

TCMH 0450 Coriolis Mass Flow Meter

for high pressure liquid applications

Specification Sensor:

Nom. Flow Rates @ 850 kg/m ³ :	180 kg/h @ 1 cSt, 6.6 lb/min @ 1 cSt
Pressure Drop max. 2 bar	150 kg/h @ 10 cSt, 5.5 lb/min @ 10 cSt
	65 kg/h @ 30 cSt, 2.4 lb/min @ 30 cSt

Connection:

Pressure Rating:

TCMH 0450-HC-SPOS: 1,050 bar, 15,200 psi

TCMH 0450-HC-SROS: 690 bar, 10,000 psi

TCMH 0450-HC-SSOS: 414 bar, 6,000 psi

Accuracy:

Flow:	±0.2 % of reading
Mass Repeatability:	±0.1 % of reading
Zero Stability ¹⁾ :	0.34 kg/h (0.16 kg/h ¹⁾ 0.012 lb/min (0.005 lb/min ¹⁾)
Temperature:	±1.8 °F ±0.5 % of reading (±1 °C ±0.5 % of reading)

Operating Conditions - Process²⁾:

Medium Temperature:	-40 °F ... +212 °F (-40 °C ... +100 °C)
Fluid:	Liquid
Pressure Effect on Sensitivity:	0.0002 %/bar, 0.000014 %/psi

Operation Conditions - Environment:

Ambient Temperature:	-40 °F ... +158 °F (-40 °C ... +70 °C)
Relative Humidity:	max. 95 %

Material of Construction:

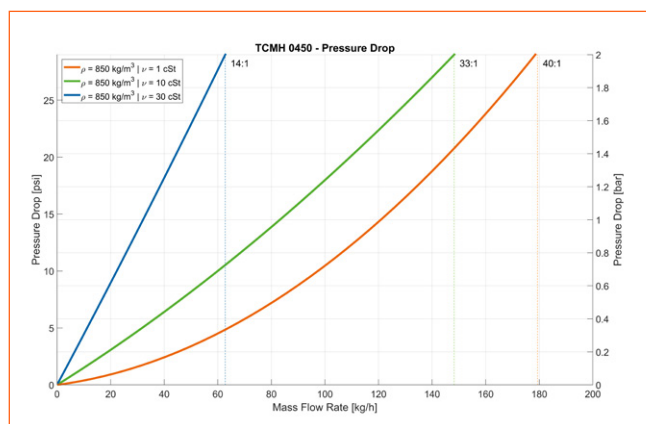
Tubes:	1.4404/AISI 316L
Manifold:	1.4435/AISI 316L
Housing:	1.4404/AISI 316L

Burst Protection:

Rupture Disc: G1/2"

Cabling:

Signal Cable Connection: Push-Pull connector
For triple Ex approval (Ex3)³⁾



¹⁾ Customer information required for density and viscosity at operation temperature for Reynolds number compensation.

²⁾ Customer specific pressure compensation curves on request.

³⁾ With connector M23 (TCE) and with connector Lemo (TCM), x m cable length (TCC-06-xx).

Specification Electronics:

Power Supply: 24 V DC \pm 20 % or 90 ... 264 V AC
Housing: aluminum diecast (1.4404/AISI 316L)
Display: LCD Display

Output signals:

Analog : 2 x 4 ... 20 mA passive two-wire, galvanically free
Accuracy \pm 0.05 % of f.s.
Temperature drift 0.05 % per 10 K
Load <620 Ω (with 24 V supply)
Output value programmable
Frequency/Pulse: 5 - 10,000 Hz / Active Push-Pull for flowrate
Status: Push-Pull programmable

Input signals:

Control Input: 0/24 V DC
Analog (optional): 4 ... 20 mA active for passive 2-wire-pressure sensor
Supply >20 V (sensor current 20 mA)
Interface: RS485 RTU (Modbus), optional HART®

Ingress Protection:

IP65 (NEMA 4)
IP66 (NEMA 4X) optional

Dimensions:

Meter Dimensions: see drawing
Meter Weight: 7.5 kg/16.5 lb
Electronics Dimensions: see drawing
Electronics Weight
with aluminum diecast housing: 3.8 kg/8.3 lb
with 1.4404/AISI 316L housing: 6.15 kg/13.56 lb

Remote Field Mount



Ex-Certifications:

ATEX (Ex)	Zone 1: Group IIC, T2...T4
ATEX (Exn)	Zone 2: II 3G Ex nA IIC T2...T4 Gc
IECEX (Ex)	Zone 1: Gruppe IIC, T2...T4
cCSAus (Ex1) ⁴⁾	Class 1, Division 1: Group A, B, C, D, T2...T4
ATEX + IECEX + cCSAus triple approval (Ex3) ⁴⁾	Zone 1: Group IIC, T2...T4 and Class 1, Division 1: Group A, B, C, D, T2...T4

⁴⁾ For cCSAus the electronic is only available in aluminum housing.



