

1 YEAR
WARRANTY



User's Guide

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LV850 Level Sensor



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WARNING: These products are not designed for use in, and should not be used for, human applications.



Please follow these installation, connection and adjustment instructions carefully. Failure to comply with these instructions or misuse of this equipment will void your warranty.



Equipment installation, connection and adjustment by qualified personnel only!



LV850 LEVEL SENSOR

NOTES:



1 Description

Level Sensor LV850 is suitable for liquids with low relative dielectric constant ϵ_r (e.g. oil). Units come with Minimum and Maximum selector switch.

It operates on the principle of electrical capacitance changes arising when an electrode surrounded by air is immersed in the medium.

- LED status display
- Selection of minimum and maximum function by changeover switch.




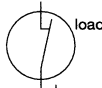



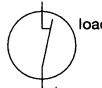



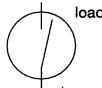



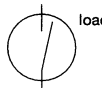






Minimum switching

Normally the sensor is immersed and the green LED indicates. As the level drops below the sensor the green LED extinguishes.

Maximum switching

Normally the sensor is not immersed and the green LED indicates. As the level rises above the sensor the green LED extinguishes.

- In the event of a short-circuit in the load circuit, the green LED will extinguish and the red LED will flash.

Minimum switch position 1 			Maximum switch position 2 		
medium level	transistor output	LED green red	medium level	transistor output	LED green red
		 			 
		 			 
short circuit in the load circuit		 			 

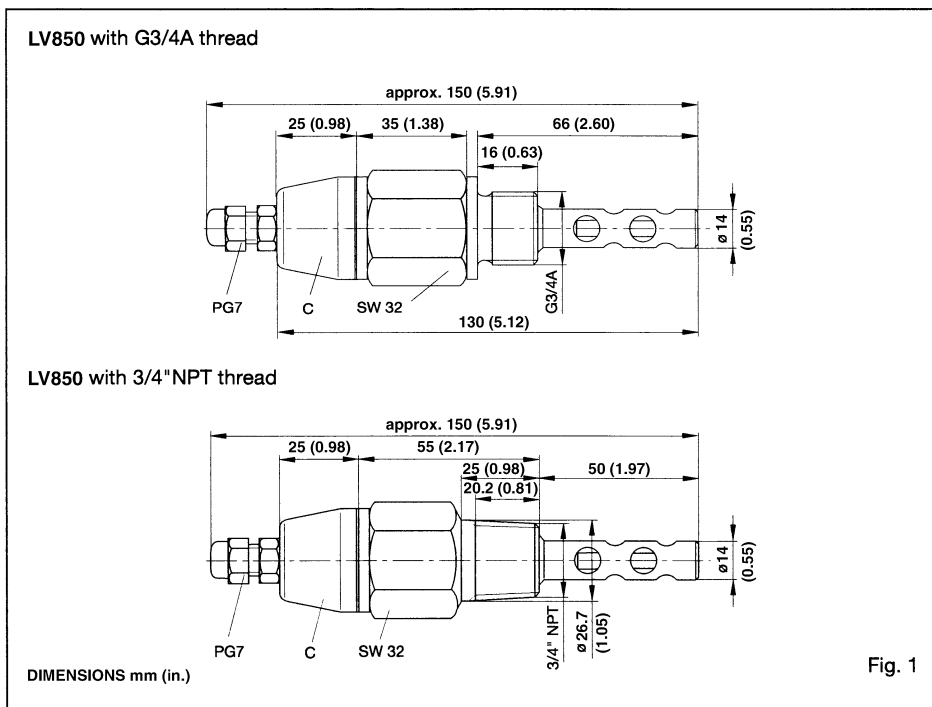
2 Technical Data

Temperature range	-20°C to +130 °C (-4°F to +266°F)
short-time	to +150°C (+302°F)
Ambient temperature	-20°C to +85°C (-4°F to +185°F)
Pressure resistance	max. 25 bar (367.5 PSI)
Response delay	approx. 0.1 s
Degree of protection	IP 65
Input voltage	DC 9 ... 36 V

Option:

- metal coupling for pipe extension (see fig. 2) if the sensor is to be used as an immersion sensor

CE mark to demonstrate compliance with applicable directive





3 Level Sensor Installation

NOTE

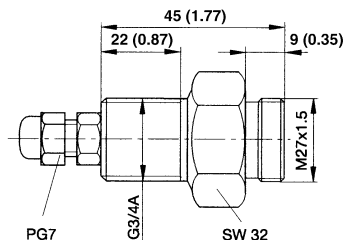
The Level Sensor may be installed in any attitude.

1. Ensure sufficient clearance space (see Fig. 1) in the container wall.
 - Ensure a type 3/4" NPT or G3/4A thread in the container wall has been provided.
2. Screw the Level Sensor into the threaded aperture using a recognized sealing material.
3. When tightening the level sensor please use the flats provided (SW32).

CAUTION

Do not overtighten.

Metal coupling (option)



DIMENSIONS mm (in.)

Fig. 2

4 Connection

CAUTION

Check that the supply voltage corresponds with the voltage rating shown on the system.

1. Loosen the gland (PG7)(see Fig. 1).
2. Unscrew the cover of the housing (C).
3. Feed the supply cable through the gland (PG7) and the cover (C), or through the metal coupling supplied as option (see Fig. 2).
4. Connect the cable to the terminal block (TB) (see Fig. 3).
5. Set selector switch (S) to minimum or maximum:
 1. - minimum
 2. - maximum
6. Connect the supply voltage. LED (red) indicates.

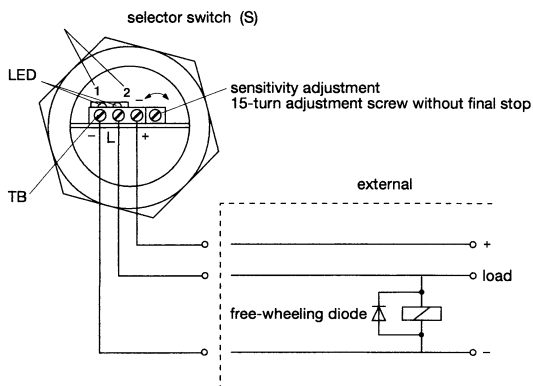


Fig. 3



7. Increase the level until the Level Sensor is immersed in the medium.
 8. Minimum Sensor:
 - Turn the potentiometer screw (E) to (-) until the LED (green) extinguishes. Then slowly turn to (+) until the LED indicates. Adjust the screw a further full turn to (+) to compensate for any tolerance.
 9. Maximum Sensor:
 - Turn the potentiometer screw (E) to (+) until the LED (green) extinguishes. Then slowly turn to (-) until the LED indicates. Adjust the screw a further full turn to (-) to compensate for any tolerance.
 10. Replace and tighten the cover (C) or the metal coupling (option).
 11. Replace and tighten the cable gland nut (PG7).
- The Level Sensor is now connected, adjusted and ready for operation.

5 Operating Difficulties

Problem: The Level Sensor fails to operate correctly.

Solution:

- The surface of the sensor probe should be carefully cleaned from inside the container.



LV850 LEVEL SENSOR

NOTES:

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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