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%

MEASURING PRINCIPLE	Coriolis mass flow
PRODUCT HEADLINE	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.
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 straight dual-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 15 to 80 (1/2″ to 3″)
WETTED MATERIALS	Measuring tube: 1.4539 (904L) 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): ±0.15 % (standard), ±0.10 % (option) Volume flow (liquid): ±0.15 % measured flow + zero stability Mass flow (gas): ±0.35 % measured flow + zero stability Density (liquid): ±2.0 kg/m³
MEASURING RANGE	S40: 0 to 80000 kg/hr S50: 0 to 170000 kg/hr
MAX. PROCESS PRESSURE	1450 PSI (@266 °F)
MEDIUM TEMPERATURE RANGE	–40 to +150 °C (–40 to +302 °F)
AMBIENT TEMPERATURE RANGE	Standard: -40 to +65 °C (–40 to 149 °F) 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, IP69

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: 4-20 mA HART (active/passive) 4-20 mA (active/passive) Pulse/frequency/switch output (active/passive) Double pulse output (active/passive) Relay output
INPUTS	Binary
DIGITAL COMMUNICATION	HART, PROFIBUS PA, FOUNDATION Fieldbus, Modbus RS485, Profinet
POWER SUPPLY	DC 24 V 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) NEPSI 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