OVAL GEAR FLOWMETER

SERIES LOGF

FLUIDEX
Solutions for Measurement and Control

Fluidex series LOGF is a Positive Displacement Flow Meter with large capacity. The meters have two rotating gears in oval-shape. A fixed amount of the liquid passes between the gear teeth and through the meter after each revolution. The flow rate is identified by the number of shaft rotations. LOGF are used in a wide range of applications where accurate measurement of liquid is required.

FEATURES AND BENIFITS:

- High accuracy & repeatability
- No need for flow conditioning
- Measure low & high viscosity liquids
- Available in DN80 and DN100 (3″ to 4″) line sizes
- Flow range covered from 35~2500 LPM (10~660 US GPM)
- Pressure up to 12 bar (175 psi)
- Available with various options of end connections (threaded and flanged)
- Available with a wide range of mechanical and electronic registers
- Available in Aluminium and Stainless Steel execution
- Availability of explosion proof and Intrinsically Safe models
- Quadrature pulse output option
- 4-20 mA Integral output option
- Bi-directional flow

STANDARD OPTIONS:

- *Flanged and hygienic process connections*
- *Explosion proof*
- *Mechanical registers*
- *Integral and remote LCD totalizer and batch totalizer*
- *Flow rate totalizers*
- *Scaled pulse*
- *4~20mA & flow alarm outputs*
- *Electronic batch controllers and pulse processing modules*

GENERAL SPECIFICATIONS

LOGF	080	080E	0100	0100E

METER PERFORMANCE

	Accuracy @ 3cp
Pulse Meters	± 0.5% of reading (± 0.2% with optional NL correction)
Mechanical 'M' Registers	± 1% of reading
Mechanical 'V' Registers	± 0.5% of reading

Repeatability	Typically ± 0.03%

FLOW RANGE

	Flow Range*			
Size in MM (INCH)	DN80 (3")	DN80 (3")	DN100 (4")	DN100 (4")
LITERS / MINUTE	35~750	50~1000	75~1500	150~2500
US GPM	10~200	13~260	20~400	40~660

(*) Max. flow is to be reduced as viscosity increases, max. pressure drop 100Kpa. (15 psi)

PRESSURE RANGE

METERS (PULSE)	Maximum pressure in Bar (PSI)			
Aluminium (A)				
Screwed	12 (175)	12 (175)	10 (145)	10 (145)
Flanged (ANSI 150)	12 (175)	12 (175)	10 (145)	10 (145)
Flanged (ANSI 300)		Consult Factory		
Flanged (DIN 16)	12 (175)	12 (175)	10 (145)	10 (145)
Flanged (JIS 10K)	10 (145)	10 (145)	10 (145)	10 (145)
Stainless Steel (S)				
Screwed	12 (175)			
Flanged (ANSI 150)	12 (175)			
Flanged (ANSI 300)		Consult Factory		
Flanged (DIN 16)	12 (175)			
Flanged (JIS 10K)	10 (145)			

METERS (MECHANICAL)	Maximum pressure in Bar (PSI)			
Aluminium (A)				
Screwed	12 (175)	12 (175)	10 (145)	10 (145)
Flanged (ANSI 150)	12 (175)	12 (175)	10 (145)	10 (145)
Flanged (ANSI 300)		Consult Factory		
Flanged (DIN 16)	12 (175)	12 (175)	10 (145)	10 (145)
Flanged (JIS 10K)	10 (145)	10 (145)	10 (145)	10 (145)
Stainless Steel (S)				
Screwed	12 (175)			
Flanged (ANSI 150)	12 (175)			
Flanged (ANSI 300)		Consult Factory		
Flanged (DIN 16)	12 (175)			
Flanged (JIS 10K)	10 (145)			

TEMPERATURE RATINGS**

Mechanical	-20°C~+80°C (-4°F~+176°F)
Pulse	-20°C~+120°C (-4°F~+250°F)

(**) Please consult factory if special operating temperature range is required.