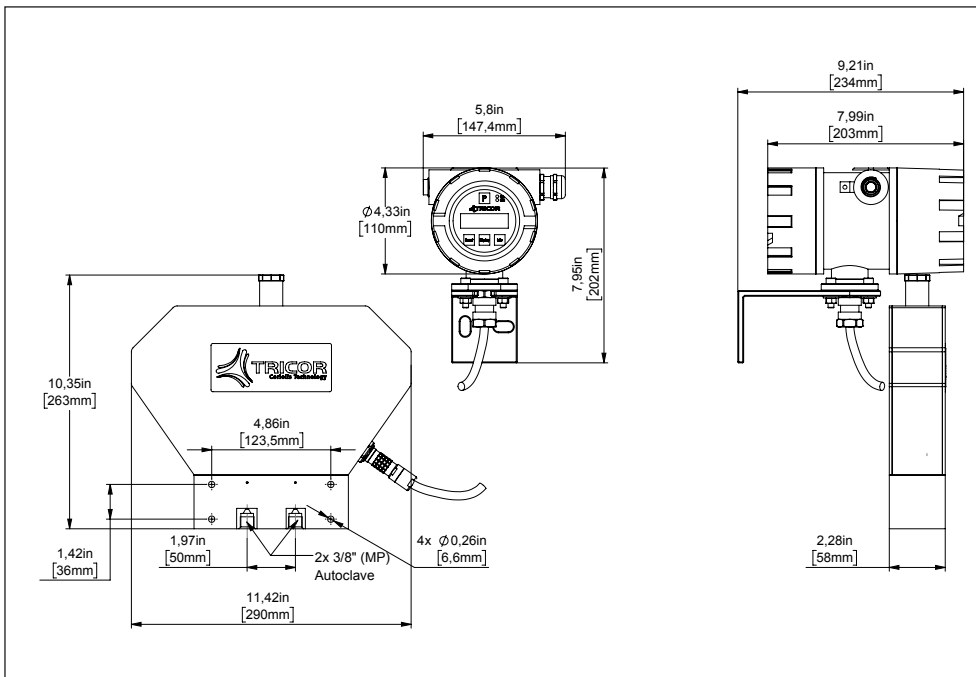
Users of explosion proof instruments should first refer to "Installation Manual for Hazardous Areas"!



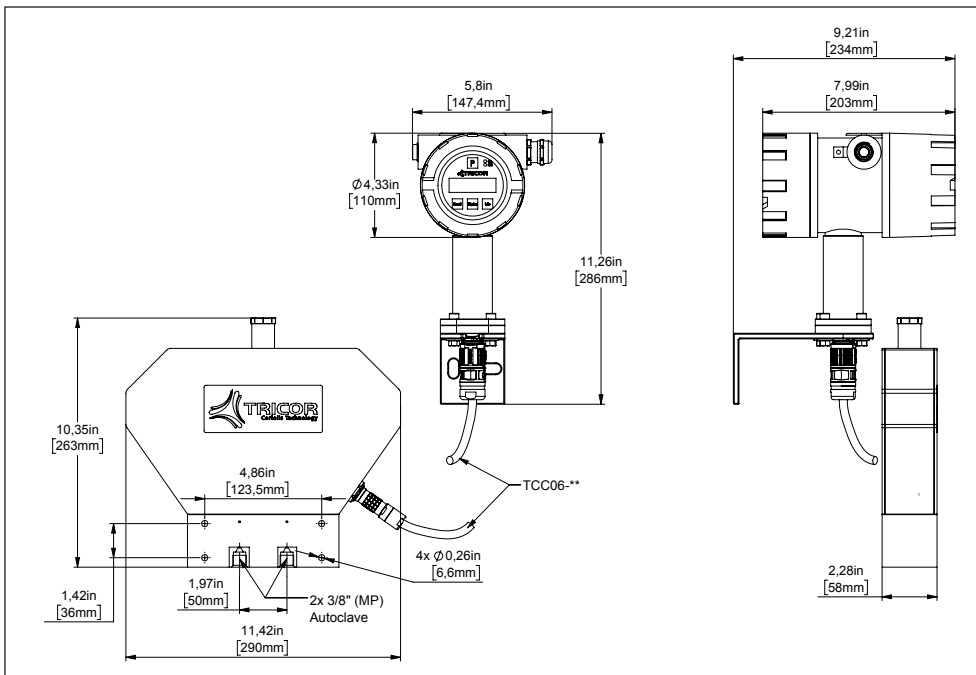
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Meter Dimensions:



Ex/Ex1



Ex3