



50 SERIES

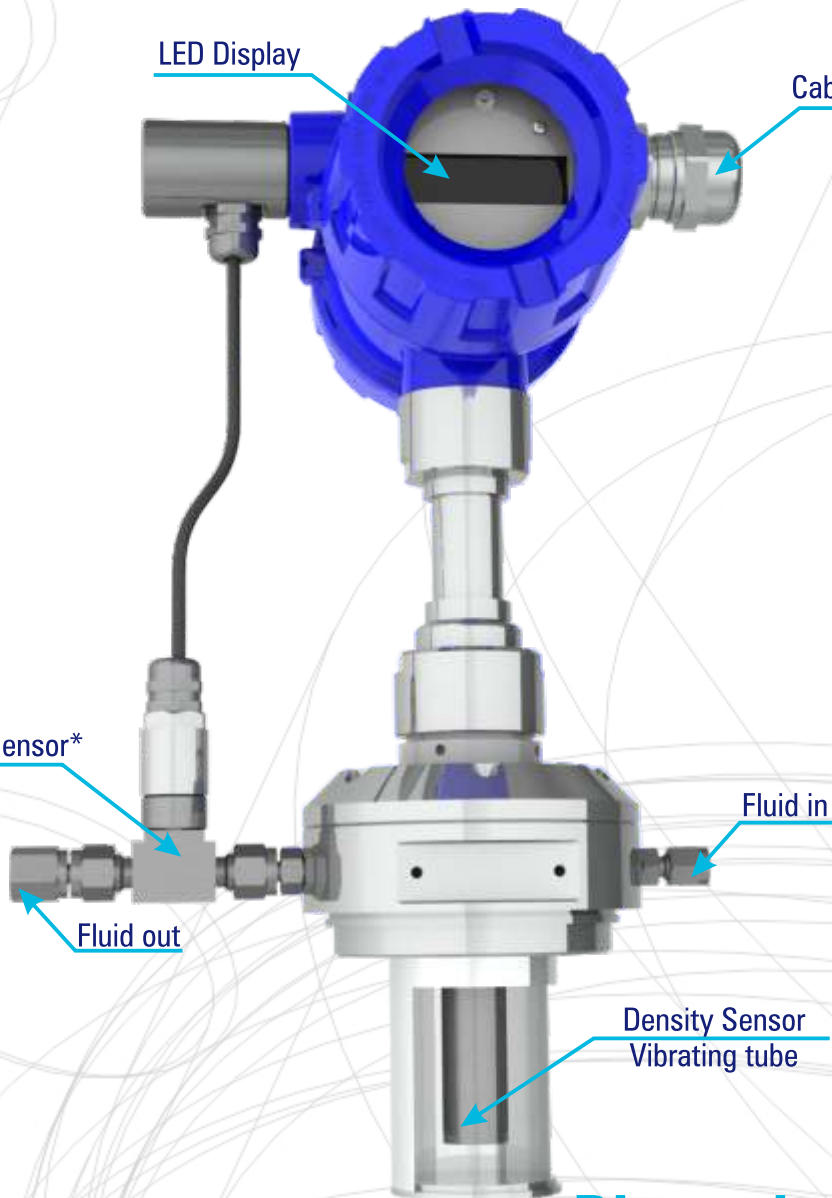


GAS DENSITY/SPECIFIC GRAVITY METER

DC-53/DC-53SG

IN PROCESS TO EXCELLENCE

DC-53/DC-53SG Overview



Key application

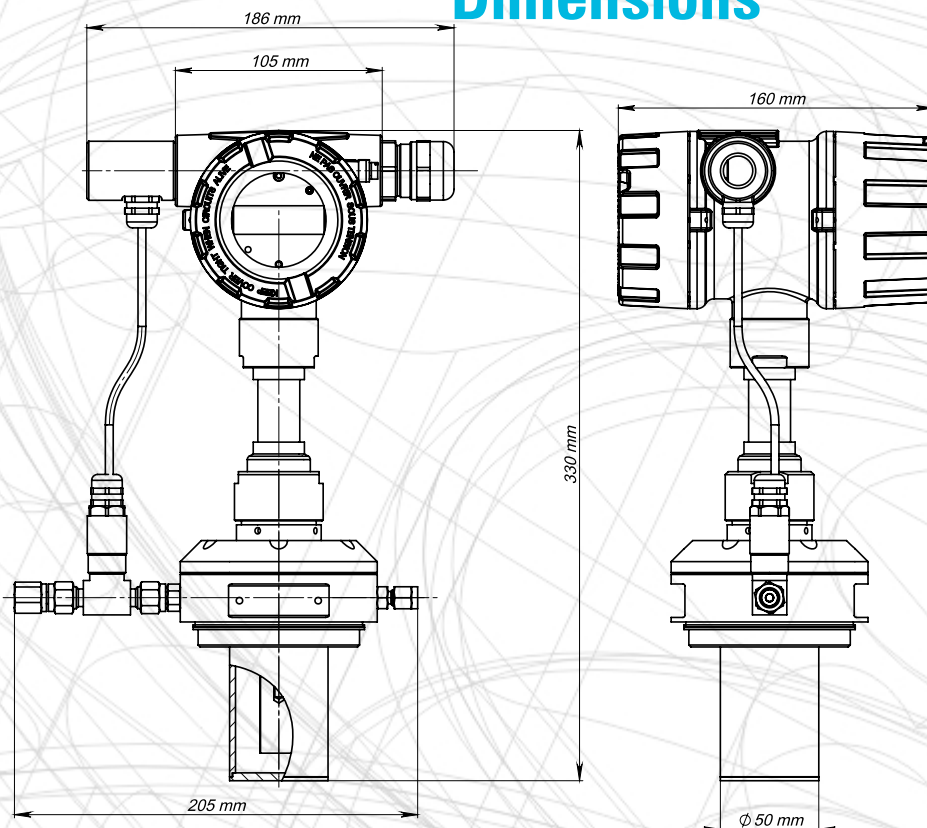
DC-53 Density Meter is designed for accurate, continuous monitoring of the technological process. High-accuracy density data for natural gas mixtures are required in entire range of pressure, temperature and compositions encountered in custody transfer.

Operating principle

The gas passed over the cylinder tube resonance sensor vibrating at its natural frequency. The mass of gas in contact with the vibrating walls vibrates with the cylinder. Depends upon the gas density and, since increasing the vibrating mass decreases the natural frequency of vibration, the gas density is simply determined by measuring the change in sensor resonant frequency. This measurement method provides precise gas density values in seconds.

* optional for DC-53SG

Dimensions



Specifications

Measuring range:

Density	0... 0.001 g/cm ³ (0... 10 kg/m ³) 0.001...0.01 g/cm ³ (10...100 kg/m ³)
Specific Gravity*	0... 2
Pressure	0...30 bar
Temperature	-40°C to +85°C (-40°F to +185°F)

Accuracy:

Density	±0.15% of reading
Specific Gravity*	±0.1% of reading
Pressure	±0.15% of FS
Temperature	±0.5°C (±0.9°F)

Repeatability:

Density	±0.1% of scale
Temperature	±0.1°C (±0.2°F)

Resolution:

Density	0.1 kg/m ³
Temperature	0.01°C (0.02°F)