RECOMMENDED FILTER

Size	350 microns (40 mesh)

PULSE OUTPUT OPTIONS

	Pulses / litre (Pulses / US Gallon) – Nominal			
LOGF	080	080E	0100	0100E
Reed switch	2.65 (10)	1.5 (5.68)	1.1 (4.15)	0.56 (2.1)
Hall effect	10.65 (40.5)	6.0 (22.7)	4.4 (8.3)	2.24 (8.5)
QP-Quadrature Hall option	5.33 (20)	3.0 (11.36)	2.2 (8.3)	1.12 (4.24)
PF-Pulsating Flow (Hall effect)	N/A	N/A	N/A	N/A
Reed switch output	30Vdc x 200mA max. (max. temperature shock 10°C (50°F) per minute)			
Hall effect output (NPN)	3 wire open collector, 5~24Vdc, 20mA max.			
Optional Outputs	30 Vdc, Scaled pulse, Quadrature pulse, Flow alarms or Two stage batch control			

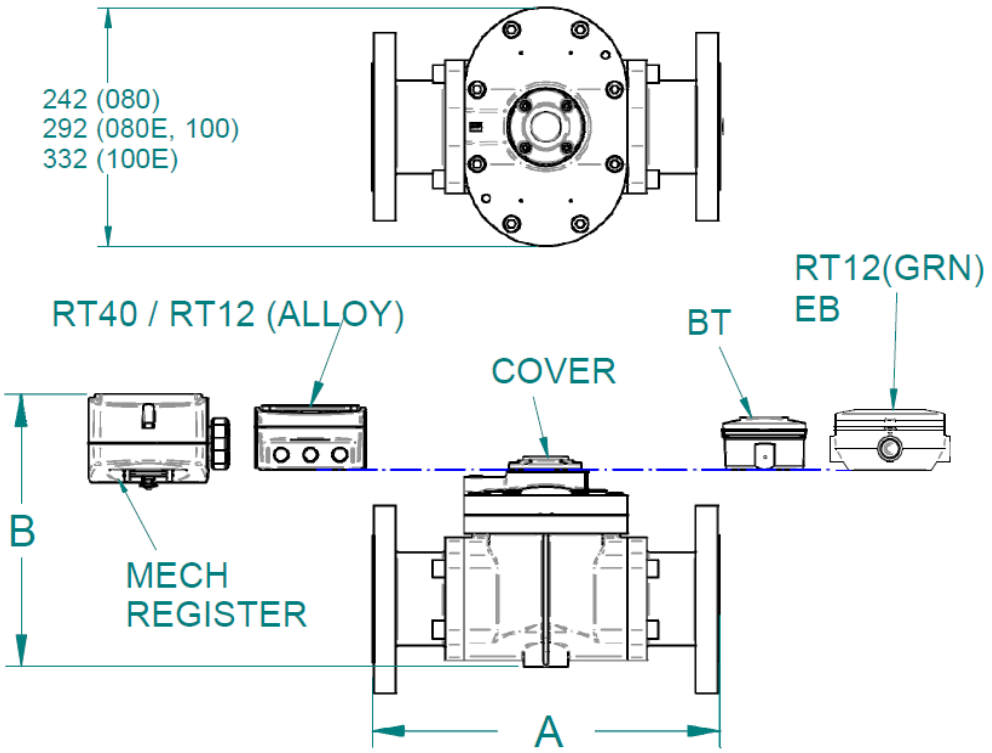
ENVIRONMENTAL CLASSIFICATION

Protection class	IP66/67 (NEMA-4X)

HAZARDOUS AREA CLASSIFICATION

Class (Optional)	Exd I/IIB T4/T6 (Integral ancillaries can be supplied I.S. (Intrinsically Safe)

DIMENSIONS



PROCESS CONNECTIONS	A				OPTION	B				
LOGF	080	080E	0100	100E		080		080E	100	100E
						Al	SS			
ANSI 150 Flange	354	382	388	414	RT12 (GRN) / EB	260	257	277	322	399
DIN 16 Flange	354	382	388	414	RT12 (ALLOY) / RT40	264	260	281	326	403
JIS 10K Flange	354	382	388	414	BT11	252	249	269	314	391
BSP Screwed	266	294	294	320	COVER	213	206	229	274	352
NPT Screwed	266	294	294	320	MECHANICAL	270	NA	288	333	416

All dimensions are in millimeters ±2 mm, Large mechanical registers are not shown in the above table. Please consult the factory for the dimensions of the ANSI 300 Flange

METER SELECTION MATRIX AND ORDER CODE

	SIZE		Flow	LPM	US GPM	LOGF			
LOGF080	3"	DN80		35~750	10~200	080	080E	100	100E
LOGF080E	3"	DN80		50~1000	13~260				
LOGF100	4"	DN100		75~1500	20~400				
LOGF100E	4"	DN100		150~2500	40~660				

		Body material						
A	Aluminum	•	•	•	•
E	Extended flow Aluminium version		•		•
S	316L Stainless Steel	•			

