TF-Series Small Capacity Electronic Flowmeter

Trimec-FP TF-Series Small Capacity Electronic Flowmeters

Volumetric flow measurement of clean liquids or low flows used in automotive, aviation, mining, power, chemical, pharmaceutical, food, paint, petroleum industries and environmental applications. For metering additives for fuel, consumer products, water treatment and flotation cells, corrosion inhibitors, catalysts, emulsifiers, oils, grease, fragrances, adhesives, solvents, ink and insecticides.

Features / Benefits

- High accuracy and repeatability, direct volumetric reading
- No requirement for flow conditioning (straight pipe runs)
- Stainless Steel rotors (Optional PPS Rotor for TF008 meter)
- Measures high and low viscosity liquids
- Quadrature pulse output option and bi-directional flow
- Only two moving parts

General Specifications

- Flow Rates: 1 - 550 L/hr [0.26 - 145 USG/hr] *
- Sizes: 1/8" - 318" [4mm - 8mm]
- Materials: Aluminium, 316 Stainless steel

  * see also Medium and Large Capacity data sheets for other sizes

Meter Selection

- Aluminium meters for petroleum products (oils and grease, fuels and fuel oils)
- Stainless steel meters for the chemical, cosmetic, food and pharmaceutical industries (water based liquids)
- Blind pulse meters available with reed switch and Hall Effect outputs. Optional Quadrature pulse and Integral 4-20mA outputs available

Integral Instruments

Options include integral LCD totalisers, flow rate totalisers and batch controllers (4-20mA, scaled pulse, alarms and batch control)

- BT LCD 5-digit reset, 8-digit cumulative totaliser
- RT14 LCD 8-digit reset, cumulative totaliser, analogue and pulse outputs with backlit display
- RT 40 LCD 6-digit reset, cumulative totaliser and flow rate. Backlit Display
- EB LCD 6-digit 2 stage batcher and cumulative totaliser
  (Available for remote mounting and with I.S. approvals)

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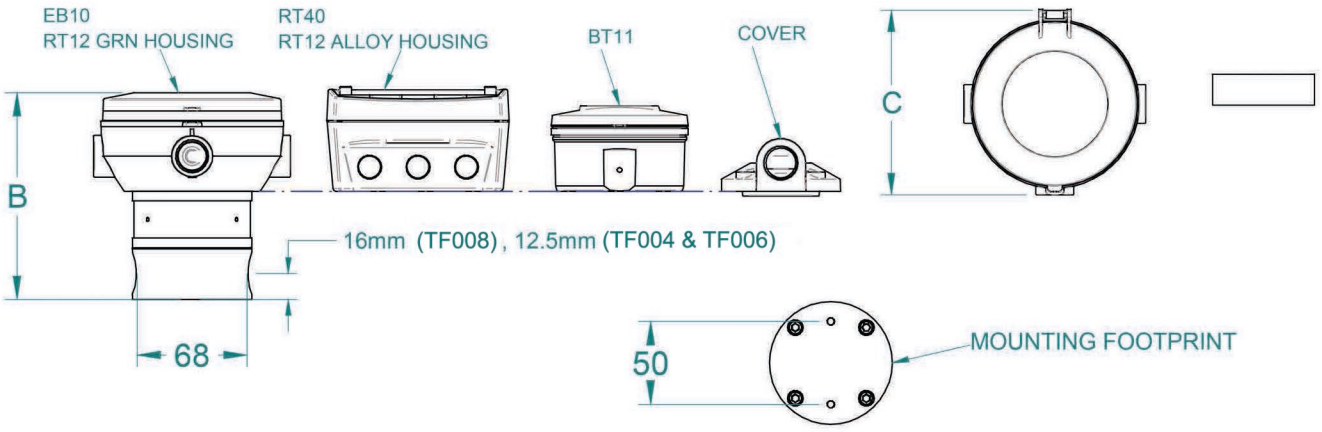
TRIMEC FLOW PRODUCTS

