



A Chart Industries Company

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 dynafloTM 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



FC 3000 electronic



Meter section



Temp probe



DP transmitter

Options



Large stainless steel housing for Flowcom 3000, printer and Ex-Barriers

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 easily changed/Easy to software update
- Density 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 – temporarily 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 lifetime
- Easy access to pc-boards for calibration reasons

Ex requirements Large stainless steel housing

- To meet the ex-requirements, this special housing is suitable to install Flowcom 3000 electronic, ex-barriers and printer
- This housing has to be mounted outside the ex-zone.

Options

Flow IDC

- Inline Density Column based on Dynaflo™ technology

Printer

- Matrix printer including power supply and stainless steel housing
- Portable 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

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, Nm ³ , 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 Inch
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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