

GENERAL

ALIAPD The APF860 Series is designed in roots technology with digit display for totalizer & flowrate and providing scaled pulse and analog output 4-20 mA.

APF860 Series roots flowmeters are both with high accuracy and easily adaptable to most industrial applications.

FEATURES

- 25-150 mm (1"-6") lines sizes
- Handles viscosities up to 50000 cP
- Wide range of application
- Various process connection types available
- 5 Digit totalizer (resettable) / 8 digit totalizer (LCD)
- 4-20 mA and pulse output
- High accuracy of +/-0.5% of reading (or +/-0.2% of reading)
- Display with auto sleep function that gets up to 6 years of battery life

STANDARD SPECIFICATION

- Size : 0025, 0040, 0050, 0080, 0100, 0150 mm
- Flow Range : 0.007-200 m³/hr
- Accuracy : +/-0.5% of reading (Standard)
: +/-0.2% of reading (Option)
- Repeatability : +/-0.1% of reading
- Material
 - Body, Cover & Flange : Cast Iron / Stainless Steel 316
 - Roots : Aluminum / Copper / Stainless Steel 316
 - O-Rings : PTFE
 - Register Housing : Aluminum Alloy
- Max. Viscosity : 0.5-200 cP (Standard)
: 201-50000 cP (Optional)
- Operating Temperature : -10~80 °C
: -10~120 °C (Optional)
: -10~180 °C (Optional)
- Max. Pressure : 16 kgf/cm²
- Process Connection : Flange
: JIS 10K FF / ANSI 150# FF
- Power Supply : 3.6 V Battery, Size D * 1 ea
- Battery Life : 3-6 years
- Protection Class : IP65
: Intrinsically Safe, Eex ia IIC T5
: Explosion Proof, Ex d IIB T6
- Painting : Dark Grey
- Ambient Temperature : -25~60 °C



- Flow Range
 - 0025 mm : 0.4-6 m³/hr@5 cP
 - 0040 mm / 0050 mm : 0.8-13 m³/hr@5 cP
 - 0080 mm : 1.8-24 m³/hr@5 cP
 - 080M mm : 2.5-50 m³/hr@5 cP
 - 080L mm / 0100 mm : 2.8-70 m³/hr@5 cP
 - 100L mm : 8-120 m³/hr@5 cP
 - 150L mm : 25-200 m³/hr@5 cP
- Display
 - Flowrate / Totalizer : 5 Digit Flowrate / 8 Digit Totalizer
 - Dual Totalizer : 5 Digit Totalizer (Resettable, Magnet)
: 8 Digit Totalizer (Reset from Internal)
- Engineer Unit : L, m³, ft³, Gal
- Time Unit : sec, min, hr
- Current Output : 4-20 mA (2 wires)
Load : Rohm (VDC-6) * 50
- Pulse Output
 - Without Display : Reed Switch (2 wires, Unscaled Pulse)
: 2-36 VDC, 500 mA Max.
 - With Display : Open Collector (2 wires, Scaled Pulse)
: 11-26 VDC, 50 mA Max.
- Cable Entry : 1/2" NPT (F)
- Optional : Heating Jacket (Heat oil or Steam)
: Strainers, U-Type or Y-Type
: Air Eliminator

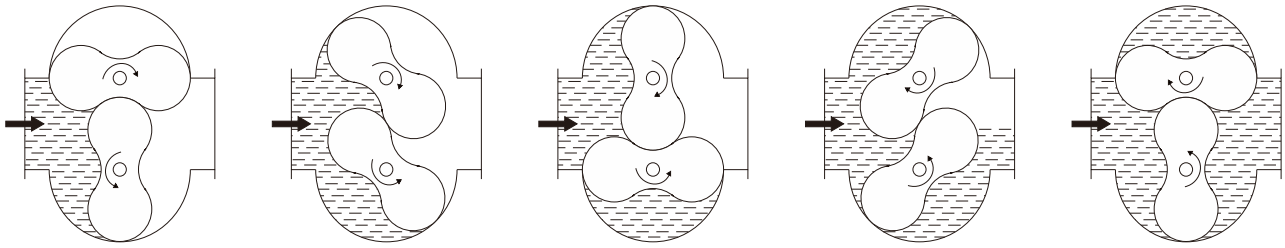
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WORKING PRINCIPLE



