



# 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<sup>3</sup> (0.2-2.3 g/cm<sup>3</sup>)  
Accuracy : +/-0.002 g/cm<sup>3</sup>
- 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<sup>3</sup>, g/cm<sup>3</sup> (6 Digit)
- Totalizer Unit** : g, kg, Ton, L, m<sup>3</sup>, Nm<sup>3</sup>, 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<sup>2</sup>



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ACF6000V1.2.3.r3.A4.en



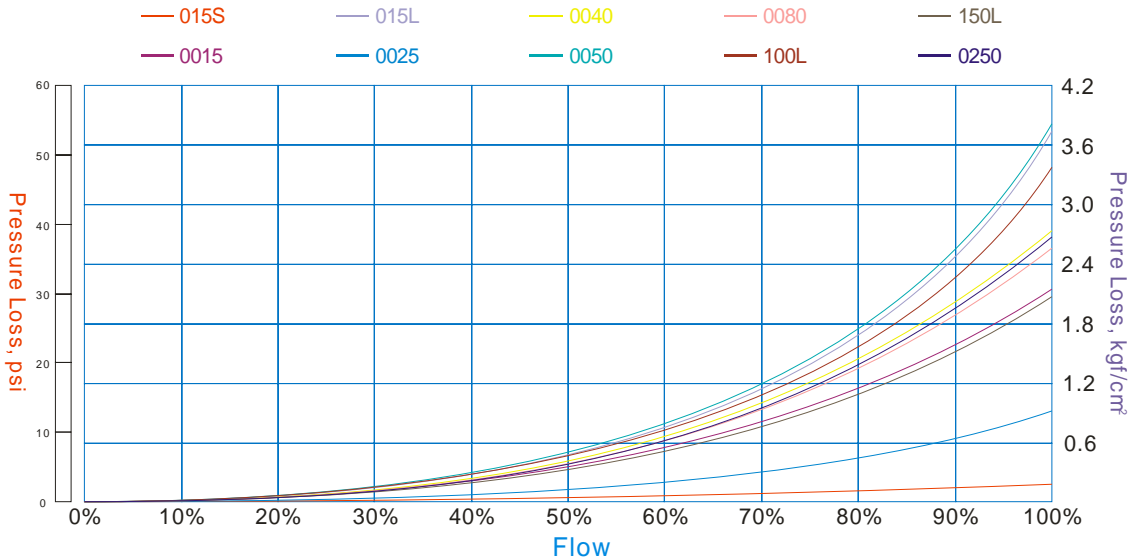
**FLOW RANGE**

Unit : kg/hr

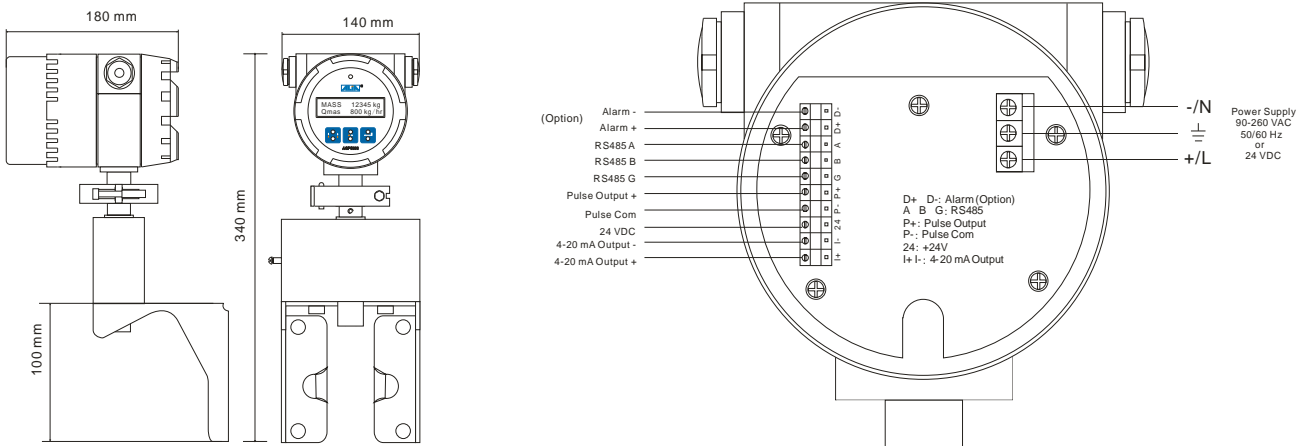
Normal Size		Flow Rate & Accuracy Table					
Model Code	Inch	Minimum	Normal	Maximum	Zero Stability	Temperature Effect %Flow Rate / °C	Pressure Effect %Flow Rate / kgf/cm <sup>2</sup>
015S	1/2" (S)	24	240	480	0.045	+/-0.0002	-0.001
0015	1/2"	100	1,000	2,000	0.17		
015L	1/2" (L)	300	3,000	6,000	0.40		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



