OpreX™ Field Instruments

YOKOGAWA
Co-innovating tomorrow™

ROTA*MASS* Nano

Coriolis Mass Flow and Density Meter



ROTA*MASS* Total Insight

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The Rotamass Nano is designed for precise low-flow measurement in demanding applications, delivering high accuracy, repeatability, and reliable dosing performance—even under aerated or challenging conditions. Applications include chemical dosing and injection, additive/blending systems, specialty chemicals and pharmaceuticals, catalyst feed and micro-batching, high-accuracy filling and dosing, and custody transfer (low flow).

Performance

- High accuracy at low flow rates (down to ~0.039 lb/min) for precise dosing
- Reliable performance with entrained gas / aeration
- Strong corrosion resistance with 316L and optional Nickel Alloy C-22 wetted parts
- Compact design with small connections (down to ¼")
- Flexible installation with minimal piping requirements

Features on Demand

- Predictive maintenance with Total Health Check
- Tube Health for in-line verification that can be individually adapted to your process conditions
- Benefit from Viscosity function and capability to handle high viscous process fluids
- Advanced concentration measurement function for complex applications
- Net Oil Computing function provides real-time measurements of net oil and water cut based on API standards
- Gas content handling and slug detection
- Batching function
- Dynamic Pressure Compensation
- NTEP for custody transfer applications

Technical Data

Measuring Range Full Scale (for liquids)

Size	Full range (lb/min)
Nano 06	0 – 1.5
Nano 08	0 – 3.5
Nano 10	0 – 11
Nano 15	0 – 22
Nano 20	0 – 55

Zero Point Stability

Model	Zero Point Stability (lb/min)
Nano 06	0.00012
Nano 08	0.00018
Nano 10	0.00032
Nano 15	0.0007
Nano 20	0.0018

Materials of Wetted Parts

Sensor
316L stainless steel Optional Nickel Alloy C-22

Accuracy

Liquids:
±0.1% of measured value (Ultimate transmitter)
±0.2% of measured value (Essential transmitter)

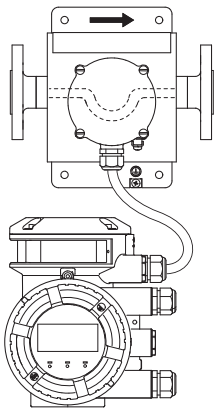
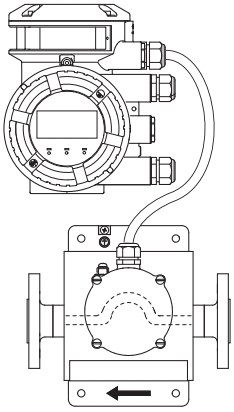
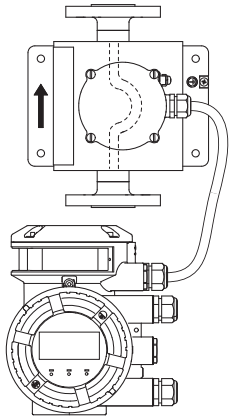
Gases:
±0.5% of measured value (Ultimate transmitter)
±0.75% of measured value (Essential transmitter)

Density:
0.0005 g/cm³ (Ultimate transmitter)
0.004 g/cm³ (Essential transmitter)

Process Conditions

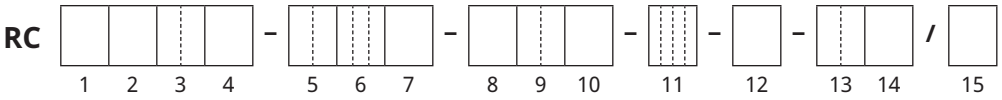
Temperature	up to 500°F (260°C)
Pressure	4,130 psi (285 bar)
Ambient	-58 to 176°F (-50 to 80°C)

Installation

Fluid	Installation Position
Liquid	Horizontal, measuring tubes at bottom 
Gas	Horizontal, measuring tubes at top 
Liquid/Gas	Vertical, direction of flow towards the top (recommended) 

Catalog Code

All available properties of the Rotamass Coriolis flow meter are specified by means of a model code. One model code position may include several characters depicted by means of dashed lines. Additional options available / please consult factory for all certificate and testing options. Access our free online configurator tool at: www.flowconfigurator.com.



Position 1	Transmitter
E	Essential (basic function)
U	Ultimate (high function)

Position 2	Sensor
N	Nano

Position 3	Meter size
06	Maximum mass flow: 1.5 lb/min
08	Maximum mass flow: 3.5 lb/min
10	Maximum mass flow: 11 lb/min
15	Maximum mass flow: 22 lb/min
20	Maximum mass flow: 55 lb/min

Position 4	Material wetted parts
K	Measuring tubes: Nickel alloy C-22/2.4602; Process connections: Stainless steel 1.4404/316L

Position 5	Process connection size
06	DN06, ¼ inch
08	DN08, ⅜ inch
15	DN15, ½ inch
20	DN20, ¾ inch
25	DN25, 1 inch
40	DN40, 1½ inch

Position 6	Process connection type
BA1	CL150 ASME B16.5, raised face (RF)
BA2	CL300 ASME B16.5, raised face (RF)
BA4	CL600 ASME B16.5, raised face (RF)
BA5	CL900 ASME B16.5, raised face (RF)
BA6	CL1500 ASME B16.5, raised face (RF)
TT9	Process connection with internal thread NPT

Position 7	Sensor housing material
0	Stainless steel 1.4301/304, 1.4404/316
1	Stainless steel 1.4404/316L

Position 8	Process temperature range
0	Standard temperature range
2	Medium temperature range