Operating pressure Up to 30 Bar (up to 435 psi)

Supported measuring units
Real density: g/cm³, kg/m³, lb/gal, lb/ft³;
API; SG*, Mol Weight*
Referred density: at 15°C; 20°C;
60°F; API60; SG60*

Ambient temperature -20... +60°C (-4... +140°F)

Sensor:

Type Vibrating element (Resonance principle)
Material Stainless steel SS 316 L, NiSpan C, Teflon

Power supply 24 VDC

Dimensions, weight

Height 330 mm (5.76 in)
Width 220 mm (5.55 in)
Length 160 mm (3.9 in)
Weight approx.4.5 kg (approx. 9.9 lb)

Weather rating IP68

Digital output Standard: RS485, Modbus
or user choice of signals and protocols

Analog output 4-20 mA/HART, up to 3 channels

Implosion protection marking ATEX II 1/2G Ex ia IIB T4;
IECEx Ex ia IIB T4 Ga /Gb

Quality Assurance ISO 9001:2015

APPLICATIONS

- Gas blending
- Synthesis gas mixtures
- Industrial gas purity
- Enhanced gas flow control
- Fiscal custody transfer
- Biogas composition
- Refinery flare gas monitoring
- Portable gas measurement

ADVANTAGES

- DIN rail mount
- Small form factor for easy installation
- ATEX Hazardous area certification
- Less than 120ml fluid sample required for measurement

SOFTWARE:



Multifunctional software allows to proceed the measurements results in use-convenient form;
Compatible for a Windows 7/8/10



* optional for DC-53SG

For more information please visit www.lemis-process.com



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