ALIAMASS

Coriolis Mass Flowmeter

Model ACF6000 Series

GENERAL

ALIAMASS The ACF6000 Series uses the Coriolis effect as a technique for liquid mass flow measurement.

The ACF6000 can measure most of the liquids; the infrared light sensor makes it easy for you to set parameters & change the display data. The Double-C tube & Double-D Tube make it possible for the meter to be used in most liquid applications.

FEATURES

- ☐ Can be programmed by infrared light sensor without opening cover
- ☐ High turndown ratio of flow rate
- ☐ It comes any flanges such as ANSI, DIN, JIS etc.
- ☐ Excellent for high pressure application
- ☐ Simple for installation, commission and maintenance
- ☐ Self-diagnostic capabilities, cable faults, pipe vibration
- ☐ High accuracy of +/-0.2% of reading (or +/-0.1% of reading)
- ☐ With forward / reverse flow rate measurement function

STANDARD SPECIFICATION

- Sensor Type : C tube (15-40 mm) / U tube (40L-250 mm)
- Size : 15-250 mm (1/2"-10")
- Flow Range : 0-240 kg/hr~0-2200 t/hr
- Accuracy : +/-0.2% +/-ZS of reading (Standard)
  : +/-0.1% +/-ZS of reading (Optional)
- Repeatability : +/-0.03% +/-ZS of reading
- Density Range : 200-2300 kgf/m^3 (0.2-2.3 g/cm^3)
  Accuracy : +/-0.002 g/cm^3
- Temperature Range : -40~125 °C (Standard)
  : -40~350 °C (Optional, Remote Only)
- Material
  Wetted Parts : Stainless Steel 316L
  Flange : Stainless Steel 316L
  Sensor Housing : Stainless Steel 304
  Junction Box : Aluminum Alloy (Epoxy Paint)
- Process Connection : Flange
- Flange Type : JIS 10K / JIS 20K / JIS 40K
  : ANSI 150# / ANSI 300# / ANSI 600#
  : DIN PN10 / PN16 / PN25 / PN40
- Protection Class : IP67
  : Explosion Proof, Ex d e [ib] IIC T6 (Optional)
- Installation : Compact or Remote
- Signal Cable Length : 10-100 m
- Display : 2 lines LCD with illumination
  Flow Rate Unit : g/s, kg/m, kg/hr, t/hr, lb/m, USgal/m (6 Digit)
  Density Unit : kg/m^3, g/cm^3 (6 Digit)
  Totalizer Unit : g, kg, Ton, L, m^3, Nm^3, lb, USgal (7 Digit)
  Temperature : °C, °F (4 Digit)
- Keypad : Infrared light Sensor, can be programmed without opening the cover
- Turndown Ratio : 20:1
- Damping : 0.01-1.0 Seconds
- Low Flow Cutoff : 0.0-9.0%
- Communication : RS485 (Modbus Protocol) (Standard)
  : HART Signal (Optional)
- Current Output : 4-20 mA (Isolated)
  Load : Max. 750 Ω
  Output Unit : Mass / Volume / Density / Temperature
- Pulse Output : Open Collector
  Rating : 3-30 VDC, 50 mA Max.
- Alarm Output : Open Collector (Optional)
- Power Supply : 90-260 VAC, 50/60 Hz or 24 VDC +/-10%
- Power Consumption : 30-40 W (Depend on sensor size)
- Cable Entry : Sensor to Converter-3/4" G
  : Signal output / Power supply-M20
- Ambient Temperature : -40~60 °C
- Max. Pressure : 63 kgf/cm^2