TF-Series Small Capacity Electronic Flowmeter

Model Specifications

Model	TF004	TF006	TF008
Nominal Size	4mm (1/8")	6mm (1/4")	8mm (3/8")
* Nominal Flow range @ 3cP	1 - 36 L/hr	2 - 100 L/hr	15 -550 L/hr
	(0.26 - 9.5 USG /hr)	(0.5 - 26.4 USG/hr)	(4 - 145 USG/hr)
Accuracy	± 1% of reading (± 0.2% of reading with optional RT12 /RT14)		
Repeatability	Typically ± 0.03% of reading		
Ambient Temperature Range	-40^{0}C to +120^{0}C (-40^{0}F to +250^{0}F)		
Max. Pressure (AL meters)	15 Bar (220 psi)		
Max. Pressure (SS meters)	34 Bar (495 psi)		
Protection Class	IP66/67 (NEMA4XI, Integral ancillaries can be supplied intrinsically safe [I.S])		
Recommended Filtration	200 mesh (75 microns)		
Output Pulse Resolution - Pulses per Litre (Pulses per USG) - Nominal			
Reed Switch	2800 (10600)	1050 (3975)	355 (1345)
Hall Efect	2800 (10600)	1050 (3975)	710 (2690)
QP (Qudarture) Hall Effect	2800 (10600)	1050 (3975)	710 (2690)
HR (High Resolution) Hall Effect	11200 (42400)	4200 (15900)	n/a
Reed Switch Output	30Vdc x 200mA max. (maximum thermal shock 10^{0}C [18^{0}F]/ minute)		
Hall Effect Output	3 wire open collector, 5 - 24 Vdc max, 20mA max		
Optional Outputs	4-20mA, Scaled pulse, Quadrature pulse, flow alarms or two stage batch control		

* Maximum flow reduces as viscosity increases, see flow de-rating guide. Max recommended pressure drop 1 Bar (14.5 psi)



Dimensions (± 2mm)

	B			C
Option	TF004	TF006	TF008	
EB10 / RT12 / RT14 GRN housing	122	122	129	124
RT40	125	125	132	96
BT11	113	113	120	94
Cover	92	92	99	72

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Model Specifications

TF004	4mm	(1/8")	1 - 36 L/hr (0.26 - 9.5 USG/hr)
TF006	6mm	(1/4")	2 - 100 L/hr (0.5 - 27 USG/hr)
TF008	8mm	(3/8")	15 - 550 L/hr (4 - 145 USG/hr)

Body Material

A	Aluminium
S	316 Stainless Steel

Rotor Material / Bearing type

0	0	PPS (008 only) (not available for 150°C meters) / No bearing
5	1	Stainless steel / Carbon ceramic
7	1	Keishi cut stainless steel (for high viscosity liquids) (008 only) / Carbon Ceramic

O-ring Material

1	Viton (-15°C min[-5°F])Viton (-15°C min[-5°F])
3	Teflon Encapsulated Viton
4	Nitrile (-40°C [-40°F])

Temperature Limits

-	2	120°C [250°C] max.120°C [250°C] max.
-	3	150°C [300°F] max. (Hall only) (includes SS terminal cover)150°C [300°F] max.
-	5	*120°C [250°F] max. (includes cooling fin)*120°C [250°F] max. (includes cooling fin)
-	8	# 80°C [176°F] max. (meters with integral instruments, TF008 with PPS rotors)

Process Connections

1	BSPP (G) female threaded
2	NPT female threaded
B	Bottom entry manifold mount (SS body only)

Cable Entries

Exclusive to B2 & B3 Options

0	3- 6 mm cable gland or no cable entry
1	M20 x 1.5mm (M16 x 1.5 for R4 option)
2	1/2"NPT

Integral Options

	-	NIL
	SS	Stainless Steel Terminal Cover
	RS	REED Switch Only - to suitt Intrinsically Safe Installations
	QP	Qudrature pulse (2 NPN phased outputs)
TF004 - 11200ppl, TF006 - 4200ppl	HR	High resolution Hall effect output (Hall Effect only) (TF004 & TF006 only)
With scaleable pulse output	B2	*# BT11 totaliser with pulse output
IECEx & ATEX approved	B3	*# BT11 intrinsically safe totaliser with pulse output
Scaled pulse, alarms, & 4-20mA	R2	*# RT12 rate totaliser with all outputs (GRN housing)
IECEx & ATEX approved	R3	*# RT12 intrinsically safe rate totaliser with all outputs (GRN housing)
Scaled pulse, backlighting	R4	*# RT40 backlit rate totaliser (alloy housing with facia protector)
Scaled pulse, alarms, 4-20mA & backlighting	R5	*# RT14 backlit rate totaliser with all outputs (GRN housing)
2 stage DC batcher & totaliser	E0	*# EB10 batch controller

* Temperature code 5 required when operating temperature is between 80°C (180°F) and 120°C (250°F)

Temperature code 8 required for all integral instruments.

Model No. Example

TF008	S	5	1	1	-	8	1	1	R2

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