100 Series

contrec

MODEL 104D

FEATURES

- High and Low Flow Rate Alarms
- 4-20mA Output
- Pulse Output
- Fully Programmable
- Displays Rate, Total and Accumulated Total
- Loop DC Powered
- Panel, Wall and Pipe Mounting
- Watertight to IP67 (Nema 4X)
- CE Compliant

CE

LOOP POWERED

Rate Totaliser

The 104D is a 4-20mA Loop Powered Rate Totaliser and is designed to operate with Turbine, Positive Displacement and Paddlewheel Flowmeters in applications such as irrigation systems and pipelines, and as a replacement for mechanical registers.

ACCURACY • QUALITY • PERFORMANCE

Field Mounting Rate Totaliser

PROVEN IN THOUSANDS OF FIELD INSTALLATIONS THROUGHOUT THE WORLD.

The 104D is a high accuracy Rate Totaliser designed to operate with digital output flowmeters. Having an IP67 weatherproof case, tactile keyboard and various mounting options, makes it a very versatile unit.
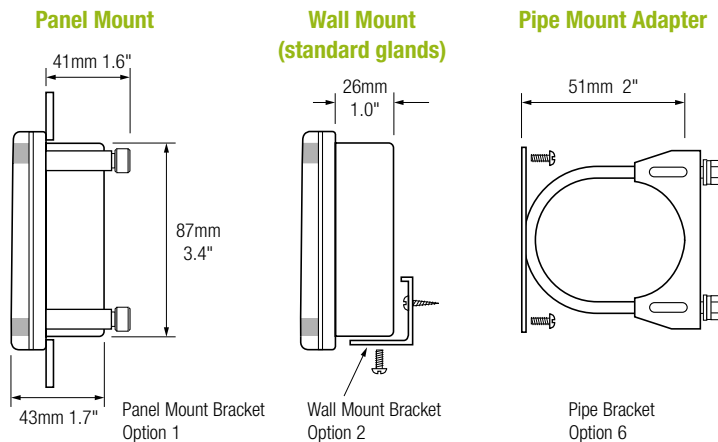
The Rate Totaliser is fully programmable with 10 point linearisation curve for improved accuracy, frequency cut-off and conversion factors (i.e. rate in Litres – totalise in Tons). A non-volatile memory stores all set up parameters and totals.

Rate of Flow, Resettable Total and Accumulated Total are all programmable in engineering units.

The 104D Rate Totaliser is housed in a rugged, yet attractive, IP67 (Nema 4X) polycarbonate enclosure which is completely watertight. A wall mounting bracket (no gland holes) is supplied as standard, while panel and pipe mounting brackets are available as options.

DIMENSIONS

Overall Sizes

151mm (5.9") width
98mm (3.9") height
43mm (1.3") depth

Panel Mount

41mm 1.6"

87mm 3.4"

43mm 1.7"

Panel Mount Bracket Option 1

Wall Mount (standard glands)

26mm 1.0"

Wall Mount Bracket Option 2

Pipe Mount Adapter

51mm 2"

Pipe Bracket Option 6

TERMINAL DESCRIPTIONS

Terminal Inputs & Outputs

Number	
1	4-20mA (+) Output
2	4-20mA (–) Output
3	Low Alarm (–)
4	Low Alarm (+)
5	High Alarm (–) or Pulse (–)
6	High Alarm (+) or Pulse (+)
7	Signal Input (–)
8	Signal Input (+)

PRODUCT CODES

Product Code & Mounting Types

104D	•		Rate Totaliser
Enclosure Mounting		0	Wall Mounting (no gland holes)
		1	Panel Mount Brackets
		2	Wall Mounting (standard glands)
		6	Pipe Mount Adapter

Typical Part Number: 104D .2

GENERAL SPECIFICATIONS

Operating

Temperature Limits: −20 to +60°C, −4 to +140°F

Enclosure

Cable Entry: By cable gland
Materials: Polycarbonate and ABS

Display

Total: 7 digit 10mm (0.4") high LCD (continuously powered). *Note: The Reset Total is resettable from the front panel and the Accumulated Total is displayed when the ACCUM TOT key is pressed*

Rate: 5 digit 8.5mm (0.33") high LCD (continuously powered)

K-factor Range: The pulses per unit of measure (eg. pulses/gallon) is programmable in the range 0.000001 to 999,999

Decimal Points: Fully programmable for Rate and Total

Time Base: Rates can be displayed in units per second, minute, hour or day

Frequency Range: 0.01Hz to 10kHz

Signal Type: Switch settable for sine wave (15mV P-P minimum), open collector, reed switch or pulse

Interference: CE compliance

4-20mA

Resolution and Linearity: 0.05% of span
Accuracy: 0.05% of span @ 25°C, 0.1% (typically) of span full temperature range
Update Time: 0.5 second
Connection: 2 wire
Voltage Drop: 2.5V maximum

High & Low Alarms

Type: 2 x open collector output alarms suitable for driving DC solenoid or external relays. The outputs provide: 1. high, 2. low

Switching Power: 200mA, 30Vdc maximum
Saturation Voltage: 0.8Vdc across the output in the "ON" state
Isolation: All outputs are separately opto-isolated

Battery

Type: 2 x Lithium batteries
Battery Life: 2 years