



Features

- Self powered, 8 digit total and accumulated total, 5 digit LCD instantaneous rate display
- Simple flow chart programming with English prompts
- -20 to 80°C (-4 to 176°F) operation
- PNP / NPN transistor scaleable pulse output as standard
- Robust IP67 (Nema 4X) powder coated aluminium enclosure with M20 x 1.5 or ½" NPT electrical conduit entries
- All data is retained in the event of power loss or battery removal
- Extended battery life beyond 10 years with unique programmable power management function
- Multipoint linearity correction

Options

- Loop powered 4-20 mA output and selectable PNP or NPN flow alarms
- Multi function dual digital inputs A+B, A-B or A÷B
- 4-20 mA analog input
- Communications
- Data logging

RT100 Series Universal Rate Totaliser



Overview

The RT100 flowrate totaliser has been specifically designed to operate with common pulse producing flowmeters such as positive displacement, turbine and paddle-wheel sensors, without the need for external power.

Ultra low power consumption is a result of innovative design which provides many years of service from replaceable lithium batteries.

External power may be applied to interface with common controllers such as PLC's via the scaleable pulse output and/or optional analog output. Multipoint linearity correction of the flowmeter input is available to enhance accuracy and extend flow sensor rangeability.

A robust cast aluminium enclosure complete with multiple conduit entries provides protection in industrial environments with the flexibility of wall or pipe mounting via optional stainless steel brackets. Direct on meter and panel mounting versions are available.

Simple Programming

Simple flow chart programming with English prompts enables the user to configure the RT100 with ease. Once in program mode the scrolling prompts guide you through the entire programming routine greatly reducing the need to refer to the manual.

The RT100 is fully user programmable and has selectable PIN protection for security.

Scaleable Pulse Output

A selectable NPN or PNP transistor output with variable pulse width is provided to ensure compatibility with commonly used PLC inputs, counters and metering pumps. The default width of 300ms (frequency permitting) enables most PLC's to successfully scan the incoming pulses with standard input circuits, avoiding the need for, and additional cost of high speed counter inputs.

Loop powered 4-20 mA output

An optional high resolution analog output enables transmission of the instantaneous flowrate. The output reflects any linearisation that may be programmed.

Flow Alarm Outputs

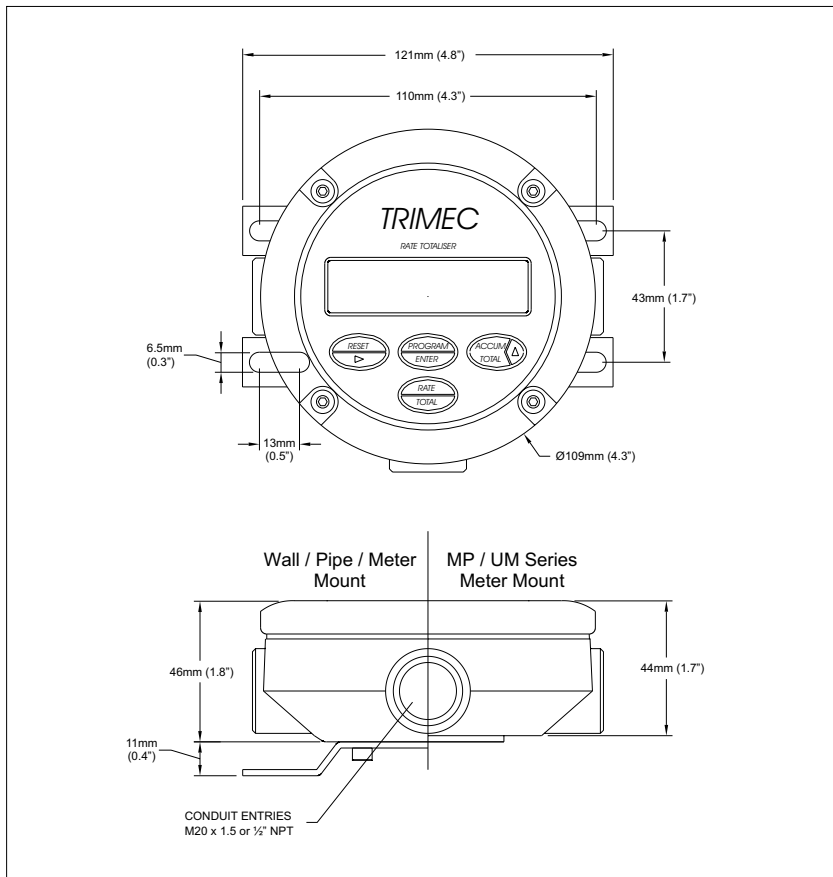
Optional NPN or PNP selectable low and high flowrate alarms have independently adjustable dead bands to provide application flexibility and enable connection to commonly used devices.

