



ALIAPD

Positive Displacement Flowmeter-Oval Gear

Model APF850 Series

GENERAL

ALIAPD The APF850 Series is designed in Oval Gear technology with digit display for Totalizer & flowrate and providing scale pulse and analog output 4-20 mA.

APF850 Series Oval Gear flowmeters are both high accuracy and easily adaptable to most industrial applications.

FEATURES

- 15-40 mm (1/2"~1-1/2") 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 or 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 : 15S, 015, 020, 025, 040 mm
- Flow Range : 5-5000 L/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 : Polyphenylene sulfide (PPS)
O-Rings : PTFE
Register Housing : Aluminum Alloy
- Max. Viscosity : 0.5-200 cP (Standard)
: 201-50000 cP (Optional)
- Operating Temperature : -10~120 °C (Standard)
: -10~150 °C (Optional)
- Max. Pressure : 19 kgf/cm²
- Process Connection
Thread : NPT (Male) with Coupling
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



- Flow Range
15S mm : 5-200 L/hr@5 cP
015 mm : 10-700 L/hr@5 cP
020 mm : 20-1300 L/hr@5 cP
025 mm : 50-3500 L/hr@5 cP
040 mm : 100-5000 L/hr@5 cP
- Display
Flow Rate / Totalizer : 5 Digit Flow rate / 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 wire)
Load : Rohm (VDC-6) * 50
- Pulse Output
Without Display : Reed Switch (2 Wire, Unscaled Pulse)
: 2-36 VDC, 500 mA Max.
With Display : Open Collector (2 Wire, 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
- Ambient Temperature : -25~60 °C



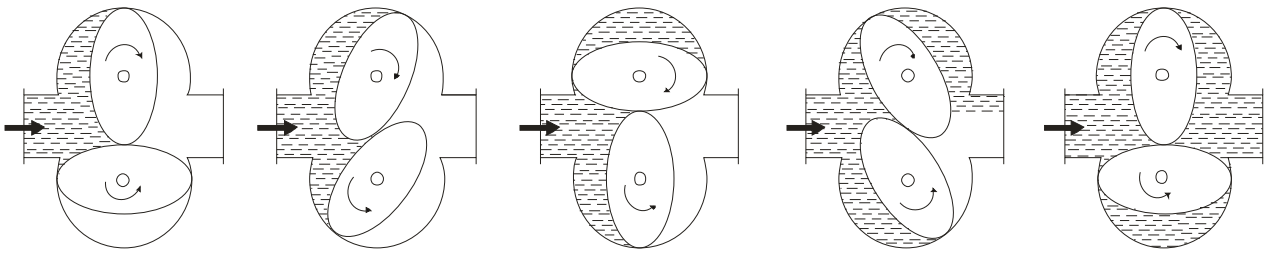
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WORKING PRINCIPLE



