



290 series MUD density Transmitt

Custom construction 2 wire 4 to 20 mA differential pressure transmitter

Features

- Compact design for simple installation.
- Standard construction readily adapted to suit each application.
- May be fully submersed or externally mounted.
- Stainless steel body and Hastelloy diaphragms for superior corrosion resistance
- 2 wire 4 to 20 mA output from remotely located amplifier module
- Intrinsically safe versions.
- Normal calibration 6.67 to 20 Pounds / US Gallon (0.8 to 2.4 SG). Alternative calibration as required.
- Additional temperature compensation available for applications where in service shift is significant
- Protected by design against conditions of asymmetric overload
- Static accuracy +/- 0.25%



The PSM 290 Series transmitter measures mud density as a function of differential pressure. The unit has two pressure sensitive diaphragms, each of which are located at a known elevation in the tank. Under normal operation both diaphragms will be submerged, and since the distance between them is fixed, any variation in the pressure differential between them must be a function of the liquid density.

The two diaphragms are hydraulically linked within the sensor's construction. The lower diaphragm is "rated" to give a known displacement in response to applied pressure, while the upper is compliant and simply transfers the pressure it measures via the hydraulic fill, to the rear of the rated diaphragm. Actual displacement of the lower diaphragm is measured using an internally mounted Linear Variable Differential Transformer. The externally mounted amplifier module receives the LVDT's output signal and conditions it to provide a 4 to 20 mA output over the required span. For convenience this amplifier may be sited up to 100 Metres away from the sensor. It also incorporates the zero and span adjustment facilities, greatly simplifying initial installation / commissioning and subsequent calibration checks

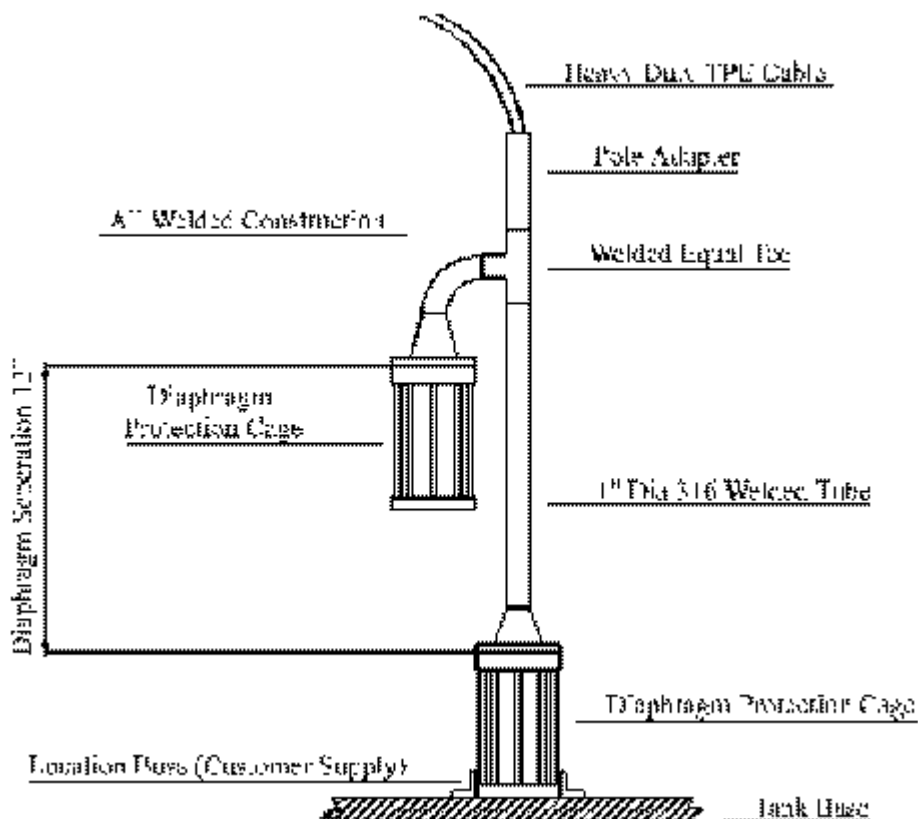
PSM's unrivalled experience in the design of pressure sensitive diaphragms and their application in the Marine / offshore sector, together with a versatile approach to unit construction, ensures optimum performance for all applications. Units can be manufactured to suit either external flanged, or threaded fittings, or as a completely submersible unit suitable for pole suspension or clamping in place. The design is approved for use in Hazardous area's and employs the same construction techniques & principles as PSM's range of Marine duty Hydrostatic level transmitters which are type approved by all major Classification societies

SENSOR

Construction Body assembly	316L stainless Steel
Diaphragms	Hastelloy C276
Mounting	External flanged or threaded, or internal submersed
Standard Range	Density span 0.8 to 2.4 (others on request)
Fluid fill	Silicon or Mineral oil
Operating temperature:	-10 to +80° C
Temperature compensation:	As required by application
AMPLIFIER MODULE	Wall mount GRP enclosure
Construction	IP65 (IP67 option) / NEMA 4X
Enclosure rating:	12 to 30 Vdc
Power supply:	4 to 20 mA dc, 2 wire.
Signal output:	
PERFORMANCE	
Accuracy:	+/-0.25% of set span
Temperature coefficient	+/- 0.01% set span/°C range & zero (compensated un
OPTIONS	
Intrinsically safe unit available	To EEx ia IIC T6

Typical submersible Construction

Engineering drawings available on request



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