Enclosure Design

Thoughtful design allows the RT100 to be panel mounted or mounted directly to many flowmeters regardless of their orientation. Multiple conduit entries also reduce wiring restrictions simplifying and minimising installation costs.

Optional stainless steel mounting kits are available for wall or pipe mounting.

DIMENSIONS



SPECIFICATIONS

Display	Custom multifunction LCD - 8 digit alphanumeric, 9mm (0.35") character height displays: * 8 digit total (resettable) * 8 digit accumulated total * 5 digit instantaneous flowrate * programming prompts and messages - Subscript text, 2mm (0.08") character height, annunciates functional status
Configuration	Four tactile feedback keypad for flow chart entry of data with scrolling English prompts. User selectable 4 digit PIN set-up protection. Programmable engineering units and decimal point location for both rate and totals, time base, K-factor, rate dampening and power management function. All data is E ² PROM protected in case of power loss or battery failure.
Signal Type	Universal pulse / frequency input compatible with reed switch, open collector, Namur and sine wave with 20mV minimum P-P voltage (typical of turbine coils)
Input Frequency Range	0 to 5 kHz (rate display minimum 0.25 Hz)
K-Factor Range	0.001 to 999999.999 with floating decimal point during K-factor entry
Engineering Units	Selectable as ltr, m ³ , kgs, gal, lbs or no units
Rate Time Base	Selectable as units per second, minute, hour or day
Decimal Points	Individually programmable from 0 to 3 positions for rate, total and accumulated total.
Power Supply	Self powered by replaceable Ultra Lithium batteries, life expectancy of 7 to 10 years depending on power management selection. External via regulated 8 to 24VDC or optionally via the 4-20 mA output loop. Optional: Universal AC/DC (110-240VAC) with SPST relays.
Pulse Output	Scaleable NPN / PNP selectable transistor, 100mA max. resistive load Auto ranging pulse width with 1:1 ratio, defaulting to a maximum of 300 ms.
Linearisation	Up to 10 flow rate and frequency coordinates can be entered to enhance flowmeter accuracy when externally powered (VDC or 4-20mA loop)
Optional Analog Output	2 wire 4-20 mA output, 12 to 24 VDC into 750 ohms @24VDC Resolution 0.1% of range, programmable zero and span with output simulation
Optional Alarm Outputs	2 x NPN / PNP selectable transistor outputs, low and high flow alarms with adjustable deadband, 100 mA max. resistive load
Optional Dual Inputs	A+B, A-B or A÷B, all outputs correspond to the flow computation
Enclosure	IP67 (Nema 4X) UV resistant powder coated aluminium with stainless steel screws and viton o-ring seals. 109mm (4.3") diameter x 46mm (1.8") deep, 0.45 kg (1 lb)
Mounting	Wall or horizontal / vertical pipe mount (with optional brackets) Panel mount (all models) Direct on flowmeter mount (may require optional adaptors)
Conduit Entries	3 x M20 x 1.5 or ½" NPT
Operating Temperature	-20 to 80°C (-4 to 176°F)

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QUALITY AND SIMPLICITY IN FLOW MEASUREMENT

ORDERING INFORMATION

FUNCTION	
RT	Rate totaliser
SERIES	
1	100 series (field / meter / panel mount)
VERSION	
1	Scaleable pulse output (standard)
2	2 wire 4-20 mA loop powered, flow alarms and dual inputs
3	Communications & Data logging
CONDUIT ENTRIES	
1	3 x M20 x1.5
2	3 x 1/2" NPT
FLOW INPUT TYPE	
D	Pulse / frequency
A	Analog, 4-20 mA
POWER SUPPLY	
0	Self (battery) or regulated 8 to 24 VDC
1	Universal AC/DC with SPST relays
HOUSING TYPE	
FM	Field / panel / meter mount (adaptors or brackets not included)*
MM	MP / UM series meter mount (MP50 requires an adaptor)*
99	Specially engineered housing

* adaptors are supplied separately, see below

ACCESSORIES

AWM	Stainless steel wall mount kit
APM	Stainless steel 2" pipe mount kit
ASS	Stainless steel sun shade
AMP	Adaptor for MP50
ADM	Adaptor for DP series (M16 x 1.5 to M20 x 1.5)
ADN	Adaptor for DP series (M16 x 1.5 to 1/2" NPT)
ATM	Adaptor for TP series (3/4" BSP to M20 x 1.5)
ATN	Adaptor for TP series (3/4" BSP to 1/2" NPT)
A99	Customer nominated adaptor

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