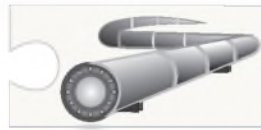




DC - series



Temperature

Density

## In-flow Density Meter DC-50



### Advantages:

- Straight through flow design
- Density accuracy up to  $0.00025 \text{ g/cm}^3$
- Automatic temperature compensation
- Accurately measures viscous liquids
- Rigorous factory calibration and testing
- Standard installation packs easily ties into process
- No moving parts, virtually maintenance-free system
- Hazardous area approvals
- Flexible data transfer options

### Applications:

- Blending operations
- Volumetric to mass flow metering systems
- Pipeline Interface detection
- Process monitoring and control
- Product identification and consistency
- Concentration and dilution measurement

■ DC50 series of process liquid density meters has been carefully engineered to fit large range of applications within the oil and gas, petrochemical, chemical, food & beverage, metallurgy and other industries.

Use the proven vibrating element technique which is widely accepted as the most accurate method of continuous online density measurement, LEMIS Baltic engineers did new step ahead introducing unique proprietary design of streamlined resonant tube which is washed on either side by measured liquid. The new sensor allows the best signal stability at oscillating process pressure offering excellent repeatability under pipeline operating conditions.

An integral Pt100 temperature probe provides compensation of the density meter for temperature effect and allows calculation of reference density, API gravity, % concentration or specific gravity.

A choice of wetted parts materials : from stainless steel for general industrial use, Ni-SpanC for most demanding applications as fiscal metering, and Hastelloy for applications where ultimate corrosion resistance is required. Large offer of factory pre-built installation packs allows quick and simple field installation.



■ Calibration of LEMIS Baltic densitometers is performed according ISO9001:2000 quality assurance program and by using calibration materials that are traceable to national standards. In-house calibration and testing is performed with rigorous quality protocol for every standard model of the sensor. The DC50 series proves high accuracy and long term calibration stability insensitive to mounting position, plant vibration, process flow rate and pressure variations.

## DC50 Product configurations



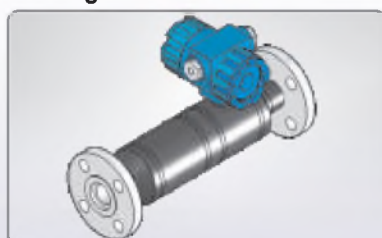
### ■ Installation packs

Correct installation is a key factor for accurate long-term measurement of liquids density and viscosity at process conditions. LEMIS Baltic offers a choice of factory pre-built installation packs allows quick and simple field installation with minimal pipeline disturbance or process downtime.

When ordered with LEMIS Baltic installation pack, the sensor has mounted at factory, tested and calibrated already fitted assuring best performance and eliminating the need for in-situ calibration for most of applications. The sensors has no moving parts and virtually maintenance-free.

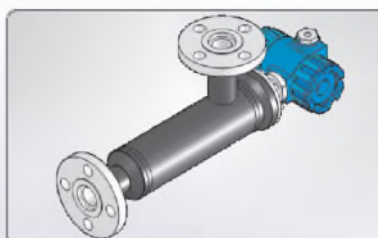
If you have specific requirements over the standard list, we can tune system specification for your specific need.

#### Straight flow



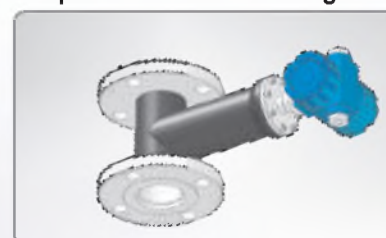
(S-type)

#### L-flow chamber



(G-type)

#### Pipeline recess mounting



(T-type)

### ■ Specifications

Parameters	Performances
Density Operating Range	0 kg/m <sup>3</sup> to 2000 kg/m <sup>3</sup> (0 to 2 g/cc)
Factory Calibrated Range	Typical 600 kg/m <sup>3</sup> to 1200 kg/m <sup>3</sup> (0.6 to 1.2 g/cc)
Transducer Calibration Accuracy	Available to $\pm 0.25$ kg/m <sup>3</sup> ( $\pm 0.00025$ g/cc)
Repeatability	0.1 kg/m <sup>3</sup> ( $\pm 0.0001$ g/cc)
Process Temperature Range	-40°C to +160°C (-40°F to +320°F)
Temperature Measurement	Built-in high accuracy 4-wire PT100 DIN 43760 Class A
Installation types	straight flow, L-flow chamber, pipeline recess mounting, other customized
Process Connections	large selection of flanges available : ANSI; DIN; 1.5" comp; IDF
Maximum Operating Pressure	100 bars max or flange rating
Ambient Temperature Range	-40°C to +85°C (-40°F to +185°F)
Weather Rating	IP67
Converter Analog output	Up to 3 x isolated 4 - 20 mA, direct or reverse-acting, configurable
Converter Digital output	User choice of signals and protocols: RS485; RS232; Modbus; etc...
Quality Assurance	ISO 9001:2000, ATEX audited factory
Factory Calibration	Calibration certificates supplied as standard
CE mark	Compliant EN 61326 ; EN5011 ; EN 50082-2
Hazardous area	ATEX II 1/2G Ex ia IIB T4
Material Traceability	Optional certification available

Due to continuing product improvement, we reserve the right to alter specifications at any time without notice.

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