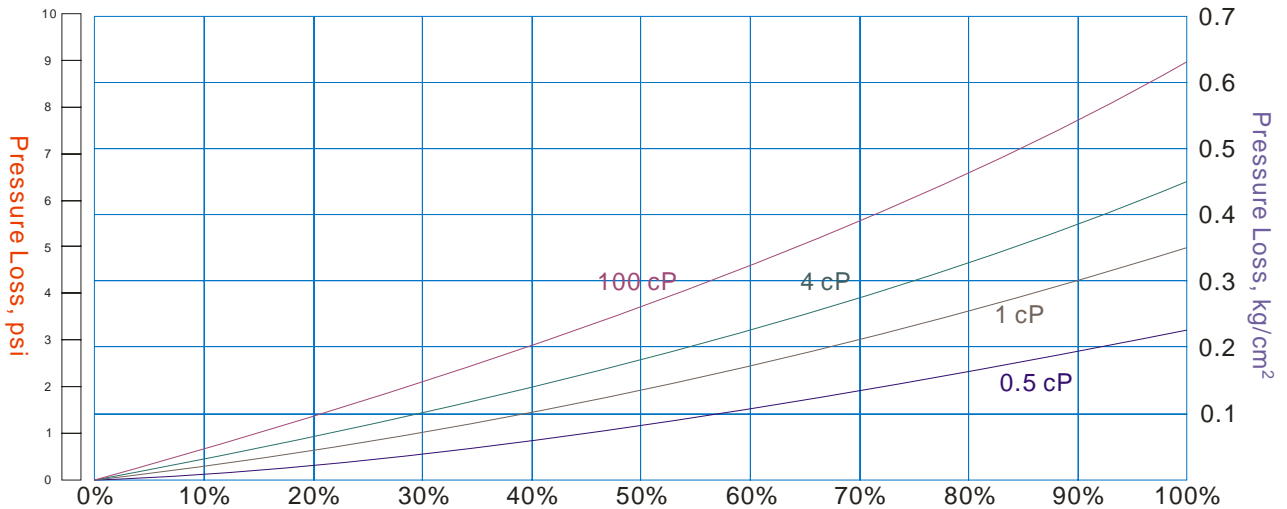
STANDARD FLOW RANGE

Accuracy: +/-0.5% of reading

Unit: m³/hr

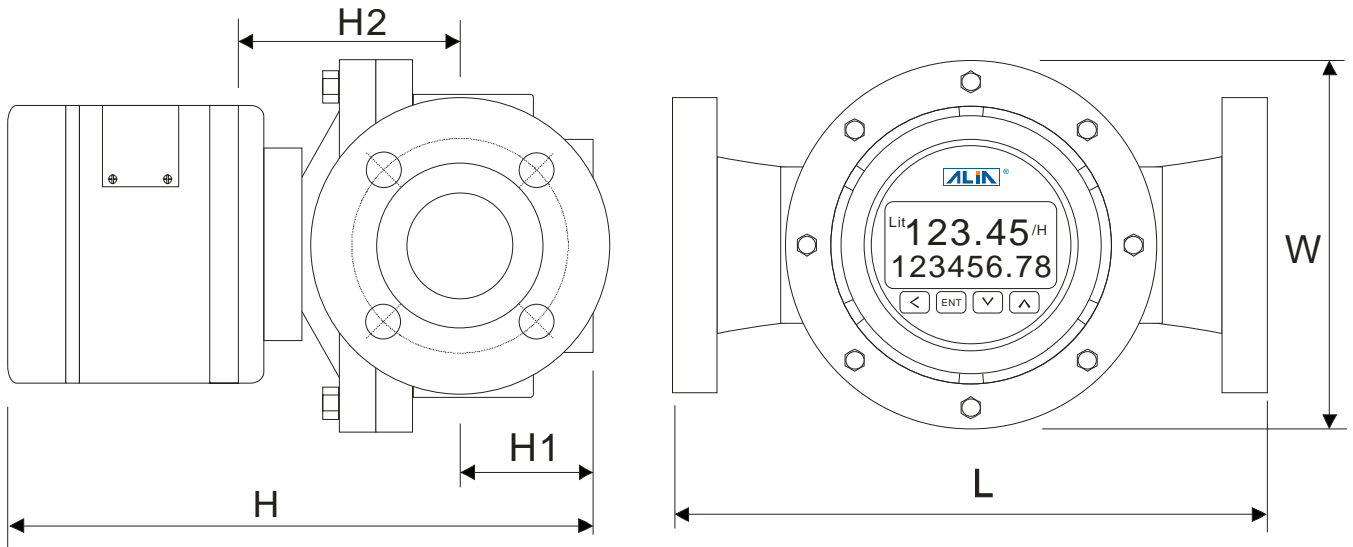
Normal Size		Viscosity (cP)								
mm	Inch	<0.5	0.5-2	2-5	5-10	10-50	50-150	150-500	500-2000	>2000
0025	1"	X	1-4.5	0.8-4.5	0.4-6	0.1-6	0.05-6	0.025-6	0.013-4.5	0.007-3.5
0040	1-1/2"	X	2-9	1.5-9	0.8-13	0.25-13	0.1-13	0.05-13	0.02-13	0.01-9
0050	2"	X	2-9	1.5-9	0.8-13	0.25-13	0.1-13	0.05-13	0.02-13	0.01-9
0080	3"		6.5-17	5-17	3.5-24	1.8-24	0.6-24	0.3-24	0.15-24	0.07-20
080M	3"(M)		13-35	8-35	5-35	2.5-50	1-50	0.5-50	0.25-50	0.12-35
080L	3"(L)		18-55	12-55	7-55	2.8-70	1.4-70	0.7-70	0.35-70	0.23-50
0100	4"		18-55	12-55	7-55	2.8-70	1.4-70	0.7-70	0.35-70	0.23-50
100L	4"(L)		25-85	16-85	12-85	8-120	4-120	2-120	0.7-120	0.35-85
0150	6"		65-150	50-150	35-180	25-200	20-200	15-220	10-230	4-200

