CAT.No.CBN018E-4

OVAL

Liquid

Big Bore Size Coriolis Flowmeter

(100mm, 150mm, 200mm, 250mm)

ALTImass Type U

CA100 CA150 CA15H
CA200 CA20H CA250

GENERAL PERFORMANCE

Item		Description					
Model		CA100	CA150	CA15H	CA200	CA20H	CA250
Flow rate	Guaranteed min. rate (t/h)	3.42		7		14	
	Min. setting rate (t/h)	17.1		35		70	
	Max. service rate (t/h)	342		700		1400	
	Max. allowable rate (t/h)	684		1400		2800	
	Accuracy	±0.1% of RD (※1)		±0.1% ± zero stability error of RD			
	Repeatability	±0.05% of RD (※2)		±0.05% ± 1/2 zero stability error of RD			
	Zero stability (t/h)	0.0171		0.035		0.07	
Density	Measuring range	0.3 to 2g/mL					
	Accuracy (Option)	±0.0005g/mL					
Analog output accuracy		Accuracy ± 0.1% of FS					

※1: ±ZS is applied for flow rates below 5% of the max. service rate. (within guaranteed flow range)
※2: ±1/2 ZS is applied for flow rates below 5% of the max. service rate. (within guaranteed flow range)

GENERAL SPECIFICATIONS

Item		Description					
Model		CA100	CA150	CA15H	CA200	CA20H	CA250
Nominal size		100mm, 4″, DN100	150mm, 6″, DN150		200mm, 8″, DN200		250mm, 10″, DN250
Materials	Wetted parts	SUS316L					
	Housing	SUS304					
Process connection		JIS10, 20, 30K RF/ASME (JPI) 150, 300, 600RF/DIN PN 10, 16, 25, 40RF					
Applicable fluids		Liquid					
Density range		0.3 to 2.0g/mL					
Viscosity range		Max. 10000mPa･s (※1)					
Temperature range (Differs by explosionproof specification)		−200 to +200°C (※2)					
Tube withstand		13.56MPa at 20°C (For reference purpose only: 9.39MPa at 200°C)		10.6MPa at 40°C (For reference purpose only: 7.5MPa at 200°C)		8.8MPa at 40°C (For reference purpose only: 6.3MPa at 200°C)	
Max. operating pressure		Depends on flange rating					
Flow direction		Bidirectional					
Explosionproof specification		TIIS, ATEX, IECEx, KCs, CSA, EAC, NEPSI, ITRI					
Other standards		OIML R117-1:2007 MID (WELMEC 7.2, 8.8)					
Dusttight, waterproof configuration		IP66/67					

※1: If the viscosity is 10000mPa･s or more, contact OVAL.
※2: In case of non-explosionproof type, the maximum measurement temperature of integral type is 150°C. However, the product must be used within the maximum ambient temperature of 45°C.

TRANSMITTER SPECIFICATIONS

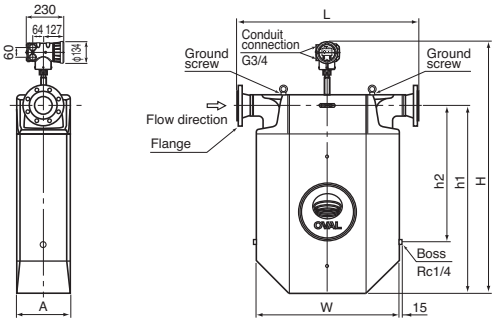
Item		Description
Model		PA0K
Power supply		85 to 264VAC 50/60Hz or 20 to 30VDC (Safety rated 100 to 240VAC 50/60Hz)
Power consumption		Max. 15W
Ambient temperature		−40 to +55°C (※1)
Transmission length (separate type)		Max. 200m (Dedicated cable used) (※2)
Dusttight, waterproof configuration		IP 66/67
Communication interface ※ Optional except for HART	HART (Standard)	HART protocol version 7, Bell202 (※3)
	Modbus	RS-485 Modbus protocol, Baudrate : 9600bps, 19200bps, 38400bps RTU or ASCII, Response time : 25 to 50 ms
	FOUNDATION fieldbus	AI block×4, IT block×2, with Link Master function
	PROFIBUS PA	AI block×4, TOT block×2
Damping (default)		Flow rate 0.8sec, density 4sec, temperature 2.5sec.
Low flow cutoff (default)		Under 0.6% of max. service flow rate
Pulse output (※5)		Open drain output (equivalent to open collector output) [Min. 10V to Max. 30V, 50mADC, ON resistance 0.6Ω or less] or Voltage pulse (Low level: 1.5V max., High level: 13V min. Output impedance: 2.2kΩ) Setting range: 0.1 to 10000Hz (Max. output 11000Hz)
Analog output (※5)		4 to 20mADC (max. load 600Ω) Select two outputs from instant flowrate (mass or volume) temperature, and density.
Status output (※5)		Open drain output (equivalent to open collector output) [Max. 30V, 50mADC, ON resistance 0.6Ω or less] Select one output from error (※4), flow direction, or high/low alarm (default is error)
Status input (※5)		Contact-closure input (Form "a" contact) Short: 200Ω max., Open: 100kΩ min. Select one output from remote zero, total reset, 0% signal lock, or function off (default is function off).