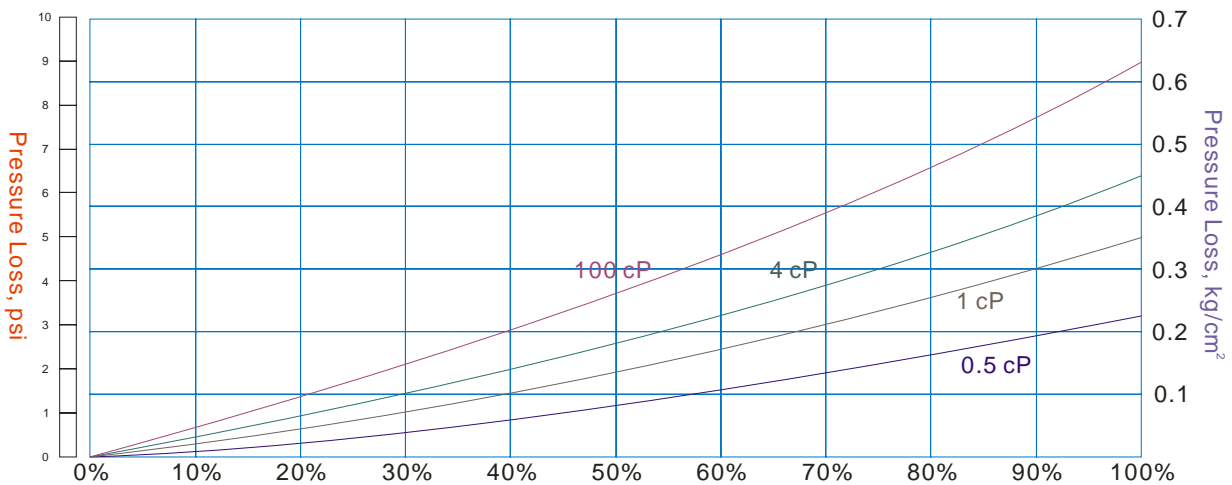
STANDARD FLOW RANGE

Accuracy : +/-0.5% of reading

Unit : L/hr

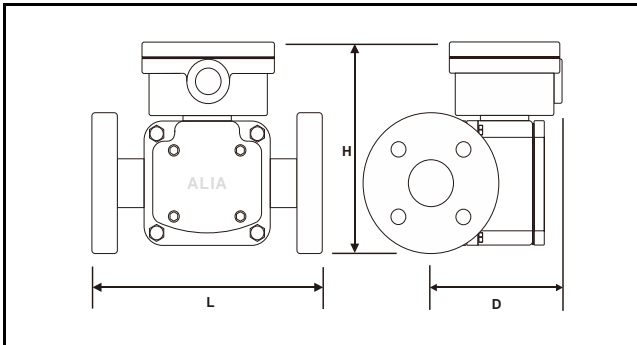
Normal Size		Viscosity (cP)							
mm	Inch	0.5-2	2-5	5-10	10-50	50-150	150-500	500-2000	> 2000
15S	1/2"	15-200	8-200	5-200	3-200	2.5-200	2-200	1.5-160	1-140
015	1/2"	30-700	13-700	10-700	7-700	5-700	3-700	2-500	1.6-430
020	3/4"	60-1300	30-1300	20-1300	16-1300	13-1300	11-1300	9-1000	7-700
025	1"	150-3500	78-3500	50-3500	42-3500	38-3500	34-3500	29-2800	25-2300
040	1-1/2"	300-5000	150-5000	100-5000	80-5000	67-5000	56-5000	45-4100	37-3500

PRESSURE LOSS

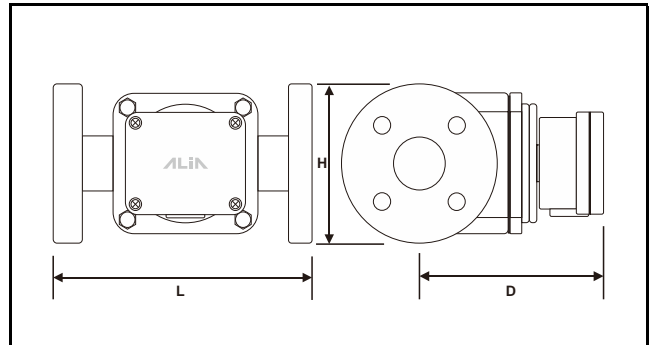


Model Code	Size		Maximum Flow Rate
15S	15 mm	1/2"	200 L/hr
015	15 mm	1/2"	700 L/hr
020	20 mm	3/4"	1300 L/hr
025	25 mm	1"	3500 L/hr
040	40 mm	1-1/2"	5000 L/hr

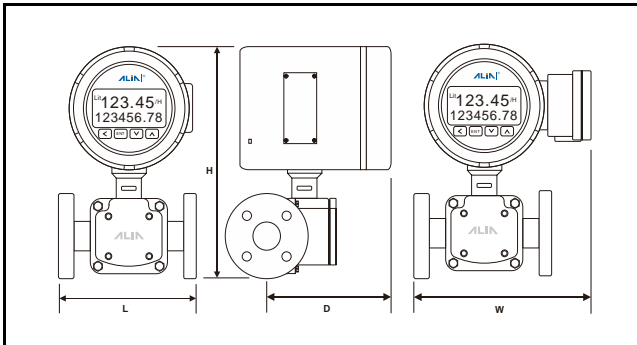
➤ DIMENSIONS



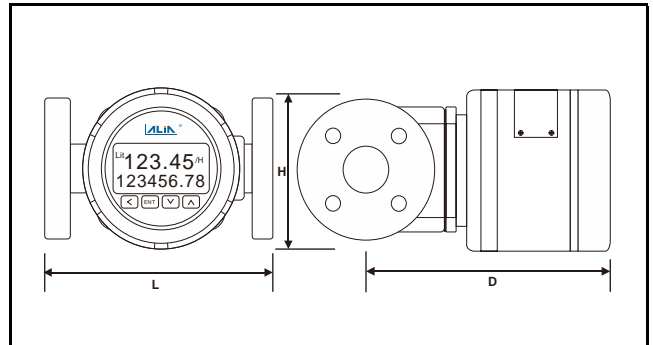
Flange End / Unscaled Pulse Output					
Size		L	H	D	Weight
mm	Inch	mm	mm	mm	kg
15S	1/2"S	----	----	----	----
015	1/2"	114	143	100	4
020	3/4"	165	143	100	4



