

GENERAL

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

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 : 0.3 - 200 CP (Standard)
: 201 - 50000 CP (Optional)

- Operating Temperature : -10 to 120°C (Standard)
: -10 to 150°C (Optional)

- Max. Pressure : 19 Kg/cm²

- Process Connection

Thread : NPT (Male) with Coupling

Flange : JIS 10K FF / ANSI 150# FF

- Power Supply : 3.6V Battery, Size D x 1 ea
- Battery Life : 3-6 years
- Protection Class : IP65
: Intrinsically Safe (Unscaled pulse Output)
- : Explosion Proof, Ex d IIB T6
- Painting : Dark Grey



- Flow Range

15S mm : 5 - 200 L/Hr @ 5CP

015 mm : 10 - 700 L/Hr @ 5CP

020 mm : 20 - 1300 L/Hr @ 5CP

025 mm : 50 - 3500 L/Hr @ 5CP

040 mm : 100 - 5000 L/Hr @ 5CP

- 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, 500mA Max.

With Display : Open Collector (2 Wire, Scaled pulse)

: 11 to 26Vdc, 50 mA Max.

- Cable Entry : 1/2" NPT (F)

- Optional : Heating Jacket (Heat oil or Steam)

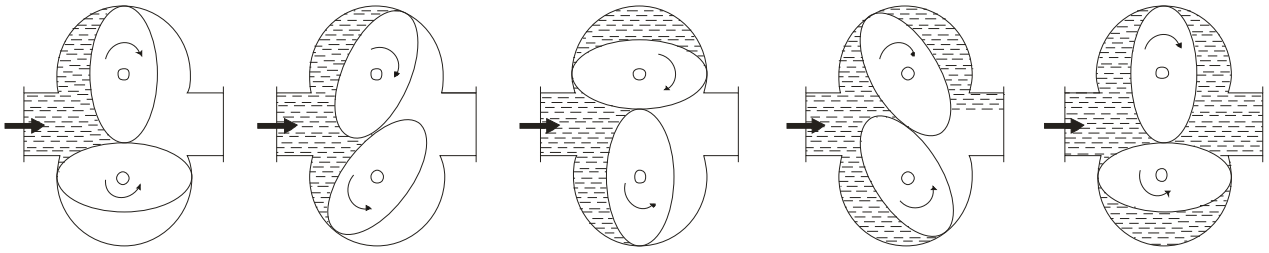
: Strainers, U-Type or Y-Type

: Air Eliminator

- Ambient Temperature : -25 to +60°C



WORKING PRINCIPLE



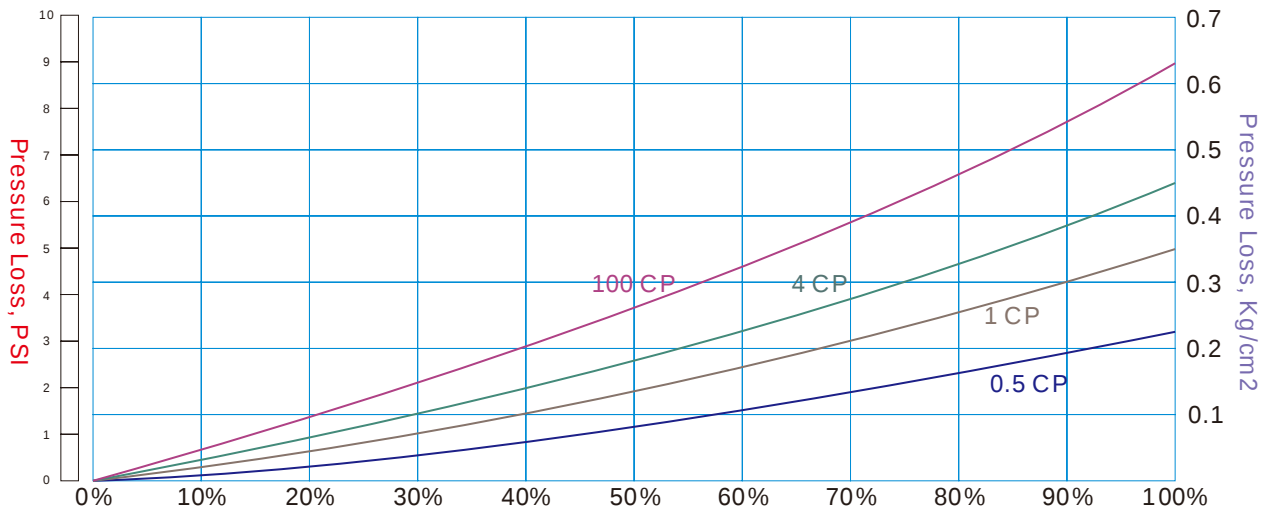
STANDARD FLOW RANGE

Accuracy: +/- 0.5% of reading

Unit : Liter/Hr

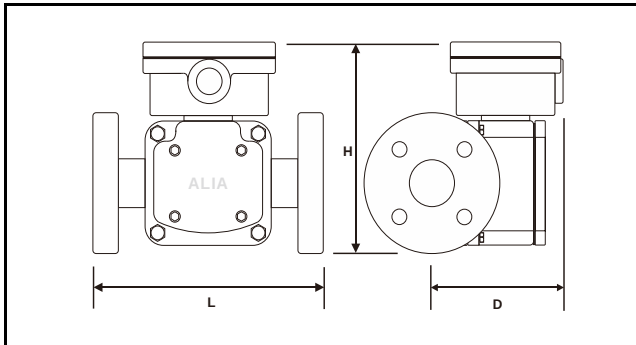
Normal Size		Viscosity (CP)							
mm	Inch	0.5 - 2	2 - 5	5 - 10	10 - 50	50 - 150	150 - 500	500 - 2000	> 2000
15S	1/2"	15 - 200	8 - 200	5 - 200	3 - 200	2.5 - 200	2 - 200	1.5 - 160	1 - 140
015	1/2"	30 - 700	13 - 700	10 - 700	7 - 700	5 - 700	3 - 700	2 - 500	1.6 - 430
020	3/4"	60 - 1300	30 - 1300	20 - 1300	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



