

DMC300 Coriolis Mass Flowmeter



ADVANTAGES

- Universal measurement principle for liquids and gases
- High measurement accuracy: up to $\pm 0.1\%$ - 0.05% repeatability
- Multivariable measurement: mass flow, density and temperature
- Independent measurement of physical properties and temperature fluid flow
- No upstream and downstream straight lengths required
- Communications: RS485 - HART - 4-20mA

Coriolis Mass Flow Meter DMC300

DESCRIPTION

The DMC300 series high performance Coriolis mass flowmeter directly measures the “mass” of the fluid with high accuracy based on the Coriolis principle (Coriolis force). Accuracy is not affected by factors such as temperature, pressure, density, viscosity etc. and compensation calculation is not required. The Coriolis mass flow meter consists of two parts: the sensor and the transmitter. It is designed and produced based on the national directive of explosion protection standards (Exdib II Ct3~T6).

APPLICATIONS

- Petrochemical industries
- Food industries
- Oil and gas industries
- Metallurgical & Mining Industries
- Energy
- Construction industries



SPECIFICATIONS

Main Features	
DN (mm)	15~300
Design	U (DN40-300) - Δ (DN15-25) - V (DN15-300)
Structure	Built-in -50~125 °C Remote -50~200 °C Built-in high temperature -50~300 °C Remote low temperature -50~200 °C
Transmitter	G ou D (see transmitter Type table low)
Accuracy: repeatability	±0,1% : ±0,05% ±0,2% : ±0,1% ±0,5% : ±0,25%
Density	Range : 0.2~2.0g/cm ³ Error : ±0,002 g/cm ³ Repeatability : 0.001 g/cm ³
Supply	24VDC - 220VAC
Communication	Hart - RS485 Modbus - 4-20 mA - Frequency - Pulse
Process connection	GB/T 9115-2010, DIN, ANSI, JIS, Tri-clamp or others upon request
Sanitary Type	Tri-clamp or others as needed
Nominal Pressure(Mpa)	1.6 2.5 4.0 6.3 (25 Mpa possible for certain sizes)
Température	Measurement : -50~350°C ±1% Environment : -20~55°C. Storage : -20~70°C
Humidity	Environment : < 90% Storage : < 90%
Protection Sign	IP67 (IP68 optional)
Explosion Proof	Integrated : Exdib II CT4~T6 Remote : Ex ib IICT3~T6 Exdib IICT3~T6 (DN100~200)
NDE	Complies with EMC IEC 61362 industrial guidelines



Type U



Type Δ



Type V

Transmitter Type		
Type	G Analog Transmitter	D DSP digital transmitter
Principle	Standard sampling Typical response time Standard accuracy and repeatability	Higher sampling Short response time High repeatability accuracy digital filter
Display	LCD	OLED
Screen Size	Standard	Big screen
Picture		

ACCURACY

0.1%	0.2%	0.5%
$\pm 0.1\% \pm (\text{Zero point stability} \times 100\%)$ Instant flow	$\pm 0.2\% \pm (\text{Zero point stability} \times 100\%)$ Instant flow	$\pm 0.5\% \pm (\text{Zero point stability} \times 100\%)$ Instant flow

The accuracy is calculated on water under the following conditions : temperature between 20°C-25°C and pressure between 0.1Mpa~0.2Mpa.

FLOW RANGE

Flow Meter U & Δ with D transmitter						
Design	DN (mm)	Max Flow Range. (Kg/h)	Nominal Flow (Kg/h) Accuracy 0.1%	Nominal Flow (Kg/h) Accuracy 0.2%	Nominal Flow (Kg/h) Accuracy 0.5%	Stability (Kg/h)
Δ	15	30~3000	150~3000	100~3000	80~3000	0.12
Δ	25	80~8000	4000~8000	300~8000	280~8000	0.32
U	40	320~32000	2000~32000	1500~32000	1300~32000	1.2
U	50	500~50000	3500~50000	2500~50000	2000~50000	2
U	80	1400~140000	6000~140000	5500~140000	5000~140000	6
U	100A	2000~200000	15000~200000	12000~200000	10000~200000	8
U	100B	2000~180000	18000~180000	14000~180000	12000~180000	10
U	150A	5000~500000	35000~500000	30000~500000	25000~500000	20
U	150B	5000~480000	42000~480000	32000~480000	28000~480000	24
U	200	10000~1000000	10000~1000000	70000~1000000	50000~1000000	40
U	250	15000~1500000	10000~1500000	75000~1500000	70000~1500000	60
U	300	25000~2500000	170000~2500000	125000~2500000	120000~2500000	100

