: | > 20 MΩ, 500 VDC between electronics and housing | |
| Ambient light rejection: | according to EN 60947-5-2 | |
| Vibrations: | 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 material: | ABS | |
| Lens material: | PMMA window, polycarbonate lens | |
| Mechanical protection: | IP67 | |
| Connections: | 2 m cable Ø 4 mm / M12 4-pole connector | 2 m cable Ø 5 mm |
| UL requirements: | VDC models: they are intended to be connected to a Class 2 transformer or class 2 power supply. VAC models: these devices shall be connected to a power-supply or system, including filters or air-gaps, of overvoltage category II ("load level - secondary circuit of a protected utility transformer"), suitable to control over-voltages at the maximum "rated impulse withstand voltage peak of 1.2KV and with a short-circuit power limit at max 500VA. | |
| Weight: | 90 g. max. cable versions / 40 g. max. connectors versions | |

SETTINGS

S62..A/B setting: Position the sensor and reflector on opposite sides. Turn the sensitivity trimmer to maximum. Find the points where the yellow LED (OUT) 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.

S62..C setting: Position the sensor and turn the sensitivity trimmer at minimum: the yellow LED is OFF (light mode). 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.

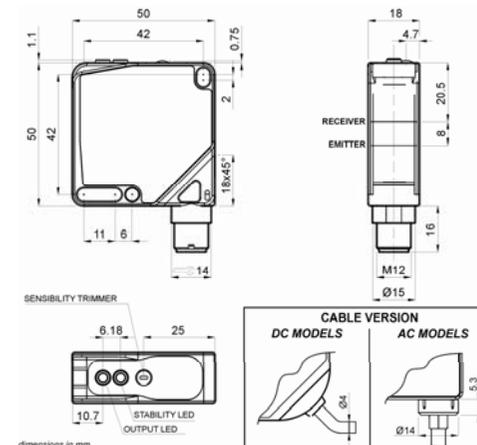
Turn the trimmer clockwise until the yellow LED turns ON (Background detected state, pos.B). The trimmer reaches maximum if the background is not detected. Turn the trimmer in intermediate position C, between the two positions A and B. The green LED must be ON.

S62...F/G setting: 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.



DIMENSIONS



INSTALLATION

The sensor can be positioned by means of the two housing holes using two screws (M4x35 or longer, 1.2Nm maximum tightening torque). Various orientable fixing brackets to ease the sensor positioning are available (please refer to the accessories listed in the general catalogue). The operating distance is measured from the front surface of the sensor optics. The M12 connector can be oriented at two different positions using the specific fastening spring and rotating the block of 180°.



TEST FUNCTION (S62..G)

The TEST+ and TEST- inputs can be used to switch off the emitter light 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 12...30 VDC, respecting the polarity. The emission is switched OFF connecting TEST+ to VDC and TEST- to 0V.

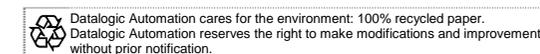
The sensors are NOT safety devices, and so MUST NOT be used in the safety control of the machines where installed.

DECLARATION OF CONFORMITY

We Datalogic Automation declare under our sole responsibility that these products are conform to the 2004/108/CE and successive amendments.

WARRANTY

Datalogic Automation warrants its products to be free from defects. Datalogic Automation 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 Datalogic Automation products.



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