

Metering Systems LNG







For consistent accuracy and lowest life-cycle costs, FLOW Instruments' metering systems for Liquefied Natural Gas are the market's unrivalled choice.

Accurate flow measurement and low maintenance costs

Our standard FLOW metering systems cover flow rates from 1,000 to 70,000 kg/h (2,200 to 154,000 lb/h) with further sizes available upon request. Flowcom 3000 is the heart of our metering system. This electronic device combines the best components for temperature and differential pressure measuring, offers very high durability and diagnostics without any additional tools.

Handling of different LNG mixtures:

To ensure the highest possible measuring accuracy, the system is suitable to enter manually the different mixtures (mixture of different components or elements) of LNG.

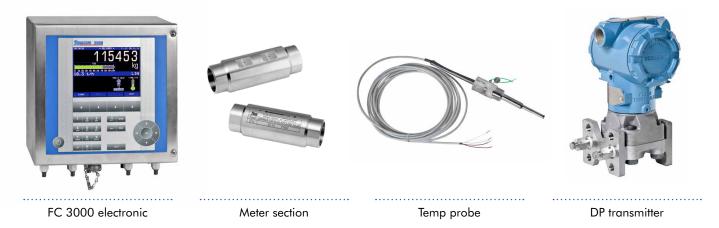
As an alternative the density can be measured dynamically during the delivery with the FLOW IDC (Inline Density Column) which is based on the FLOW Instruments dynaflowTM technology.

Fields of application:

The Flowcom 3000 is available for trailer as well as for stationary filling stations.

Custom solutions and special applications are available on request. Please contact our customer service team for further information.

Components



Options



Features	Benefits
No moving parts	 Lowest life cycle cost (30 % cost saving on 10 years or more) No replacement of meter section during the lifetime Life time warranty on the meter section
Highest meter accuracy	 Long term stability over years. Accuracy better than +/- 0.5% No negative drift because of no wearing
Inline density column	 Real time dynamic density measurement - no manual settings are needed / no frauds
FLOW processor	 Type approved for Europe (MID), USA (NTEP), China, South Africa, Australia, Russia and more. Parameters can be easely changed/Easy to software update Densitiy correction via mixture set up possible
Integrated type approved Data logger	 No ticket printer needed More than 4000 deliveries are stored Every delivery including all parameters Data can be transferred by Bluetooth or wire
SD card slot	 Easy download of configuration data for service issues Easy data upload without direct impact of type approval Data changes without braking seals, no recalibration needed
Soft key interface	Intuitive operation for driver and service people
Inputs and outputs	Pump shut-off can be controlled by the Flowcom
Pump smart	 Massive cost reduction on pump maintenance. Forces driver to ensure proper cool-down prior to turning on pump Pump operation shut-down if the tank runs dry.
Pump hour counter	Service warning – temporarely locks out pump if ignored
Pulse output	Counted quantity can be transmitted to a PLC-system
Multi color display	 Easy and convenient handling during filling procedure All delivery parameters visible at a glance Clear error messages visible by red indication or flashing display.
Stainless steel housing	Zero corrosion/long lifetimeEasy access to pc-boards for calibration reasons
Ex requirements Large stainless steel housing	 To meet the ex-requirements, this special housing is suitible to install Flowcom 3000 electronic, ex-barriers and printer This housing has to be mounted outside the ex-zone.

Opti	ons
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Flow IDC	 Inline Density Column based on Dynaflow[™] technology
Printer	Matrix printer including power supply and stainless steel housingPortable Bluetooth printer.
Bluetooth	Internal and external modul to transfer data for example to a handheld
Option boards	Analog output board – 2 outputs with 4-20 mA

Quality Management System as per ISO 9001:2008 Certified from TÜV NORD CERT GmbH

02-V2-0-EN-FC3000-LNG

Technical specifications

Metering section	
Measuring range	1,000 to 70,000 kg/h (2,200 to 154,000 lb/h) (Standard ratio 1 to 5), (with two DP transmitter up to 1 to 25)
Sizes	DN 12 - DN 80 / ½ ″ - 3" (other sizes on request)
Material	Stainless steel
Approvals	European type approval based on MID, China, South Africa, USA, Russia and more
Units	kg, liter, Nm³, gallon, lbs, (others on request)
Flowcom 3000 electronic	
Dimension of the electronic	250 x 250 x 160 mm/9,85 x 9,85 x 6,3 lnch
Water/Dust protection	IP 65
Coloured display-size	5,7"
Data logger	Approved storage of 4000 delivery strings
Digital inputs	4, electrical isolated (9-36 Volt DC)
Digital outputs	5, type transistor PNP (Max 1,5 A)
Serial interfaces	3 x RS232 (electrical isolated with overvoltage protection)
Analog inputs	5 inputs, actively powered, Range 0,1-25mA
Cable glands	9 x M16 x 1.5
Weight	4.5 kilograms
Back-up battery	Battery – lithium button 3V Type 2032
Languages	English, German, Chinese, Spanish, French,
Operation conditions	
Temperature	-25 °C up to 55 °C // -13 °F up to 131 °F
Voltage	9-36 VDC
Power consumption without printer	max. 10 Watt
Power consumption printer	max. 50 Watt/2 A at 24 Volt

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