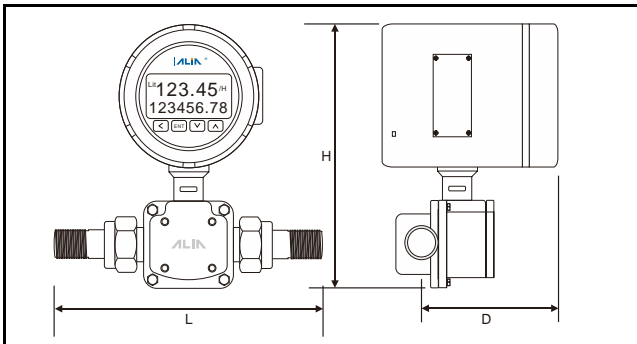
Flange End / Unscaled Pulse Output					
Size		L	H	D	Weight
mm	Inch	mm	mm	mm	kg
025	1"	200	123	120	6.5
040	1-1/2"	200	140	120	9



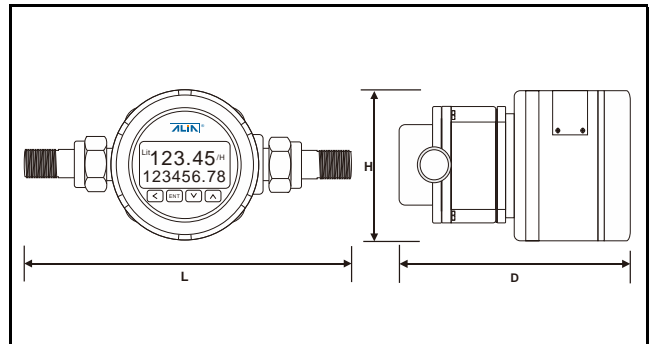
Flange End / Digit Display					
Size		L	H	D	Weight
mm	Inch	mm	mm	mm	kg
15S	1/2"S	----	----	----	----
015	1/2"	114	205	123	5
020	3/4"	165	205	123	5



Flange End / Digit Display					
Size		L	H	D	Weight
mm	Inch	mm	mm	mm	kg
025	1"	200	123	190	7
040	1-1/2"	200	140	190	9



Screw End with Coupling / Digit Display					
Size		L	H	D	Weight
mm	Inch	mm	mm	mm	kg
15S	1/2"S	197	205	123	2.5
015	1/2"	197	205	123	3
020	3/4"	248	205	123	3



Screw End with Coupling / Digit Display					
Size		L	H	D	Weight
mm	Inch	mm	mm	mm	kg
025	1"	283	123	190	5.5

PRODUCTS LINE

Cast Iron	15S	015	020	025	040
	1/2"	1/2"	3/4"	1"	1-1/2"
NPT(M)					
JIS 10K					
ANSI 150#					
S.S. 316	15S	015	020	025	040
	1/2"	1/2"	3/4"	1"	1-1/2"
NPT(M)					
JIS 10K					

MODEL SELECTION GUIDE

APF850 Series										
Example: APF850-CI-040-JRIN-NN-S/V-BH										
APF850-	XX-	XXX	-X	X	X	X	-XX	-X	-XX	Description
Material	CI-									Cast Iron Body / PPS (Oval Gear)
	SS-									Stainless Steel 316 Body / PPS (Oval Gear)
Size	15S-040									15S, 015, 020, 025, 040 mm
Process Connection			-T							Thread, NPT (Male) with Coupling
			-J							JIS 10K FF
			-A							ANSI 150# FF
Register			N							Without Display
			R							5 Digit Flow rate / 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 Wire) + Scaled Pulse (Open Collector) (Register R)
			P							Scaled Pulse Output (Open Collector 2 Wire) (Register R or T)
Max. Temperature			N							-10~120 °C
			H							-10~150 °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