※1: Below -20°C, the display loses its visibility due to weakened contrast. Both the display and infrared sensor may exhibit slow responses below -20°C.
※2: If signal cable length exceeds the max. transmission length, consult the factory.
※3: Of the two analog output systems, only analog output 1 is available for HART communication.
※4: Of error outputs, "zero adjust is in progress" status output can also be set up.
※5: When FOUNDATION fieldbus, PROFIBUS PA is selected as the communication protocol, all input and output signals will be turned off.
※: Denoising parts are embedded in the lines between power source, output, communication, and the chassis.
Lower the applied voltage to the following levels in order to conduct insulation test or withstand voltage test on these lines.
AC: 200V, DC: 250V

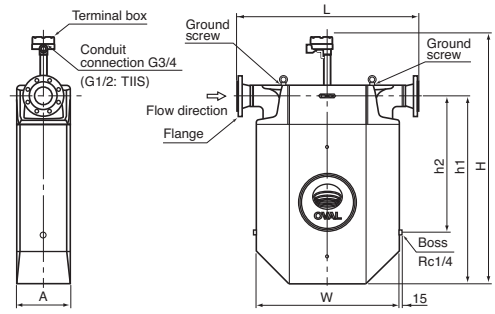
DIMENSIONS

Unit in mm

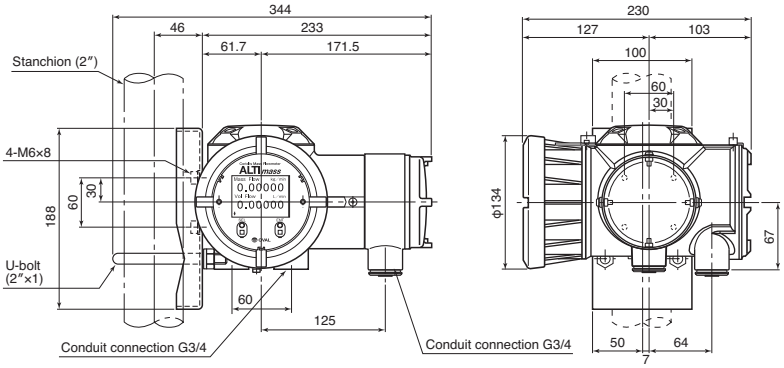
● Transmitter integrally mounted



● Transmitter separately mounted



● Separately mounted transmitter



Model	Flange		L	H (Separately mounted type)	h1	h2	A	W	Approx. weight kg (JIS10K)
	Nom. size	Process connection							
CA100	100	JIS10K	992	1403 (1309)	1015	660	300	810	231
CA150	150		1300						246
CA15H	150		1015	1604 (1510)	1190	851	320	810	310
CA200	200		1330						340
CA20H	200		1330	1830 (1736)	1390	960	420	1110	610
CA250	250		1699						650

※ : For dimensions of other connection standards, contact OVAL.

The specification as of January, 2019 is stated in this catalog. Specifications and design are subject to change without notice.

OVAL Corporation
3-10-8 Kamiochiai, Shinjuku-ku, Tokyo 161-8508, Japan
Tel. 81-3-3360-5121 Fax. 81-3-3365-8605
http://www.oval.co.jp/english

1309 1901 ----S