

T-Conventional Series CORIOLIS MASS FLOWMETER

Oil-gas-water Mixture
Coriolis Mass Flowmeter

ETRANS – CMASS050TU Datasheet



Precise Measurement,
Ultimate Control

www.enelean.com



Coriolis Flow Flowmeter

MODEL CMASS050TU



Application Areas

Oil & Gas Exploration
Multiphase Flow Research
Enhanced Oil Recovery (EOR)
Well Group Metering Stations
Offshore Platforms

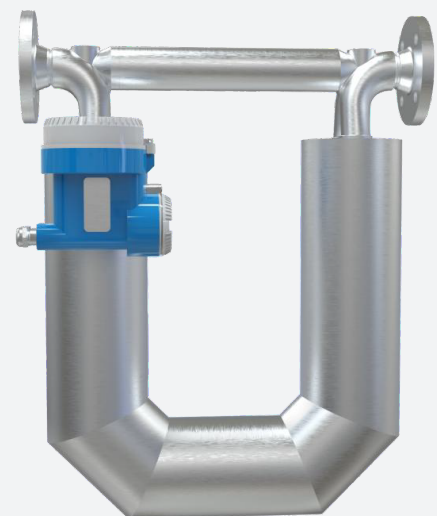
Features

- Direct Mass Measurement: Measures total mass flow of mixtures without needing gas-liquid separation.
- High Accuracy: Features a 0.2% accuracy class for reliable production management and transactions.
- Multivariable Output: Provides simultaneous data for mass flow, mixture density, and temperature.
- High Pressure Resistance: Rated for PN63 (Class 400) to meet demanding oilfield pipeline requirements.
- Explosion-Proof Design: Certified for safe operation in hazardous environments with flammable gases.
- Laminar/Turbulent Independent: Measurement remains accurate regardless of changes in the flow regime.
- Low Maintenance: Unobstructed U-shaped tube design is resistant to wear from sand, wax, and solid particles.
- Digital Integration: Equipped with RS485/Modbus for easy connection to SCADA and cloud management systems.

