



LEVEL MEASURING

WITH DISPLACER TRANSMITTER



www.aramakco.com



Introduction

The Displacement Level Transmitter (DLT) made by Aramak is a Hydraulic coupling type level indicating transmitter with smart data processing function.

The hydraulic coupling is a new innovation of displacement level measurement that has been developed by ARAMAK Company.

Displacement Level Transmitter is one of the most advanced level instruments based on displacer device.

The buoyancy principle is well known for many decades for its high reliability and stability in fluids level measurement.

The **DLT** Series parameters and the measured values can be configured and monitored using PC or HART Communicator located in Plant Control Center. It is also possible to adjust, operate, and control the DLT easily on site using conventional remote keypad .



Applications

- Knock-out pots
- Condensate drums
- Separators
- Flash vessels
- Storage vessels
- Receiver tanks
-



Technical Data:

Output: 4–20 mA / HART / Loop Powered

Range: 300 to 3000 mm (as per the order)

Operating pressure: -0.6 to 200 barg

Specific gravity range: 0.5 to 1.5

Operating temperature: -20 to 200°C

Ambient temperature: -20 to 60 °C

Accuracy: < ±1.5% of output span

Repeatability: ±0.2% of output span

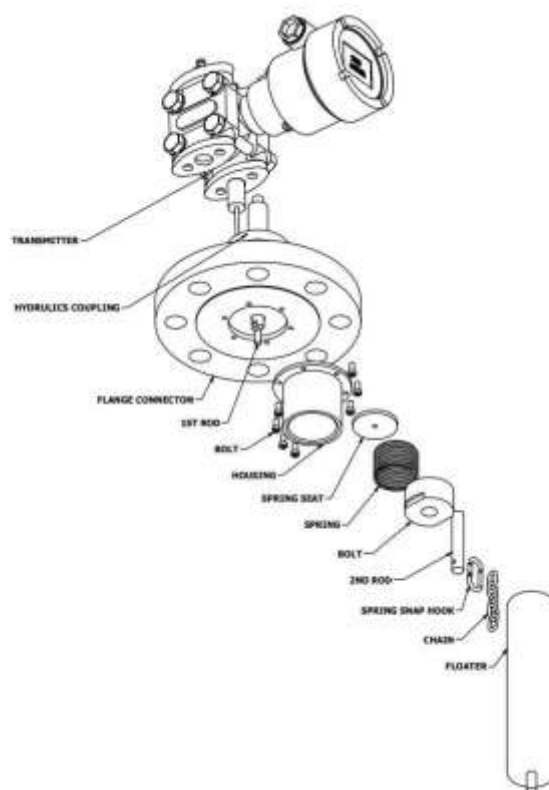
Linearity: 0.2% of output span

Resolution: 0.1% of output span

Hysteresis: 0.3% of output span

Ingress Protection: IP66/IP67

Approval/Certificate: ATEX Eexia IIC T6 / Ee xd (for the transmitter)



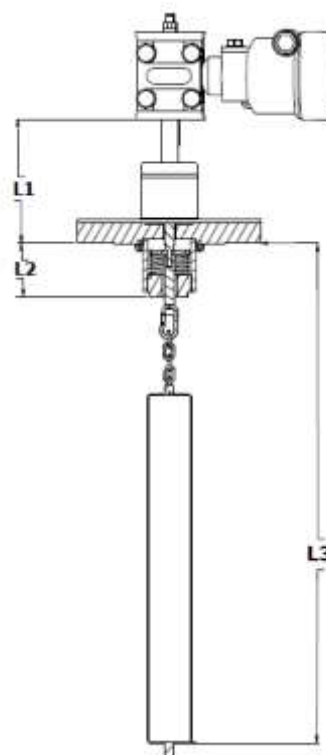
Materials of Construction:

The transmitter head is manufactured from cast aluminum with a paint finish of two-pack Epoxy paint suitable for off-shore/coastal environment.

Wetted parts are made from stainless steel, including the element and hydraulic coupling, except for the spring which is manufactured from a special corrosion resistant spring material, chosen for its stability and repeatability under changing process conditions.

Options:

Wetted parts material selection is available in Alloy C276 (UNS N10276), Alloy 625, (UNS N06625), and others on request.





External Chamber :

The material used is either as specified in the order or selected by Aramak to suit the application. Only certified materials are used, and the welding is as per the ASME IX, and EN ISO 15614-1 standards.

All pressure retaining parts are hydrostatically pressure tested to a minimum of 1.5 times the working pressure. NDT tests including radiography and dye penetrant testing is available when specified at the time of order placement. Inspection by customers or their appointed inspection agents is welcome provided that it is requested at time of order placement.

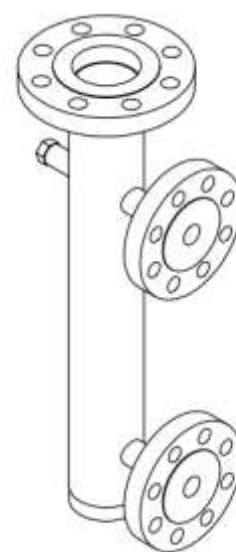
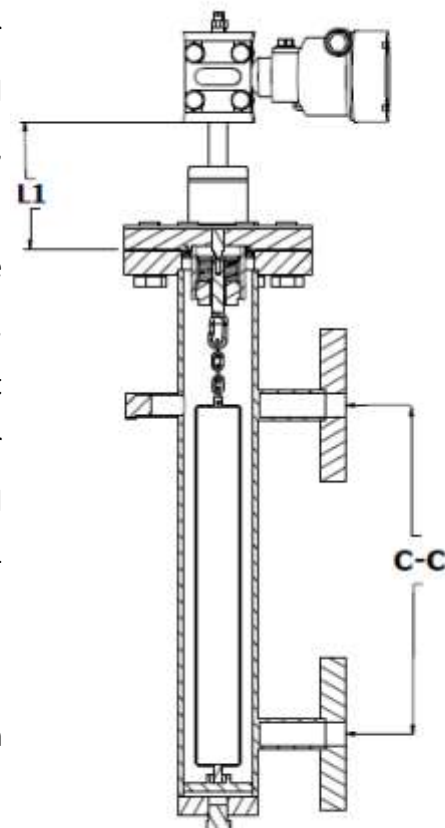
The basic materials/ sizes are:

- Chamber pipe: 3" or 4" A106 (depending on float/ displacer size)
- Top flange: 3" or 4" A105 according to the chamber pipe size
- Process connection: Flange ½" to 4" (FF, RTJ, RF)
- Pressure rating: 150# to 1500# (PN20 to PN160)

Options:

- Wetted parts materials in Stainless Steel 316/304, Titanium, Alloy C276 (UNS N10276), Alloy 625, (UNS N06625), Monel 400 and others on request
- Vent/Drain is applicable as per the order

The Center- to- Center (C-C) length and process connections are according to related datasheets.





Mounting type:

Side Mounted Level Transmitter

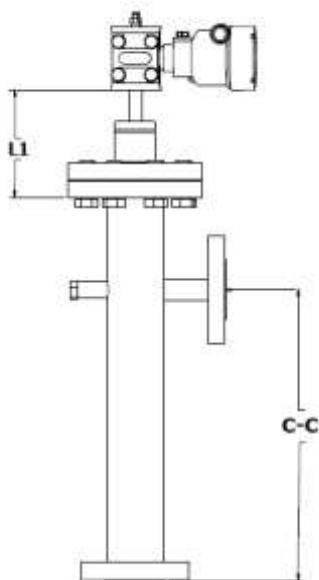
- All construction works are done in-house by code certified welders
- Float/ displacer is designed and weighted for maximum accuracy
- Transmitter and switch are installed, adjusted and maintained
- Safe for corrosive, flammable, toxic, high-temperature and high- pressure applications
- Rugged design- low maintenance

Top Mounted Magnetic Level Gauge

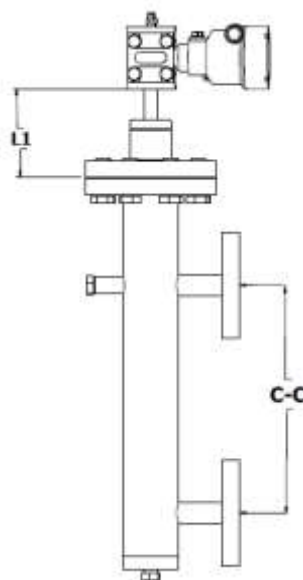
- Magnets above the float are connected with chain
- Slug catcher level
- Optional stilling wells
- Total or interface level measurement
- Underground tanks and sumps level

Heat Tracing and High Temperature Insulation for Magnetic Level Gauge

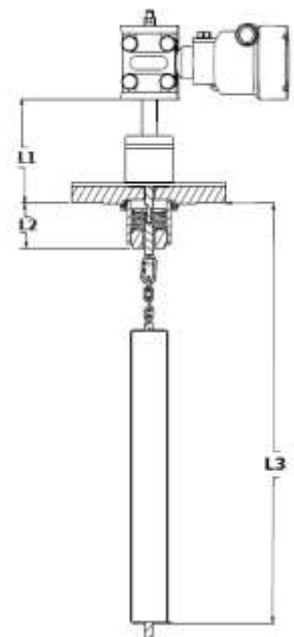
- Electrical or steam heat tracing
- Removable insulation



Side-Bottom



Side-Side



Top mount

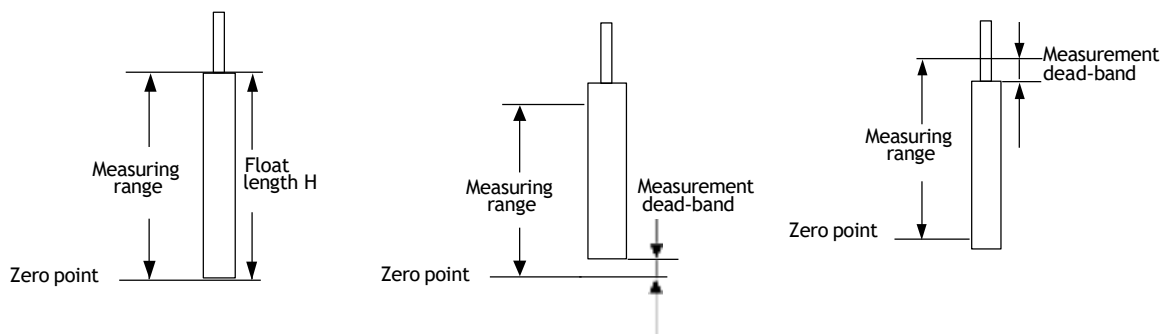


Attention in usage

Aramak standard Displacement type level transmitter measurement range is set equivalent to float (displacer) length (H).

Therefore, it will be unsuitable when detecting the levels around 0 % or 100 % (in normal operation), or when continuous output of 4 mA or less or 20 mA or more is needed.

When conducting the actual liquid measurement adjustment (filling adjustment) after installing the displacement type level transmitter at the job site, be sure to set the float bottom to zero point (reference point at 0 % liquid level). Structurally, if the measurement fluid is not in contact with float, output will not change. If other than the float bottom is set to zero point (reference point at 0 % liquid level), it may cause the measurement dead-band at the measurement range of lower limit (or upper limit), or may cause output linearity error.





Ordering Code Information

[Please check the order code in our website. \(Click here\)](#)



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