Position 9	Mass flow & density accuracy
C7	Liquid: 0.1% mass flow + 0.004 g/cm3
D7	Liquid: 0.15% mass flow + 0.004 g/cm3
E7	Liquid: 0.2% mass flow + 0.004 g/cm3
50	Gas: 0.5% mass flow

Position 10	Design and housing
A	Remote type; Aluminum coated
J	Remote type; Stainless steel

Position 11	Ex Approvals
NN00	Non Ex proof
FF11	FM XP + IS; Gr. A-G (USA & CAN)
FF12	FM XP + IS; Gr. C-G (USA & CAN)

Position 12	Cable entries
2	ANSI ½ in NPT

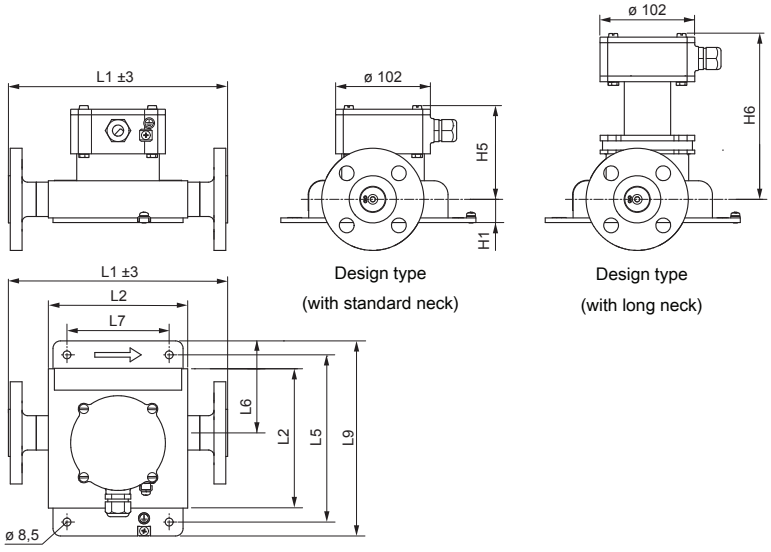
Position 13	Communication type and I/O
JA	1 active current output HART, 1 passive pulse or status output
JB	2 active current outputs one with HART, 2 passive pulse or status outputs
M6	Modbus output, 1 passive pulse or status output, 1 active current output
T3	PROFINET over APL, intrinsically safe, 1 passive pulse output

Position 14	Display
1	with display

Position 15	Additional options
BG	Tag number on nameplate
CL	Customer-specific installation length
CS	CRN Canadian Registration Number
C52	Net Oil Computing per API standard
CST	Concentration
TC	Tube health check
VM	Viscosity function liquids
Q20	NTEP approval
L005	5m/16.4ft standard remote sensor cable
L010	10m/32.8ft standard remote sensor cable

Dimensions **Inches (millimeters)**

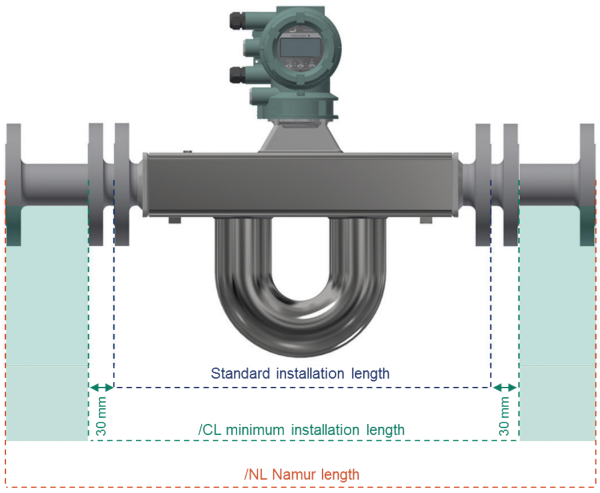
Note: Dimensions—Inches to the nearest tenth (millimeters to the nearest whole mm), each independently dimensioned from respective engineering drawings.



*The overall length (L1) of the sensor depends on the selected process connection (type and size).

Model	L2	L4	L5	L6	L7	L9	H5
Nano 06	5.9 (150)	10.6 (270)	7.1 (180)	4.4 (111)	4.3 (110)	8.3 (210)	4 (101)
Nano 08	5.9 (150)	10.6 (270)	7.1 (180)	4.4 (111)	4.3 (110)	8.3 (210)	4 (101)
Nano 10	5.9 (150)	10.6 (270)	7.1 (180)	3.9 (99)	4.3 (110)	8.3 (210)	4 (101)
Nano 15	5.9 (150)	10.6 (270)	7.1 (180)	3.5 (89)	4.3 (110)	8.3 (210)	4 (101)
Nano 20	5.9 (150)	10.6 (270)	7.1 (180)	2.2 (55)	4.3 (110)	8.3 (210)	4 (101)

Custom Length (/CL)



Allows customers to specify a custom face-to-face or overall installation length for the meter instead of using standard manufacturer (NAMUR or catalog) lengths. This is helpful as a drop-in replacement when retrofitting existing piping without cutting or re-welding lines, thus minimizing downtime and reducing rework cost.

ROTAMASS Total Insight

ROTAMASS supreme



Superior performance under demanding conditions

ROTAMASS intense



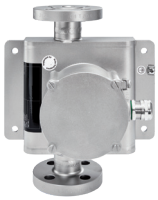
For high pressure applications

ROTAMASS prime



Versatility with superior turndown and low pressure loss

ROTAMASS nano



For low flow applications

ROTAMASS hygienic



For food & beverage, biotech-nology and pharmaceutical utility applications

ROTAMASS giga



Flexible installation for high flow applications

Essential



For general purpose application

Ultimate



For demanding & critical application

Scan to learn more about ROTA*MASS* Total Insight Coriolis Mass Flow and Density Meters

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