

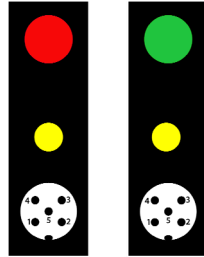


S67-MH-5-Y...

Laser Distance Sensor

INSTRUCTION MANUAL

CONTROLS



LEDS
RED LED may indicate ALARM or dirty lens surface.
GREEN LED is the POWER indicator.

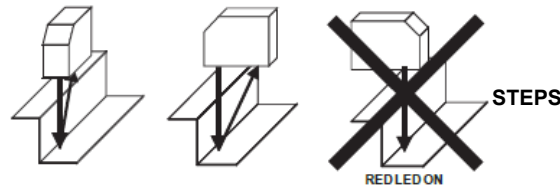
TEACH IN BUTTON
The yellow button allows the user to teach a new range by optimizing the resolution. It can be used to reset the factory settings.

INSTALLATION

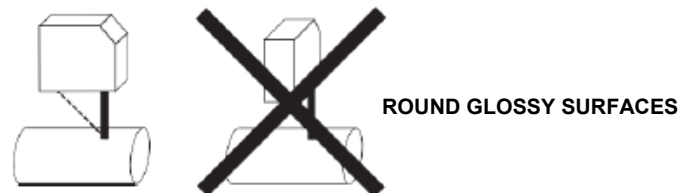
- With unit power off, connect and secure the cable to the M12 connector.

Note for electromagnetic compatibility: Connect the sensor housing to earth potential. Use shielded connecting cables.

- The mounting surface must be flat, in order to correctly mount the sensor. The distance sensor must be aligned correctly (as shown below) and then fixed to a suitable support.



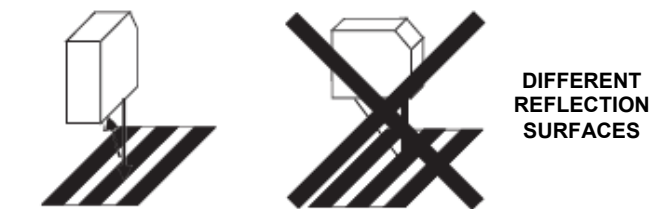
STEPS



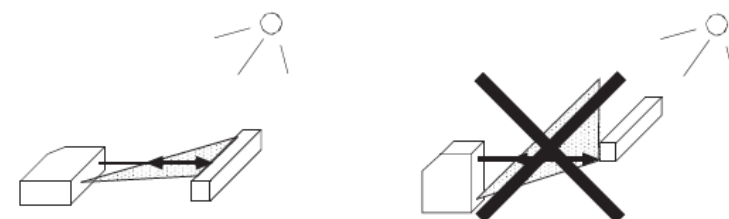
ROUND GLOSSY SURFACES



GLOSSY SURFACES



DIFFERENT REFLECTION SURFACES

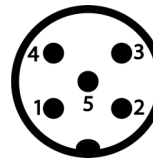


EFFECT OF AMBIENT LIGHT

CONNECTIONS

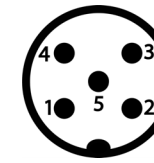
S67-MH-5-Y03-I / S67-MH-5-Y13-I

- (BROWN): +12...28 VDC
- (WHITE): ANALOGUE OUTPUT-I (4...20 mA)
- (BLUE): 0 V
- (BLACK): NOT USED
- (GREY): TEACH IN



S67-MH-5-Y03-V / S67-MH-5-Y13-V

- (BROWN): +12...28 VDC
- (WHITE): ANALOGUE OUTPUT-V (0...10 VDC)
- (BLUE): 0 V
- (BLACK): NOT USED
- (GREY): TEACH IN



Note: If external Teach-In option is not used, the Teach-In wire must be attached to GND.

Note: Shielded cable required.

Note: Color of wires are referred to European standard.

CONFIGURATION SETTINGS

The S67Y distance sensor is factory set to the maximum measuring range. In order to optimize the resolution and linearity, its Teach-In feature is designed to select a smaller range within the nominal range. If a new range is chosen the Output current, voltage and alarm output will adapt to it.

The sensor must be taught with two specific positions:

- First Teach-In: aligns the position with 0 V (or 4 mA)
- Second Teach-In: aligns the position with 10 V (or 20 mA)

Note: The two positions are always at the border of the new range (within the measuring range).

The red LED gives feedback during a Teach-In session. The red LED located on the back of the sensor, indicates "Run" mode if it detects an object in the measuring range. The S67Y can be set in two different ways: one with Teach-In button and the other one through the external teach input. The device can be taught more than 10.000 times in its lifetime. The S67Y may be always reset to factory setup.

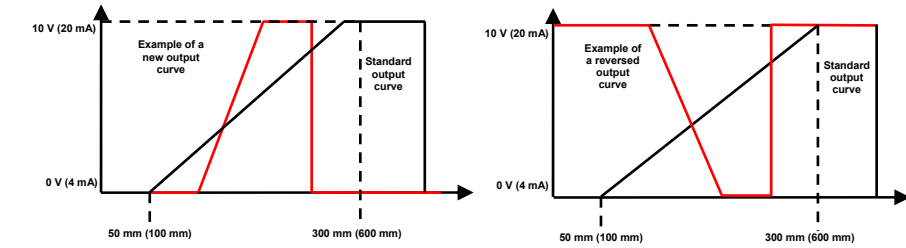
| TEACHING NEW MEASURE | RESET |
|--|--|
| Seven steps to teaching a new measuring range: | |
| <ol style="list-style-type: none"> Press (and hold) the button. The red LED will turn on, if the sensor can be taught. Hold down the button for 5 more sec. The LED will start to blink. Release the button. Place a target at the first new position of the measuring range. This is the position that will later produce 0 V (or 4 mA). Briefly press the button again. The LED will stop blinking and will stay on for about 3 sec to indicate that the first position has been stored. Then the LED will blink again. Now place the target at the second position (the other end of the new range), which will produce 10 V (or 20 mA). Briefly press the button again. The LED will stop blinking and will stay on for about 3 sec to indicate that the second position has been stored. The LED will then turn off and blink once more. Now the sensor is ready to measure. | <ol style="list-style-type: none"> Push the button. The red LED will turn on, if the sensor can be taught. Hold down the button further 5 sec. The LED will start to blink. Do not release the button now. Wait another 10 sec until the LED is ON without blinking. Factory settings have been restored to the sensor. Release the button. |
| The new, smaller operating range is now set. The red LED now indicates whether an object is within the new range (LED OFF) or not (LED ON). If one of the new borders of the range was outside the standard range or the two positions were too close to each other, then the new settings are not valid. The sensor will respond with an extended blinking at the end of the teach procedure. The previous settings are still valid and the new settings are lost. | |

