# HIGH ACCURACY- LIQUIDS/GAS CORIOLIS MASS FLOW METER

## Measured Success™



**Designed for the Upstream Oil & Gas Industry to handle challenging applications**

**Volume Flow Meter 0.10% accuracy**

**Modbus RS-485 output Secondary Configurable I/O**

**Entrained Gas Management with gas entrainment up to 100%**

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| **MEASURING PRINCIPLE** | Coriolis mass flow |
| **PRODUCT HEADLINE** | Accurate measurement of liquids and gases for a wide range of standard and custody transfer applications. Highest accuracy with bent tube design. |
| **SENSOR FEATURES** | Multi-purpose device; an alternative to conventional volumetric flowmeters. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Compact bent tube sensor. |
| **TRANSMITTER FEATURES** | Full access to process and diagnostic information – numerous, freely combinable I/O's and fieldbuses. Integrated verification – Opticheck Technology. Backlit display with touch control with BLUETOOTH access. |
| **NOMINAL DIAMETER RANGE** | DN 10 to 250 (1/2″ to 10″) |
| **WETTED MATERIALS** | Measuring tube: 1.4539 (904L)<br>Connection: 1.4404 (316/316L) |
| **MEASURED VARIABLES** | Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration |
| **MAX. MEASURED ERROR** | Mass flow (liquid): ±0.10 % (standard), ±0.05 % (option)<br>Volume flow (liquid): ±0.10 % measured flow + zero stability<br>Mass flow (gas): ±0.35 % measured flow + zero stability<br>Density (liquid): ±1.0 kg/m$^3$ |
| **MEASURING RANGE** | S40: 0 to 80000 kg/hr<br>S50: 0 to 170000 kg/hr |
| **MAX. PROCESS PRESSURE** | ANSI 1500# 3300 PSI (@200 °F) |
| **MEDIUM TEMPERATURE RANGE** | –200 to +400 °C (–328 to +752 °F) |
| **AMBIENT TEMPERATURE RANGE** | Standard: -40 to +65 °C (–40 to 149 °F)<br>Option: -50 to +65 °C (–58 to 149 °F) |
| **SENSOR HOUSING MATERIAL** | 1.4409 (316L), corrosion resistant |
| **HOUSING MATERIAL** | AlSi10Mg, coated; stainless steel |
| **DEGREE OF PROTECTION** | Standard: IP67, Type 4X enclosure |

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| **DISPLAY/OPERATION** | 4-line backlit display with touch control (operation from outside) Configuration via local display and operating tools possible.  Remote display available |
| **OUTPUTS** | 3 outputs:<br>4-20 mA HART (active/passive)<br>4-20 mA (active/passive)<br>Pulse/frequency/switch output (active/passive) Double pulse output (active/passive)<br>Relay output |
| **INPUTS** | Binary |
| **DIGITAL COMMUNICATION** | HART, PROFIBUS PA, FOUNDATION Fieldbus, Modbus RS485, Profinet |
| **POWER SUPPLY** | DC 24 V<br>AC 100 to 230 V |
| **HAZARDOUS AREA APPROVALS** | ATEX, FM, IECEX, CCSAUS, NEPSI, INMETRO, EAC |
| **PRODUCT SAFETY** | CE, C-tick, EAC marking |
| **FUNCTIONAL SAFETY** | Functional safety according to IEC 61508, applicable in safety-relevant applications in accordance with IEC 61511 |
| **METROLOGICAL APPROVALS AND CERTIFICATES** | Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025)<br>NEPSI<br>Opticheck Technology complies with the requirements for traceable verification according to ISO 9001:2008 – Section 7.6 a |
| **PRESSURE APPROVALS AND CERTIFICATES** | PED, CRN |
| **MATERIAL CERTIFICATES** | 3.1 material |

MICROWAVE **PRECISION** INSTRUMENTS

KROHNE ▶ measure the facts