

FRT - FLOWRATE TOTALISER DUAL DISPLAY UNIT

FEATURES

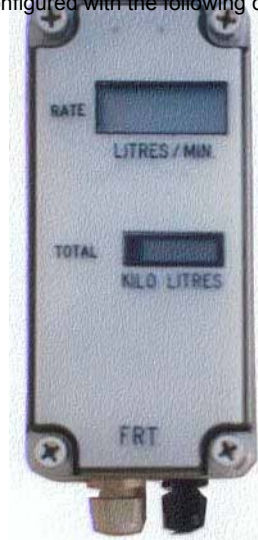
- Australian made
- Total memory retention
- Simple setup and calibration
- IP65 enclosure as standard
- Dual displays
- Range of output options
- Precalibrated to Matched flowmeter
- Listed in Sydney Water Tradewaste Manual

The FRT Flowrate Totaliser Indicator Unit incorporates dual LCD displays, a 3½ digit instantaneous flowrate reading and a 6 digit grand total display with memory retention in event of power failure. The FRT was originally designed in consultation with Sydney Water tradewaste authorities, for use in monitoring and totalising liquid tradewaste discharge, in conjunction with the Manu Rota Pulse Flow Sensor, EVK inferential jet flowmeter or blind pulse electromagnetic flowmeters. Infact the FRT can be matched with almost any flowmeter. The FRT being designed and manufactured by Manu Electronics assures simple operation, use, reliability and installation, a trademark to all Manu products. Any onsite calibration or setup k-factor changes are easily performed via internal user friendly decade rotary switches. Dual pulse and 4-20mA outputs are available. The FRT is housed in a IP65 ABS enclosure suitable for all weather applications and can be configured with the following options:-

Display legend	- Flowrate in Millilitres, Litres or Kilolitres per second, minute or hour.
	- Total 6 digits in Millilitres, Litres or Kilolitres.
Sampler/pulse	- 1, 10, 100 litres per pulse (300millisec min. width).
Tradewaste model	- 6 pin Mil spec. pulse output plug.
Current output	- 4-20mA.
Total reset	- Internal or External.
Power supply	- 12-24VDC or 220-250VAC.

SPECIFICATIONS

Displays: Flowrate	- 3½ digit LCD (14mm H.)
Total	- 6 digit LCD (8mm H.). (8digit as option)
Flowrate Span	- 10 turn trim pot, minimum effective rate 8Hz.
K-factor	- 001 to 999 per unit. (Input pulse x10 standard).
Voltage Supply	- 12-24VDC @15mA or 220-250VAC @38mA
Flowmeter supply	- 12VDC for AC model, 9VDC for DC model.
Current output	- 4-20mA, scaling via 2 x 10 turn trim pots
Sampler output	- 4N33 open collector opto isolator
Pulse input	- Schmitt trigger input filter with input multiplier.
Dimmensions	- 75 W. x 160 L. x 60 D. mm
Enclosure	- IP65, gland entries IP65 rated.



CALIBRATION & USE

Although the FRT is factory wet test calibrated to your matching flowmeter, a final calibration adjustment may be required onsite. The 3 decade pots (numbered 0-9 and marked H,T,U) will set K-factor, to recalibrate fill a calibrated vessel or load cell. Compare the quantity collected against the totaliser display reading. If the amount collected is less than is shown on LCD display total, then increase the K-factor value by the same % difference and the inverse applies. For adjustment of flowrate reading, clock time taken to fill vessel, divide volume by time; this is your flowrate reading. Then whilst liquid is flowing, turn Span pot until flowrate LCD reading corresponds. To retune current output adjust turn pots, at minimum flowrange pot '-' at 4mA and at maximum flowrange pot '+' at 20mA.

ORDERING CODE

MODEL:-	FRT M S M D I 1 C T	Optional at extra cost
M - millilitres flowrate		C - 4-20mA current output
L - litres		
L1 - litres 1 decimal place		
K - Kilolitres		
S - second flowrate		1 - 1 litre per pulse output
M - minute		10 - 10 " " "
H - hour		100 - 100 " " "
M - millilitres total		T - Sydney tradewaste spec.
L - litres		
K - kilolitres		
D - 12-24VDC power supply		
A - 220-250VAC		
I - Internal totaliser reset		
E - External totaliser reset button		

ManuFlo [®]™

Flow Measurement & Control Products

A Division of:

MANU ELECTRONICS PTY LTD

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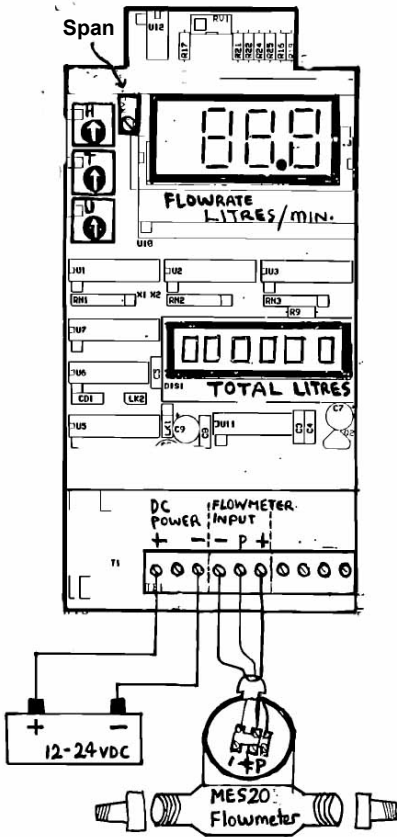
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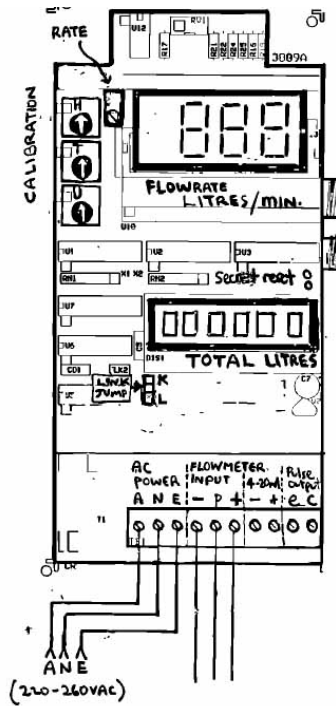
Web: www.manuelectronics.com.au

12-24VDC powered unit



9VDC to flowmeter

220-260VAC powered unit



System specification:-

- Power supply - 220-260 VAC
- Supply to flowmeter - 12 VDC
- Total system current - 37mA

Flowrate in millilitres, litres or kilolitres per minute with optional decimal point.
 Totaliser in millilitres, litres or kilolitres.
 Any flowmeter with frequency pulse output is compatible with minimum 6Hz.
 Calibration setting upto 999 per unit.
 (x1 or x10 signal multiplier input).

Flowmeter can be upto 400 metres distance from FRT.
 Use 2 core shielded cable for wiring between meter and FR

Flowmeter used

Tradewaste specification option:-

- 6 pin Mil. spec. plug for sampling or logging output, 1, 10, 100 or 1000 litres per pulse. (Pulse A.C.)
- 2 pin Mil. spec. plug for 4-20mA output.
- Internal secret totaliser reset.
- Totaliser link jumper for calibrating in litres.