TECHNICAL DATA

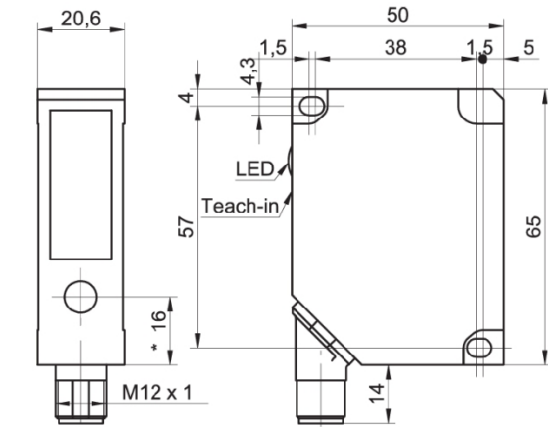
| | S67-MH-5-Y03-I | S67-MH-5-Y13-I | S67-MH-5-Y03-V | S67-MH-5-Y13-V |
|-------------------------------------|--|-----------------|-----------------|-----------------|
| Power supply: | 12 – 28 VDC | | | |
| Consumption: | < 100 mA | | | |
| Measurement range: | 50...300 mm | 100...600 mm | 50...300 mm | 100...600 mm |
| Min Teach-in range | > 5 mm | > 10 mm | > 5 mm | > 10 mm |
| Resolution: | 0.01...0.33 mm | 0.015...0.67 mm | 0.01...0.33 mm | 0.015...0.67 mm |
| Linearity error: | ±0.03...±1.0 mm | ±0.05...±2.0 mm | ±0.03...±1.0 mm | ±0.05...±2.0 mm |
| Response time: | < 900 µs | | | |
| Analog output: | 4...20 mA | 4...20 mA | 0...10 VDC | 0...10 VDC |
| Alarm: | Red LED | | | |
| Power indicator: | Green LED | | | |
| Soiled lens indicator: | Red LED | | | |
| Operating temperature: | 0...50°C | | | |
| Short circuit protection: | Yes | | | |
| Reverse polarity protection: | Yes (voltage supply only) | | | |
| Protection class | IP 67 | | | |
| Light source: | pulsed red laser diode (650 nm) | | | |
| Laser class emission: | CLASS 2 According to IEC 60825-1 (2014) | | | |
| Ambient light rejection: | < 8k Lux | < 10k Lux | < 8k Lux | < 10k Lux |
| Laser Spot : | 2 mm point | | | |
| CDRH requirements: | Complies with 21 CFR 1040.10 and 1040.11 | | | |
| Housing material: | die-cast zinc | | | |
| Housing dimension: | Rectangular 20.6 mm x 65 mm x 50 mm | | | |
| Lens material: | Glass | | | |
| Weight: | 180 g max. | | | |
| Tightening torque: | 1.0 Nm | | | |

Note: For objects with a reflectivity < 7%, with the models S67-MH-5-Y13-..., the response / release time is increased automatically up to max. 2.8 ms. Missed measurements up to 30 cycles will be suppressed. During this time the analog output stays on hold.

DETECTION DIAGRAMS



DIMENSIONS



SAFETY WARNINGS

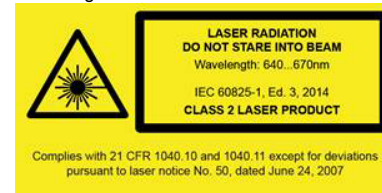
All the safety electrical and mechanical regulations and laws have to be respected during sensor functioning. The sensor has to be protected against mechanical damages.

Do not look directly into the laser beam! Do not point the laser beam towards people!

Eye irradiation for over 0.25 seconds is dangerous; refer to class 2 standard (EN60825-1).

This product is intended for indoor use only.

Use of controls or adjustments or performance or procedures other than those specified herein may result in hazardous radiation exposure.



MAINTENANCE

Device does not need for particular maintenance. In any case, take care to clean optic surface with compliant cleanser in order to avoid decay of performance. Use protection for plastic parts in case of hazardous environment.

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

CE Compliance

CE marking states the compliance of the product with essential requirements listed in the applicable European directive. Since the directives and applicable standards are subject to continuous updates, and since the manufacturer promptly adopts these updates, therefore the EU declaration of conformity is a living document. The EU declaration of conformity is available for competent authorities and customers through the manufacturer's commercial reference contacts. Since April 20th, 2016 the main European directives applicable to the products require inclusion of an adequate analysis and assessment of the risk(s). This evaluation was carried out in relation to the applicable points of the standards listed in the Declaration of Conformity. These products are mainly designed for integration purposes into more complex systems. For this reason it is under the responsibility of the system integrator to do a new risk assessment regarding the final installation.

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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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