



Density Transmitter

290 Density Transmitter

NASC has designed and developed the Series 290 as a density transmitter specifically for use in the onshore and offshore oil and gas market. It is the first fluid density transmitter that is fully submersible for use on drilling mud, slurry, cement and completion fluids. This density transmitter is rugged yet accurate, providing reliable measurement in the mixing or holding tanks and return sumps. The Series 290 transmitter measures density as a function of differential pressure. Each unit has two pressure sensitive diaphragms mechanically separated by a fixed distance on a mounting pole. The distance between the transmitters two diaphragms provide a value of the liquids specific gravity. The diaphragms are protected by enclosure cages to prevent damage from the mechanical impact or debris. These are easily removable for cleaning. The density measurement is made online in real time and is fully compensated for changes in fluid temperature.



Specifications

Construction: Body assembly 316L Stainless steel with diaphragms Hastelloy C276.

Mounting: Submersed in tank.

Measuring range (Factory calibration)

- 6.67 to 20 pounds / US Gallon
- 0.8 to 2.4 SG / 0.8 to 2.4 kg/l

Customer specific calibration within this range on request.

Minimum density measurement:

- 6.25 Pounds / US Gallons
- 0.75 SG / 0.75 kg/l

Sensor capillary fill fluid: Silicon oil

Operating temperature -10° to 80° C

Hazardous area rating (option) EEx ia IIC T6

Key Features

- Density transmitter for drilling mud, slurry, cement and completion fluids.
- Designed to be installed in mixing recirculation and storage tanks.
- Simple and flexible pole mounting installation from the top of the tank.
- Remote transmitter suitable for installation in hazardous area.
- Robust and reliable construction for arduous duty and extended service.
- Sensors protected by stainless steel cage easily removed for cleaning.
- Temperature compensated measurement with low thermal sensitivity.
- 2 Wire 4-20mA output signal calibrated to suit the application.

Amplifier Module

Construction: Wall mount GRP enclosure

Enclosure rating: IP65 (IP67 option) / NEMA 4X

Power supply: 12 to 35 Vdc

Signal output: 4 to 20mA dc. 2 wire

Performance

Accuracy $\pm 0.25\%$ of set span

Temperature coefficient: $\pm 0.02\%$ set span / °C



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Dimensional Specifications