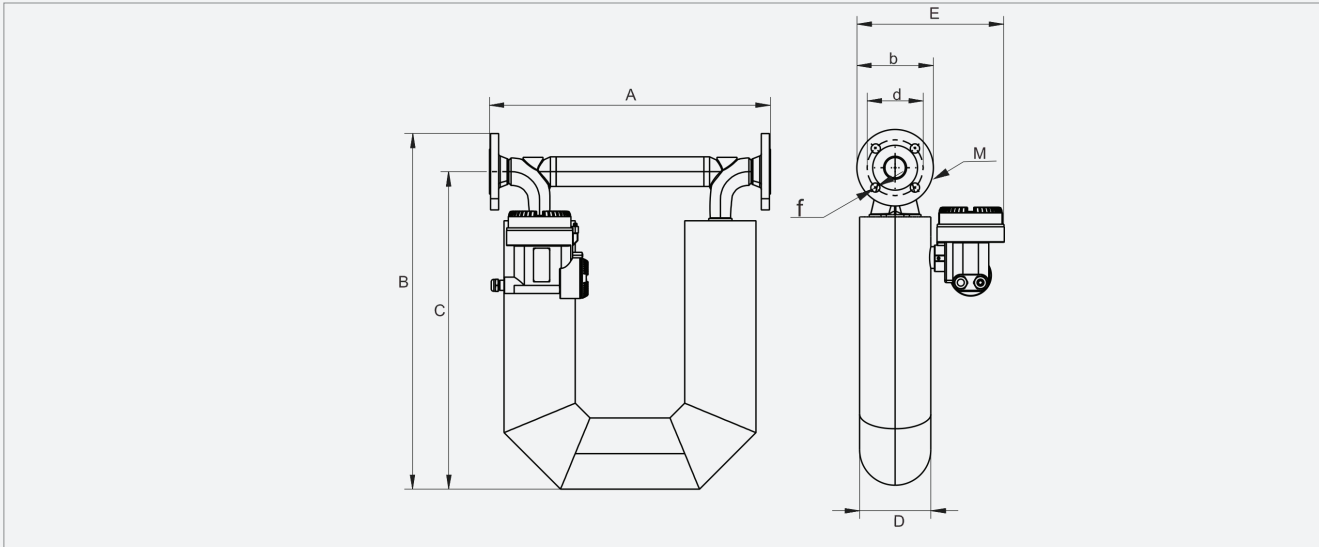
Description

The Enelsan Etrans-CMASS050TU represents the pinnacle of multi-phase flow measurement technology, specifically designed to handle the complexities of oil-gas-water mixtures. By leveraging advanced Coriolis principles, Enelsan provides a robust solution that eliminates the need for bulky traditional separators, allowing for seamless, real-time monitoring of wellhead production. Our commitment to precision ensures that operators receive highly accurate mass flow, density, and temperature data, even in the most challenging industrial environments.

As a leader in flow control solutions, Enelsan focuses on reducing operational complexity while maximizing data reliability. The Etrans-CMASS050TU is engineered with a "no moving parts" design, which significantly minimizes maintenance requirements and extends the service life in harsh conditions. With Enelsan, oilfield managers can achieve superior production accounting and process optimization through a compact, high-performance instrument that sets new standards for efficiency and durability.



Diameters



Model and diameter

MODEL	A	B	C	D	E	F	d	b	M
CMASS040	552	699	624	Ø140	288	4-Ø18	Ø110	Ø150	HG/T 20592 DN40 PN40 Flange
CMASS050	600	747	665	Ø159	305	4-Ø18	Ø125	Ø165	HG/T 20592 DN50 PN40 Flange
CMASS080	763	950	850	Ø219	353	8-Ø18	Ø160	Ø200	HG/T 20592 DN80 PN40 Flange
CMASS100	963	1079	962	Ø273	416	8-Ø22	Ø190	Ø235	HG/T 20592 DN100 PN40 Flange
CMASS150	1164	1144	994	Ø324	467	8-Ø26	Ø250	Ø300	HG/T 20592 DN150 PN40 Flange
CMASS200	1266	1445	1257	Ø377	423	12-Ø30	Ø320	Ø375	HG/T 20592 DN200 PN40 Flange
CMASS250	1260	1904	1683	Ø448	500	12-Ø30	Ø385	Ø450	HG/T 20592 DN250 PN40 Flange

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Transmitter Specifications

Certification: Transmitter & Sensor Assembly	CCS Certification, CPA, Explosion proof certificate(ex)
Power Supply	220VAC/24VDC
Output;Input1	Modbus RTU/RS-485, Pulse,4-20mA Current loop
Display;Operate	3-line backlight; Touch key control
Protection grade	IP67
Housing material	304 stainless steel, ZL401 (Transmitter)
Electrical connection	4-20mA Current loop
Measuring Tube Material; Wetted Parts Surface Finish	316L (default), titanium/Ha C alloy/ tantalum (optional); polishable.
Process connection	Thread
Accuracy class	0.15 level, 0.2 level, 0.5 level (default), 1.0 level
Transmitter software	CLS100 (default), optional CLS200, CLS300
>>Other certifications	Explosion proof certificate, SIL, CCS, 3-A, EAC



This flow meter is primarily used in wellhead measurement or multiphase flow gathering and transportation within the oil extraction industry, specifically including:

1. Oilfield Single-Well Liquid Production Measurement:** Installed at the oil well outlet for real-time monitoring of the total liquid production (total mass flow rate of the oil, gas, and water mixture) from a single well. This is its core application, replacing traditional test separators to enable unmanned, continuous measurement.
2. Multiphase Flow Test Loops:Used in oilfield development laboratories or equipment test platforms for researching and verifying multiphase flow processes, equipment performance, and the calibration of other measurement technologies.
3. Polymer Flooding Produced Liquid Measurement:Used in enhanced oil recovery (EOR) to measure the total mass flow rate of complex produced fluids containing chemicals such as polymers.
4. Well Group Metering Stations:Measuring the total output volume of commingled production fluids from several oil wells.

Contact us

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