

**OPTIMASS**

**1400**

# LIQUID FLOW CORIOLIS MASS FLOW METER

**Measured Success™**



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

**Volume Flow  
Meter 0.15%  
accuracy**

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

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



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<b>MEASURING PRINCIPLE</b>	Coriolis mass flow
<b>PRODUCT HEADLINE</b>	The flowmeter with minimized total cost of ownership. Accurate measurement of liquids and gases for a wide range of standard applications. Minimal Pressure loss with Straight Tube Design.
<b>SENSOR FEATURES</b>	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 straight dual-tube sensor.
<b>TRANSMITTER FEATURES</b>	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.
<b>NOMINAL DIAMETER RANGE</b>	DN 15 to 80 (1/2" to 3")
<b>WETTED MATERIALS</b>	Measuring tube: 1.4539 (904L) Connection: 1.4404 (316/316L)
<b>MEASURED VARIABLES</b>	Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration
<b>MAX. MEASURED ERROR</b>	Mass flow (liquid): $\pm 0.15\%$ (standard), $\pm 0.10\%$ (option) Volume flow (liquid): $\pm 0.15\%$ measured flow + zero stability Mass flow (gas): $\pm 0.35\%$ measured flow + zero stability Density (liquid): $\pm 2.0 \text{ kg/m}^3$
<b>MEASURING RANGE</b>	S40: 0 to 80000 kg/hr S50: 0 to 170000 kg/hr
<b>MAX. PROCESS PRESSURE</b>	1450 PSI (@266 °F)
<b>MEDIUM TEMPERATURE RANGE</b>	-40 to +150 °C (-40 to +302 °F)
<b>AMBIENT TEMPERATURE RANGE</b>	Standard: -40 to +65 °C (-40 to 149 °F) Option: -50 to +65 °C (-58 to 149 °F)
<b>SENSOR HOUSING MATERIAL</b>	1.4409 (316L), corrosion resistant
<b>HOUSING MATERIAL</b>	AlSi10Mg, coated; stainless steel
<b>DEGREE OF PROTECTION</b>	Standard: IP67, Type 4X enclosure, IP69

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