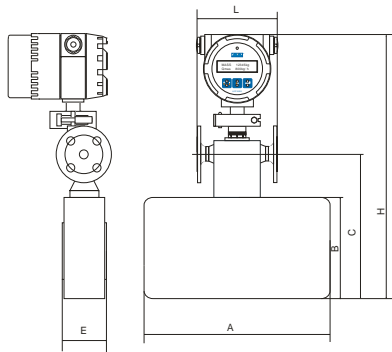
**WIRING DIAGRAM**



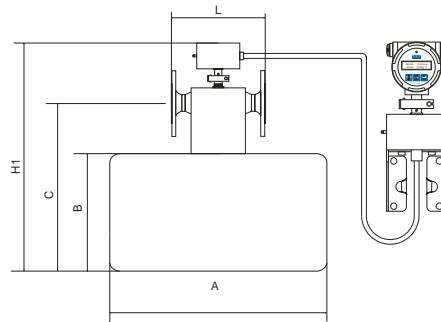
**➤ DIMENSIONS**

Normal Size		Standard Pressure kgf/cm <sup>2</sup>	Dimensions (mm)							Sensor Weight Remote Type
mm	Inch		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	

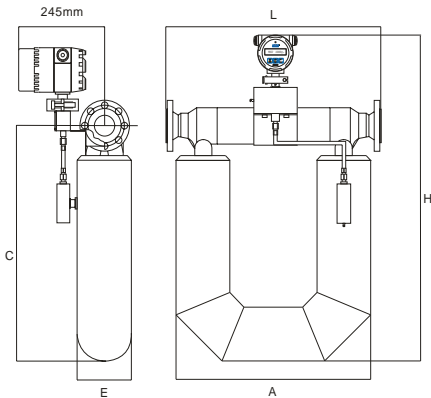
Note: Standard Dimension L only for DIN flange



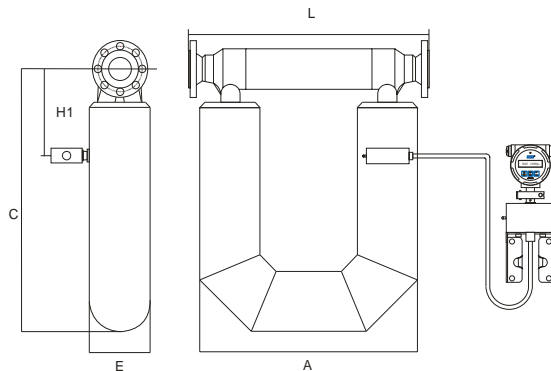
DN15-DN40



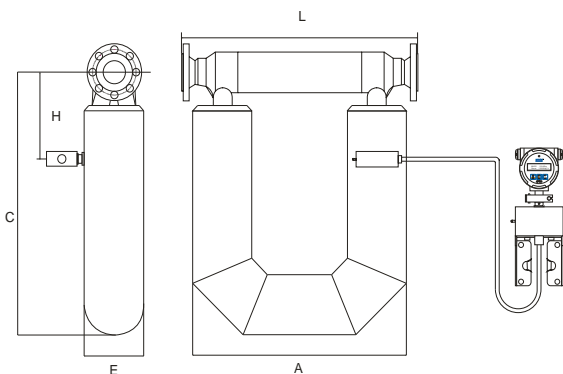
DN15-DN40



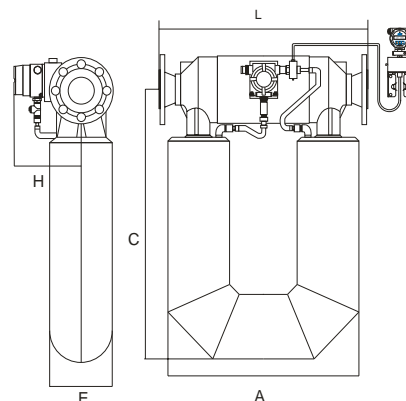
DN40L-DN65



DN40L-DN65



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 <sup>2</sup> )		
	-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**

