CLASSIC Series | TCM 7900 Coriolis Mass Flow Meter

FEATURES
- Robust, no moving parts for long life
- Custom flow connectors & installation lengths
- Excellent repeatability (±0.05 % of flow rate)
- Optional Net Oil functionality

BENEFITS
- Increased productivity, less maintenance
- Lower installation cost
- Increased product quality
- Simpler whole solution for Net Oil without PLC/RTU

FLOW RATE
- Mass Flow Rate (max.): 7,900 kg/h [290 lb/min]
- Volumetric Flow Rate (max.): 7,900 l/h [34.78 gpm, 1,193 oil bbl/d (US)]
- Nominal Meter Size: DN15 [½"]

PRESSURE RATING
- 100 bar [1,450 psi]

ACCURACY (LIQUIDS)\(^1\)
- Basic Accuracy (Mass Flow): ±0.3 % (option: up to ±0.1 %) of flow rate
- Repeatability (Mass Flow): ±0.05 % of flow rate
- Basic Accuracy (Volume Flow): ±0.3 % (option: up to ±0.15 %) of flow rate
- Repeatability (Volume Flow): ±0.05 % of flow rate
- Zero Stability: ±0.01 % of full scale

ACCURACY (GASES)
- Basic Accuracy (Mass Flow): ±1 % (option: up to ±0.5 %) of flow rate
- Repeatability (Mass Flow): ±0.25 % of flow rate

DENSITY
- Density Range: up to 2,500 kg/m\(^3\) [2.5 g/cm\(^3\)]
- Density Accuracy\(^2\): ±1.0 kg/m\(^3\) [±0.001 g/cm\(^3\)]
- Density Repeatability: ±0.5 kg/m\(^3\) [±0.0005 g/cm\(^3\)]

TEMPERATURE
- Process Temperature Range: -40 °C ... +100 °C [-40 °F ... +212 °F]
- Temperature Accuracy: ±1 °C ±0.5 % of reading [±1.8 °F ±0.5 % of reading]
- Temperature Repeatability: ±0.2 °C [±0.36 °F]

MATERIALS (WETTED PARTS)
- Tubes: 1.4404 [AISI 316L]
- Case: 1.4404 [AISI 316L]
- Flow Splitter: 1.4404 [AISI 316L]
- Brazing Alloy: BNi-2

\(^1\) Stated flow accuracy combines the effects of repeatability, linearity and hysteresis.
\(^2\) The specifications refer to standard conditions (for further information see TCM CLASSIC series manual).
CLASSIC Series | TCM 7900 Coriolis Mass Flow Meter

A) Compact Version
Weight: 8.5 kg [18.7 lb]
With meter mount in aluminum diecast housing

B) Remote Version
Weight: 9.8 kg [21.6 lb]
With junction box and remote field mount

Standard Process Connection
DN15 PN40 [½” ANSI CL 300] (others on request)

APPROVALS & CERTIFICATIONS

ATEX Zone 1
Compact version:
II 2G Ex db [ia IIC T4 Gb]
Remote version:
Sensor: II 1G Ex ia IIC T4...T2 Ga

IECEx
Compact version:
II 2G Ex db ia IIC T4 Ga
Remote version

Atex Zone 2
All versions:
II 3G Ex nA IIC T4

cCSAus
Compact version:
Cl. 1, Div. 1, Group A-D: T4 (US, Can)
Ex db ia IIC T4 Ga (Can)
Remote version:
Sensor: Cl. 1, Div. 1, Group A-D:
T4...T2 (US, Can)
Ex ia IIC T4...T2 Ga (Can)
Transm.: Cl. 1, Div. 1, Group A-D:
T4 (US, Can)
Ex db [ia Ga] IIC T4 Ga (Can)

EAC (TR-CU)
Compact version:
1Ex d ia IIC T4 Gb X
Remote version:
Sensor: 0Ex ia IIC T4...T2 Ga X
Transm.: 1Ex d [ia Ga] IIC T4 Gb X

KGS (Korean)
Compact version:
Ex d [ia] IIC T4
Remote version:
Sensor: Ex ia IIC T4
Transm.: Ex d [ia] IIC T4

METER DIMENSIONS AND WEIGHTS

A) Compact Version
Weight: 8.5 kg [18.7 lb]
With meter mount in aluminum diecast housing

B) Remote Version
Weight: 9.8 kg [21.6 lb]
With junction box and remote field mount

Standard Process Connection
DN15 PN40 [½” ANSI CL 300] (others on request)

APPROVALS & CERTIFICATIONS

ATEX Zone 1
Compact version:
II 2G Ex db ia IIC T4 Gb
Remote version:
Sensor: II 1G Ex ia IIC T4...T2 Ga

IECEx
Compact version:
II 2G Ex db ia IIC T4 Ga
Remote version

Atex Zone 2
All versions:
II 3G Ex nA IIC T4

cCSAus
Compact version:
Cl. 1, Div. 1, Group A-D: T4 (US, Can)
Ex db ia IIC T4 Ga (Can)
Remote version:
Sensor: Cl. 1, Div. 1, Group A-D:
T4...T2 (US, Can)
Ex ia IIC T4...T2 Ga (Can)
Transm.: Cl. 1, Div. 1, Group A-D:
T4 (US, Can)
Ex db [ia Ga] IIC T4 Ga (Can)

EAC (TR-CU)
Compact version:
1Ex d ia IIC T4 Gb X
Remote version:
Sensor: 0Ex ia IIC T4...T2 Ga X
Transm.: 1Ex d [ia Ga] IIC T4 Gb X

KGS (Korean)
Compact version:
Ex d [ia] IIC T4
Remote version:
Sensor: Ex ia IIC T4
Transm.: Ex d [ia] IIC T4

ELECTRONICS

Power Supply:
24 V DC or 100 ... 240 V AC
(version dependent)

Outputs:
Analog, Frequency, Pulse, Status

Interfaces:
RS485 RTU (Modbus), HART®

Cable Gland:
M20 | ½” NPT

D) Drawing of the Meter Dimensions reflects one standard connection, other connections on request (Installation length can vary depending on selected connection).
E) For cCSAus the electronic is only available in aluminum housing.
F) Only wall mounting, not panel mounting.
G) Weight: 0.4 kg (0.88 lb).
H) Weight with aluminum diecast housing: 3.8 kg (8.4 lb) with 3 m cable.

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