CE

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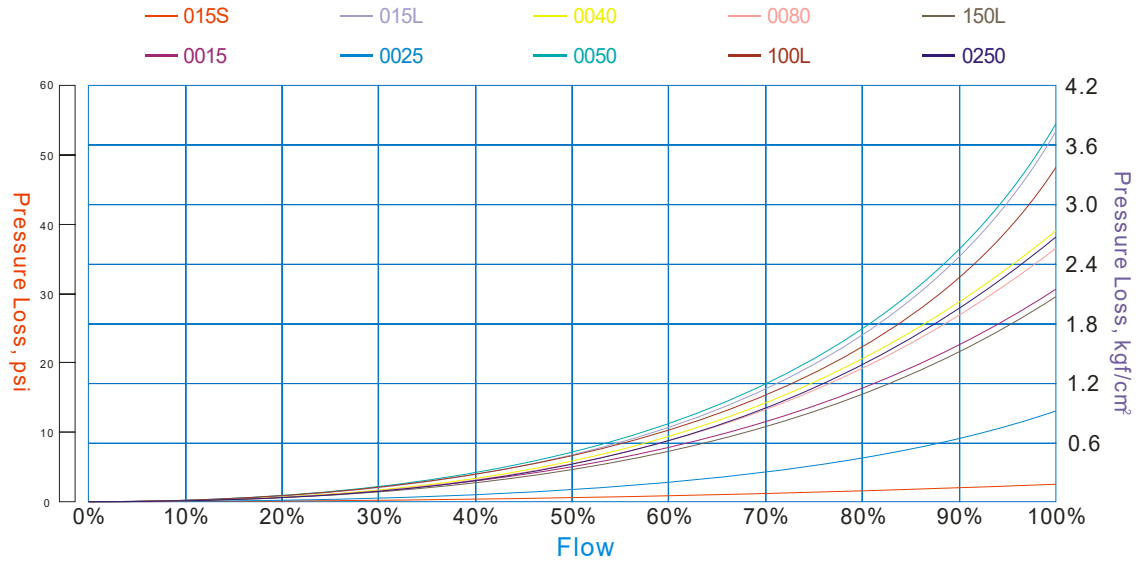
FLOW RANGE

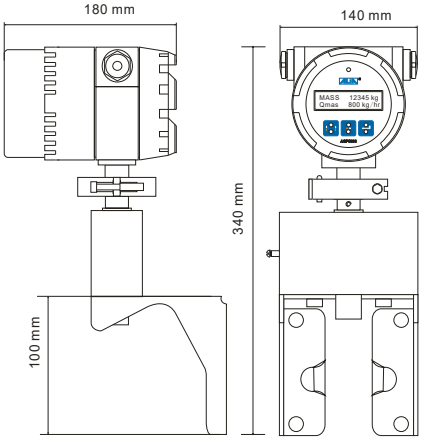
Unit : kg/hr

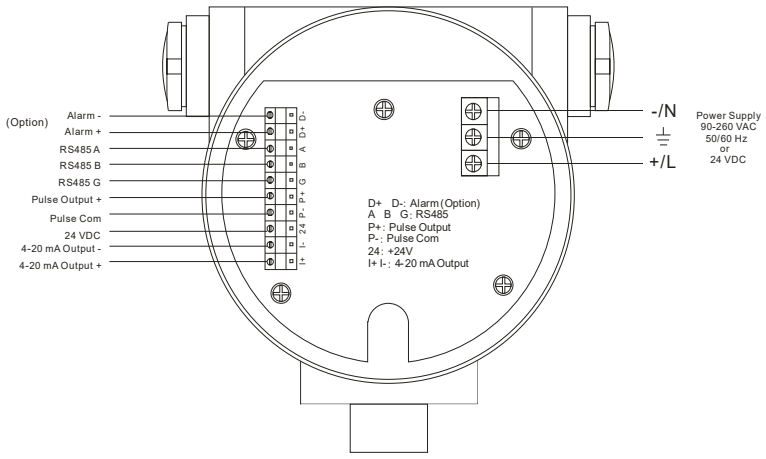
Normal Size		Flow Rate & Accuracy Table					
Model Code	Inch	Minimum	Normal	Maximum	Zero Stability	Temperature Effect %Flow Rate / °C	Pressure Effect %Flow Rate / kgf/cm^2
015S	1/2" (S)	24	240	480	0.045	+/-0.0002	-0.001
0015	1/2"	100	1,000	2,000	0.17	+/-0.000125	
015L	1/2" (L)	300	3,000	6,000	0.40		
0020	3/4"	300	3,000	6,000	0.40		
0025	1"	630	6,300	12,600	0.90		
0040	1-1/2"	1,710	17,100	34,200	2.40		-0.003
040L	1-1/2" (L)	2,700	27,000	54,000	4.05	+/-0.0005	-0.011
0050	2"	6,330	63,300	126,600	8.30		
0065	2-1/2"	6,330	63,300	126,600	8.30		
0080	3"	16,100	161,000	322,000	19.0		-0.025
0100	4"	16,100	161,000	322,000	19.0		
100L	4" (L)	36,200	362,000	724,000	48.0	+/-0.001	-0.058
0125	5"	36,200	362,000	724,000	48.0		
0150	6"	36,200	362,000	724,000	48.0		
150L	6" (L)	55,300	553,000	1,106,000	78.0	+/-0.0025	-0.035
0200	8"	55,300	553,000	1,106,000	78.0		
200L	8" (L)	110,000	1,100,000	2,200,000	156.0	+/-0.0025	-0.020
0250	10"	110,000	1,100,000	2,200,000	156.0		
Accuracy Between Minimum - Maximum is +/-0.2% (+/-0.1%) of Reading							

