

PRESSURE LEVEL GAUGE

LGP 250 / 500 Eng.



- **Determines levels by measuring the hydrostatic pressure of a liquid**
- **Maximum measurable pressure:**
 - LGP 250 = 25 kPa (0.25 bar)
 - LGP 500 = 50 kPa (0.5 bar)
- **Output signal : 0...5V–**
- **Power supply :**
 - outside voltage = **+8...+15 V–**
 - coming from COSTER devices = **12 V–**
- **IP 55 protection**

1. APPLICATION

LGP gauge is designed for measuring the level of a liquid inside a storage tank
In combination with UML 318, LGP can measure the level inside a gasoil tank.

2. OPERATION

The gauge must be inserted in the tank so that the counterweight, which has the function of keeping the gauge upright, rests on the bottom. The counterweight also serves to determine the minimum measurement level ("zero" level, equal to 70 mm from the bottom) and so prevents the gauge being immersed in the residues on the bottom of the tank.

A float, inside the cylinder, measures the hydrostatic pressure of the liquid, and transfers this measurement, through the Rilsan™ tube, to the electronic unit where a sensing element of the ceramic type compares it with the surrounding atmospheric pressure. The result of this data processing is the level of the liquid present in the tank. Since the hydrostatic pressure depends on the specific gravity of the liquid, in the event of a change to a liquid with a very different specific gravity, it would be necessary to re-calibrate the gauge.

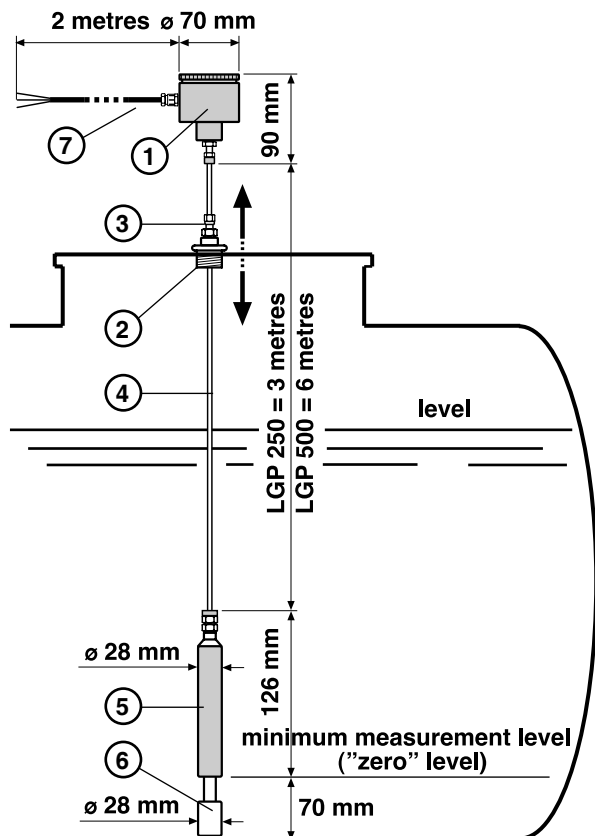
3. MODELS

Code	Description	Range			Tank connection
		pressure	water	gasoil	
LGP 250	Pressure level gauge	0...0.25 bar	2.5 m	3,0 m	1"
LGP 500	Pressure level gauge	0...0.5 bar	5.0 m	6.0 m	1"

4. TECHNICAL DATA

Power supply :		Operating temperature	0...60 °C
Outside voltage	+8...+15 V–	Storage temperature	–25...+85 °C
or		Sensor	electronic pressure
Voltage+12 V– coming from Coster devices ("G" terminal)		Measurement range:	
Consumption	10 mA max	LGP 250	0...25 kPa (0.25 bar)
Materials:		LGP 500	0...50 kPa (0.5 bar)
Enclosure for electronic unit	PVC	Accuracy	± 1 % of top of scale
Pressure-measuring cylinder	PVC	Nominal output field	0.5... V– (0.2...4.7 V–)
Protection	IP 55	Weight	0.800 kg

5. INSTALLATION



Install the gauge as follows :

- Insert the cylinder and the counterweight (5.5 - 5.6) in the 1" gas threaded hole provided in the upper part of the tank
- Screw up the 1" gas union (5.2) in the screwed hole,
- Pull towards the outside the Rilsan™ tube (5.4) and then re-insert it slowly in the tank so that the counterweight rests on the bottom
- Leave sufficient space for the tube (1–2 cm maximum) and secure it by tightening the lock nut of the union (5.3),
- Place the housing for the electronic components (5.1) so that it does not press against the part of the Rilsan™ tube projecting outside the tank.
- The housing for the electronic components must also be protected against any pools of water and from the weather; however, watertight or sealed containers must NOT be used since it must always be possible to measure the surrounding atmospheric pressure.

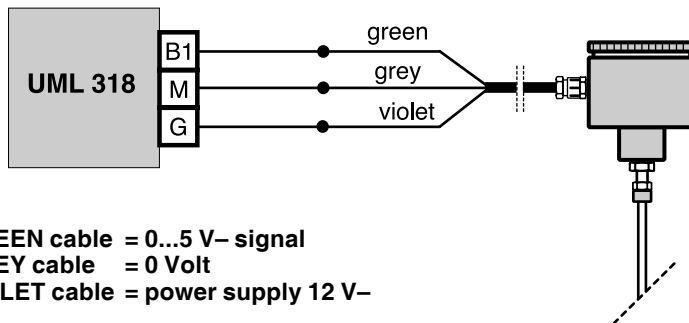
Ensure, above all, that the upper part is protected so as to avoid the compensating pressure hole coming into contact with water or becomes blocked with dirt or grease.

- 1 – housing for sensing element and the electronic unit
- 2 – sliding union for the Rilsan™ tube, 1" gas threading
- 3 – locking nut to the Rilsan™ tube for threaded union
- 4 – Rilsan™ tube
- 5 – cylinder containing float which measures hydrostatic pressure
- 6 – counterweight for maintaining the gauge vertical and which establishes the minimum measurement level
- 7 – cable for electrical connections

6. WIRING

If the cable supplied is not long enough, extend the connections using cables of at least 1 mm² cross section. In this event, it is necessary to provide adequate protection for the point of connection.

Example of connection with UML 318 :



- B1 contact : GREEN cable = 0...5 V– signal**
- M contact : GREY cable = 0 Volt**
- G contact : VIOLET cable = power supply 12 V–**

7. COUPLING AND CALIBRATION WITH UML 318 MEASUREMENT UNIT

Since LGP 250 gauge is normally coupled with UML 318 measurement unit, you are referred to the UML 318 data sheet for full details of calibration.

Amendments to data sheet

from version	to version	Page	Section	Details of amendments
08.11.04 MZ	07.02.06 MC	1 2 2	General 3. Technical data 6. Wiring	Amended general description. Amendment: nominal output field. Amendment description UML connections.



Head Office & Sales
Via San G.B. De La Salle, 4/a Tel. +39 022722121
20132 - Milano Fax +39 022593645

Reg. Off. Central & Southern
Via S. Longanesi, 14 Tel. +39 065573330
00146 - Roma Fax +39 065566517

Orders and Shipping
Via Gen. Treboldi, 190/192 Tel. +39 0364773200
25048 - Edolo (BS) Tel. +39 0364773202
Fax +39 0364770016

E-mail: info@coster.info Web: www.coster.info



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