PRESSURE LOSS



Model Code	Size		Maximum Flowrate	Model Code	Size		Maximum Flowrate
0025	25 mm	1"	6 m ³ /hr	080L	80 mm	3"	70 m ³ /hr
0040	40 mm	1-1/2"	13 m ³ /hr	0100	100 mm	4"	70 m ³ /hr
0050	50 mm	2"	13 m ³ /hr	100L	100 mm	4"	120 m ³ /hr
0080	80 mm	3"	24 m ³ /hr	0150	150 mm	6"	200 m ³ /hr
080M	80 mm	3"	50 m ³ /hr				

➤ DIMENSIONS



Normal Size		Material: Cast Iron / Length Unit: mm					
mm	Inch	L	H	H1	H2	W	Weight
0025	1"	200	288	78	70	115	15 kg
0040	1-1/2"	200	288	78	70	115	20 kg
0050	2"	250	340	105	95	165	22 kg
0080	3"	320	420	144	136	215	45 kg
080M	3"(M)	320	462	170	170	211	49 kg
080L	3"(L)	408	512	210	180	280	75 kg
0100	4"	408	512	210	180	280	80 kg
100L	4"(L)	425	610	260	220	360	175 kg
0150	6"	425	760	340	290	350	280 kg

Normal Size		Material: Stainless Steel 316 / Length Unit: mm					
mm	Inch	L	H	H1	H2	W	Weight
0025	1"	200	288	89	78	113	15 kg
0040	1-1/2"	200	288	89	78	113	20 kg
0050	2"	250	340	114	95	165	26 kg
0080	3"	320	420	144	136	211	55 kg
080M	3"(M)	320	462	170	170	230	58 kg

PRODUCTS LINE

Cast Iron	0025	0040	0050	0080	080M	080L	0100	100L	0150
	1"	1-1/2"	2"	3"	3"M	3"L	4"	4"L	6"
JIS 10K									
ANSI 150#									

S.S. 316	0025	0040	0050	0080	080M	080L	0100	100L	0150
	1"	1-1/2"	2"	3"	3"M	3"L	4"	4"L	6"
JIS 10K									
ANSI 150#									

MODEL SELECTION GUIDE

APF860 Series											
Example: APF860-CI-0050-ARPM-NN-S/V-BH											
APF860-	XX-	XXXX	-X	X	X	X	-XX	-X	-XX	Description	
Material	CI-									Cast Iron Body / Aluminum or Copper Roots (According Fluid)	
	SS-									Stainless Steel 316 Body / Flange / Roots	
Size	0025-0150										0025, 0040, 0050, 0080, 080M, 080L, 0100, 100L, 0150 mm
Process Connection	-A										ANSI 150# FF
	-J										JIS 10K FF
Register	N										Without Display
	R										5 Digit Flowrate / 8 Digit Totalizer (Internal reset)
	T										5 Digit Totalizer (Magnet reset) / 8 Digit Totalizer (Internal reset)
Output	N										None
	U										Unscaled Pulse Output only, Without Display (Reed Switch)
	I										4-20 mA (2 wires) + Scaled Pulse Output (Register R)
	P										Scaled Pulse Output (Open Collector 2 wires) (Register T)
Max. Temperature	N										-10~80 °C
	M										-10~120 °C
	H										-10~180 °C
Protection Class	-NN										IP65
	-IT										Intrinsically Safe (Without Display, Unscaled Pulse Output only)
	-EX										Explosion Proof, Ex d IIB T6 (Except Register "N")
Option	-N										None
	-S										Strainer
	-C										High Accuracy 0.2%
	-V										Viscosity higher than 200 cP
	-A										Air Eliminator
	-H										Heating Jacket
Battery	-NN										None
	-BH										Battery Holders without Battery
	-BT										Battery Holders with Battery, 3.6V / Size D * 1 PC