		Rotor materials						
0	TF-PPS Rotors (Not applicable for the LOGF100E)	•	•	•	
1	Keishi cutting of TF-PPS rotors (for high viscosity liquids)	•	•	•	
4	Aluminum (used with Aluminum meters only)	•	•	•	•
5	Stainless Steel (all SS models only)	•			
6	Keishi cutting of Aluminium rotors (for high viscosity liquids)				
7	Keishi cutting of Stainless Steel (for of high viscosity liquids)				

		Bearing type				
0	No bearing (PPS rotors only)	•	•	•	
1	Carbon Ceramic (Standard with SS rotors)	•			
4	Hardened steel roller bearings (Aluminum rotors only)	•	•	•	•

		O-ring materials						
1	Viton (Standard)	Temperature	-15~+120°C (+5~+250°F)					
2	Ethylene Propylene Rubber		-40~+120°C (-40~250°F) max.					
3	Teflon encapsulated Viton		-15~+150°C (+5~300°F) max.					
4	Buna-N (Nitrile)		-40~+100°C (-40~+212°F)					

		Temperature limits						
-	2	120°C (250° F) - see note 1						
-	3	150°C (300°F) – Hall Effect output only – See note 2	•	•				
-	5	120°C (250°F) - see note 3						
-	8	80°C (180°F) - see note 4						

		Process connections						
1	BSP female threaded	•	•	•	•
2	NPT female threaded	•	•	•	•
3	Tri clamp ferrules - See note 2	•	•	•	•
4	ANSI-150 RF flanges	•	•	•	•
5	ANSI-300 RF flanges	•	•	•	•
6	PN16 DIN flanges	•	•	•	•
7	JIS 10 kg/cm2 flanges	•	•	•	•
9	Customer nominated (Consult Factory)				

		Cable entries						
M	0	No Cable entry						
P	0	3-6 mm cable gland						
P	1	M20 x 1½mm						
P	2	½" NPT0						

Order Code Example														
LOGF100	S	5	1	1	-	5	1	2	REG					

(1) This is the limit for pulse meters. In case of PPS or when fitted with integral instruments, the limit is 80°C (180°F), (2) Available for 080A and 080S and for O-ring code 1 and 3. Not available for High Pressure Meters, (3) Instruments include integral cooling fan to increase the temperature rating to 120°C (250°F), (4) This is the maximum temperature in meters with mechanical registers, (5) ½" larger than the meter, (P) Pulse Meters, (M) Mechanical Register

REGISTER – PULSE METERS

Order Code Example

LOGF100	S	5	1	1	-	5	1	2	R2		
										Integral options	Remarks
									00	Nil	
									SS	Stainless Steel Cover	
									RS	Reed Switch only	To suit I.S. Installations
									E1	Exd IIB T4/T6	Al and SS meters
									E2	Exd I/IIB T4/T6	SS meters only
									QP	Quadrant pulse	
									Q1	Exd with Quadrature pulse	
									PF	Pulsating Flow option	Hall effect output only
									P1	Exd with PF option	
									B2	BT11 Dual Totalizer	
									B3	BT11 Intrinsically Safe (I.S.)	
									R0	RT12 Flow Rate Totalizer	Alloy Housing
									R2	RT12 Flow Rate Totalizer	GRN Housing
									R3	RT12 Intrinsically Safe (I.S.)	
									R4	RT40 Flow Rate Totalizer	
									FI	Loop powered 4~20mA	80°C max
									A1	Exd with FI	80°C max
									E0	EB10 Batch Controller	
									SB	Specific build requirement	

REGISTER - MECHANICAL METERS

Order Code Example

LOGF100	S	5	1	1	-	5	1	M	V1	V
Totalizer	Units	Small Mechanical Registers								
99999	LITERS	❹ Digit Totalizer							M3	
99999	US GAL	❹ Digit Totalizer							M4	
		Large Digit Registers								
999999	LITERS	❺ Digit Reset Register							V1	
999999	LITERS	❺ Digit Reg+Ticket Printer							V3	
999999	LITERS	❺ Digit Reg+Preset Batch Register							V5	
999999	LITERS	❺ Digit Reg+preset+Ticket Printer							V7	
		Consult Factory							SB	
		Control Valve options (close coupled)								
		Mechanical control valve + Linkages coupled to meter								V

Consult factory for US Gallons V-series Mechanical Registers and for the available range of strainer-air eliminator

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