PRESSURE LOSS



WIRING DIAGRAM

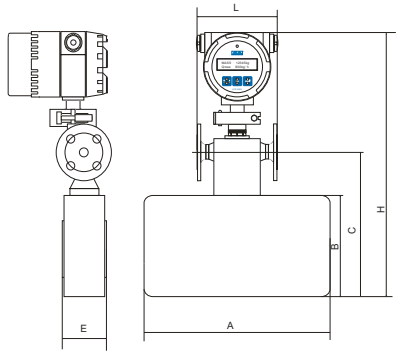




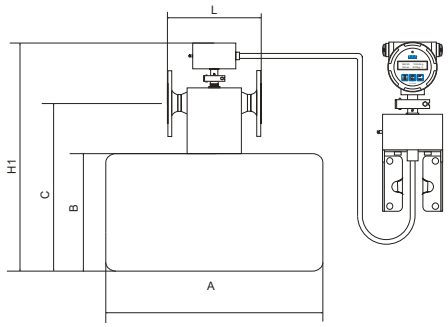
DIMENSIONS

Normal Size		Standard Pressure	Dimensions (mm)							Sensor Weight Remote Type
mm	Inch	kgf/cm^2	L	A	B	C	H	H1	E	kg
15S	1/2"	40	310	170	168	123	347	273	55	6.3
15	1/2"		162	320	170	233	455	380	110	6.5
15L	1/2"		162	370	190	252	477	400	124	7.5
25	1"		202	480	265	337	555	477	134	11
40	1-1/2"		274	615	295	383	593	516	146	21.5
40L	1-1/2"		519	389		605	850	155	129	27.5
50 / 65	2" - 2.5"		562 / 570	496		726	971	204	140	42
80 / 100	3" - 4"		850 / 864	774		941	313		214	89
100L / 150	4" - 6"		890 / 910	805		1082	373		245	172
150L / 200	6" - 8"		1090 / 1116	950		1174	287		290	248
200L / 250	8" -10"		1206 / 1240	1000		1407	287		380	365

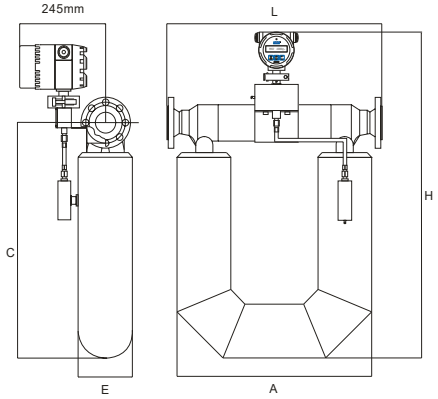
Note: Standard Dimension L only for DIN flange