Flow Meter V with D transmitter						
Design	DN (mm)	Max Flow Range. (Kg/h)	Nominal Flow (Kg/h) Accuracy 0.1%	Nominal Flow (Kg/h) Accuracy 0.2%	Nominal Flow (Kg/h) Accuracy 0.5%	Stability (Kg/h)
V	15	20~3000	200~3000	150~3000	100~3000	0.2
V	25	80~8000	6000~8000	400~8000	300~8000	0.6
V	40	240~24000	2400~24000	1200~24000	1000~24000	2.4
V	50	500~50000	5000~40000	2500~40000	2000~50000	5
V	80	800~120000	8000~120000	5500~120000	5000~120000	8
V	100A	1500~200000	15000~200000	12000~200000	10000~200000	15
V	100B	1500~180000	18000~180000	14000~180000	12000~180000	18
V	150A	5000~500000	50000~500000	30000~500000	25000~500000	50
V	150B	5000~450000	55000~450000	35000~450000	30000~450000	42
V	200	10000~1000000	10000~1000000	70000~1000000	50000~1000000	100
V	250	15000~1500000	10000~1500000	120000~1500000	75000~1500000	150
V	300	25000~2500000	200000~2500000	150000~2500000	100000~2500000	200

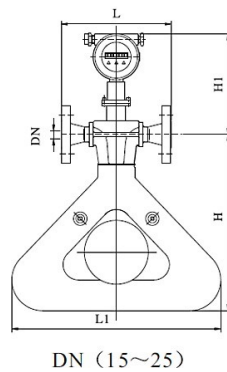
Gas Flow Range- Coriolis Flow Meter with D transmitter				
DN (mm)	Max Flow Range. (Kg/h)	Nominal Flow (Kg/h) Accuracy 0.2%	Nominal Flow (Kg/h) Accuracy 0.5%	Zero point stability (Kg/h)
15	15~3000	150~3000	75~3000	0.38
25	40~8000	400~8000	200~8000	1
40	160~32000	1600~32000	1000~32000	4
50	250~50000	2500~50000	1250~50000	6.25
80	700~140000	7000~140000	3500~140000	17.5
100	1000~200000	10000~200000	5000~200000	25
150	2500~500000	25000~500000	12500~500000	62.5
200	5000~1000000	50000~1000000	25000~1000000	125
250	7500~1500000	75000~1500000	37500~1500000	188
300	12000~2500000	125000~2500000	62500~2500000	313

Coriolis Mass Flow Meter DMC300

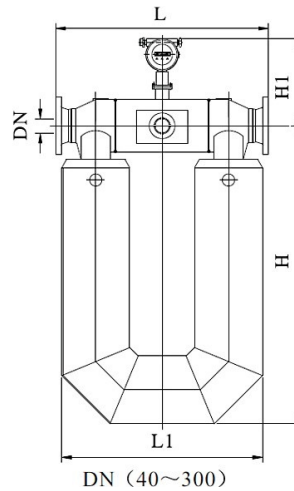
PRISMA
Instruments

DIMENSIONS & WEIGHT

Design Δ



DN (15~25)

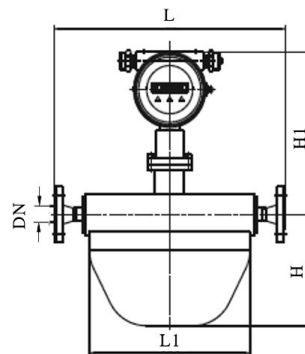


DN (40~300)

Design U

DN	L			L1	H	H1	
	GB/T 9115-2010 (MPa)		ΔL mm			Integrated	Deported
	≤4.0	≥6.3					
15	180	194	±1.5	350	290	260	190
25	200	248		450	400	280	210
40	520	547		470	660	280	210
50	558	588		550	750	290	220
80	780	808	±2.5	710	1040	320	250
100	920	948		860	1290	350	280
150	1100	1140		1050	1600	380	310
200	1364	1410	±3.5	1160	1740	420	350
300	2070	2120		1270	3150	520	450

Design V



DN	L			L1	H	H1	
	GB/T 9115-2010 (MPa)		ΔL mm			Integrated	Deported
	≤4.0	≥6.3					
15	360	374	±1.5	240	180	290	220
25	500	536	±2.5	360	250	300	230
40	600	634		500	340	310	240
50 a	660	688		500	340	320	250
50 b	800	828		500	420	320	250
80 a	900	928		700	405	350	280
80 b	935	973		730	200	350	280
100 a	1130	1156	±3.5	860	660	370	290
100 b	1130	1182		926	255	370	290
150	1450	1450		1200	900	400	330
200	1800	1844		1450	1170	420	350
250	1850	1890		1530	1180	420	350
300	2000	2050		1600	1300	460	390

Approximate weight in kg

DN mm	15	25	40	50	80	100	150	200	250	300
Design Δ & U	13	17	30	40	100	190	325	536	960	1523
Design V	12	15	25	38	78	135	265	430	500	630

ORDER CODE

DMC300 : ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
 1 2 3 4 5 6 7 8 9 10 11 12

1 : Size DN mm	X mm
2 : Fluid	L=Liquid G=Gas
3 : Fluid Temperature	T °C
4 : Structure	I=Integrated D=Remote
5 : Sensor	S=Standard Ex=Explosion Proof
6 : Design	U/Δ ou V
7 : Accuracy	1=0,1% 2=0,2% 5=0,5%
8 : Power	DC=24VDC AC=220VAC
9 : Communication	H=Hart R=RS485
10 : Output	I=4-20mA P=Pulses
11 : Pressure	X Mpa
12 : Option	DSP digital transmitter - Material SS316L – other materials Factory calibration certificate - ISO17 calibration certificate.