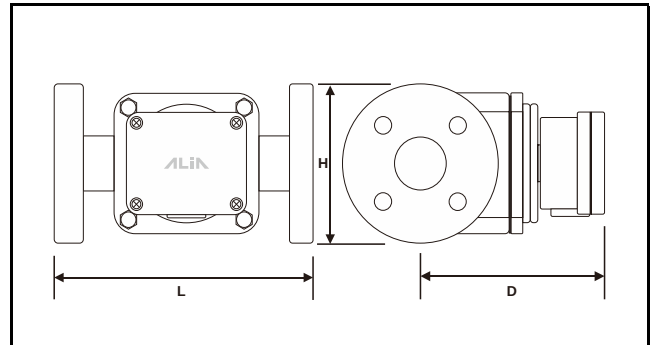
Model Code	Size		Maximum Flow Rate
15S	15 mm	1/2"	200 Liter/Hr
015	15 mm	1/2"	700 Liter/Hr
020	20 mm	3/4"	1300 Liter/Hr
025	25 mm	1"	3500 Liter/Hr
040	40 mm	1-1/2"	5000 Liter/Hr

DIMENSIONS



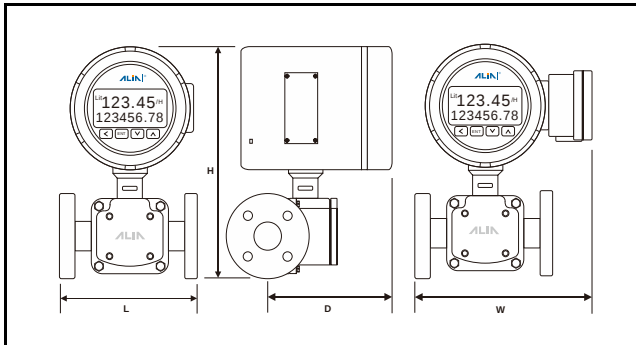
Flange End / Unscaled Pulse Output

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



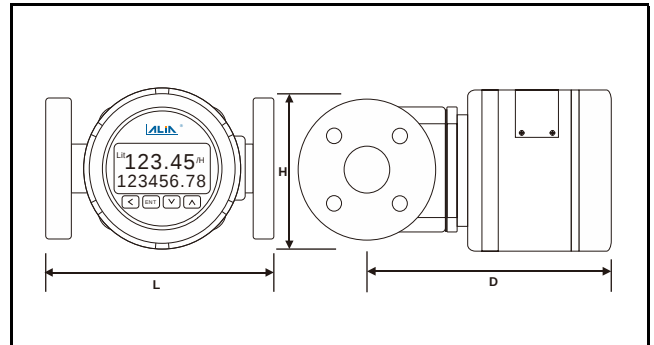
Flange End / Unscaled Pulse Output

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



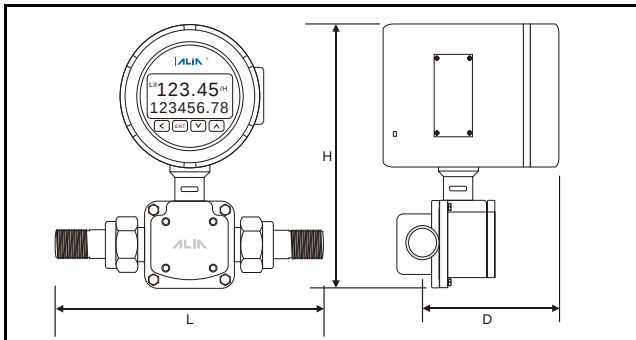
Flange End / Digit Display

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



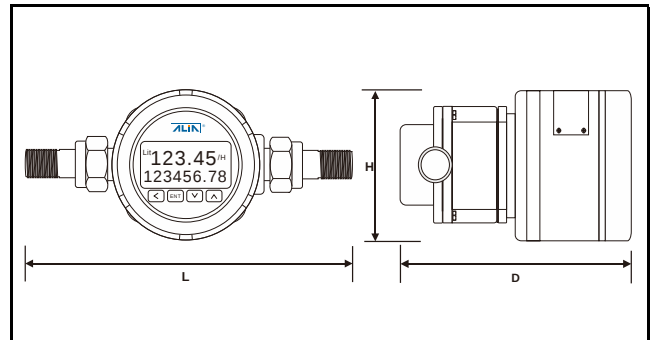
Flange End / Digit Display

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-ARIN-NN-S/V-NN

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 pluse output (Open Collector 2 Wire) (Register R or T)		
Max. Temperature						N						-10 to 120°C	
						H						-10 to 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		
Battety								-NN	Battery Holders without Battery				
								-BT	Battery Holders with Battery 3.6V / Size D *1PC				