



Coriolis mass flowmeter- TERCMF-TS



1. Overview

The TS series Coriolis mass flowmeter is a new generation of Coriolis meters with paired triangular flow tubes from Walsn. The Walsn mass flow meter is equipped with a transmitter utilizing a digital signal processor (DSP), integrated with digital closed-loop vibration control (DLC), which performs calculations and monitors diagnostic functions of the sensor. This provides high accuracy measurement, wide range ability and excellent reliability for you. Online node-configuration, diagnostics and data recording can be handled directly through a Hart communicator or Modbus.

The TS Series flowmeter not only provides mass flow rate, but can also calculate: density, temperature volumetric flow rate, total flow and component fractions online and in real-time.

2. Features

- ◆ Trapezoidal shape amplifies impact of Coriolis force, giving high sensitivity
- ◆ Dedicated ASIC with digital closed-loop control (DLC) improves the performance of gas-liquid flow measurement
- ◆ Dynamic vibration balance (DVB) technology enhances system stability
- ◆ 2-point temperature compensation and process pressure compensation

3. Applicable Fluids

- ⊙ Gases
- ⊙ Slurries
- ⊙ Liquids

4. Typical Applications

- ⊙ Custody transfer
- ⊙ Reactor feed ratio
- ⊙ Density measurement
- ⊙ Batch control

5. Environmental Conditions

- ◆ Power consumption: $\leq 20W$
- ◆ Enclosure rating: IP65, IP67, IP68 (Remote Style Options only)
- ◆ Vibration limits:
 - a) $a = 0.5g$
 - b) Endurance sweep, under the condition of 20Hz ~ 400Hz frequency for 50 sweep cycles
- ◆ Impact limits: If the flow meter is well-packed, its performance will not be affected by the following impacts:
 - a) Acceleration: 50m/s²
 - b) Impact frequency: 60 times/min ~100 times/min
 - c) Impact: 1000 times
- ◆ Ex approval: Ex d ib IIC T6 Gb
- ◆ Electromagnetic/Electrostatic compatibility
 - a) Electrostatic discharge: level 3
 - b) Electrical fast transient/burst (EFTB) resistance: level 3

6. Specifications

Basic Error	Liquid: $\pm 0.10\%$; Gas: $\pm 0.35\%$; Liquid density error: $\pm 0.0005\text{g/cm}^3$
Diameter(mm)	DN5~DN80
Anti-explosion	CSA/PCEC/ATEX/IEC
Flange	316L/Titanium/Hastelloy alloy/Other materials required by users
Pressure Rating	10MPa
Material	Measuring tube: 316L, Titanium Alloy
Protection Level	IP65, IP67, IP68 (Remote Style Options only)
Medium Temperature	-40°F~356°F (-40°C~180°C); -40°F~662°F (-40°C~350°C); -400°F~662°F (-240°C~350°C)
Ambient Temperature	-25°C—60°C (-13°F—140°F) (with LCD); -40°C—85°C (-40°F—185°F) (without LCD)
Repeatability	Liquid: $\leq 0.05\%$; Gas: $\leq 0.17\%$
Cable for Sensor	10m (The divided type is optional.)
Electronic Connection	M20*1.5 Seal, NPT1/2
Output signal	Analog + Pulse/Frequency; Analog+ Pulse/Frequency + HART; Analog+ PulseFrequency + RS485; Profibus PA/DP; FF; Specially customized