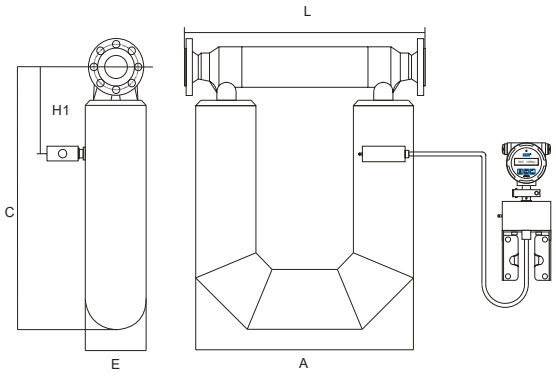
DN15-DN40



DN15-DN40



DN40L-DN65



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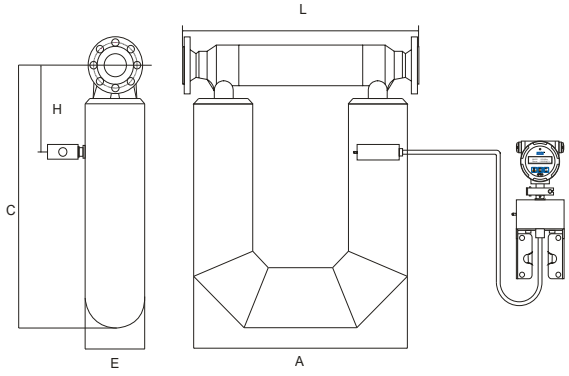
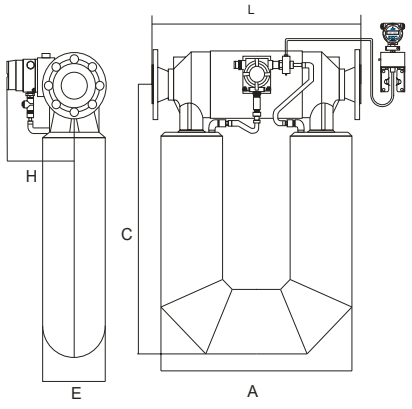


DN80-DN150

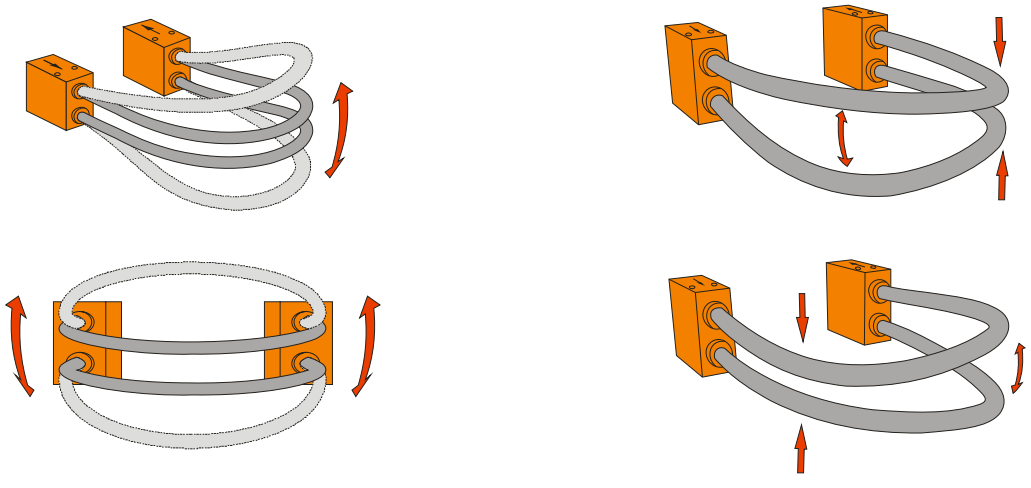


DN150L-DN250

MODEL SELECTION GUIDE

ACF6000 Series								
Example: ACF6000-0080-AH-020-H-AC-HT/EX/PT								
ACF6000-	XXXX	-X	X-	XXX	-X	-XX	-XX	Description
Size	015S-0250							015S / 0015 / 015L / 0020 / 0025 / 0040 / 040L / 0050 / 0065 mm
								0080 / 0100 / 100L / 0125 / 0150 / 150L / 0200 / 200L / 0250 mm
Process Connection		-1						PN10
		-2						PN16
		-3						PN25
		-4						PN40
		-A						ANSI 150#
		-B						ANSI 300#
		-C						ANSI 600# (Max. Pressure 63 kgf/cm^2)
		-J						JIS 10K
		-K						JIS 20K
		-L						JIS 40K
		-Z						Other
Max. Temperature			N-					-40~125 °C
			H-					-40~200 °C (Remote Type Only)
			Y-					-40~350 °C (Remote Type Only) (Except for 15S / 15 / 40L)
Installation & Cable Length				NNN				Compact Version (Size 15 / 20 / 25 / 40 / 50 / 65 mm only)
				010-100				Remote Version, Cable 10-100 m, 2" Mounting Bracket
Accuracy					-N			+/-0.2% of reading
					-H			+/-0.1% of reading
Power Supply						-AC		90-260 VAC, 50/60 Hz
						-DC		24 VDC +/-10%
Option							-NN	None
							-HT	HART Signal
							-EX	Explosion Proof, Ex d e [ib] IIC T6
							-HJ	Heating Jacket
							-PT	Cable Entry 1/2" NPTF

WORKING PRINCIPLE



Vibration Under No Flow

Vibration Under Flow