

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



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.



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.

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

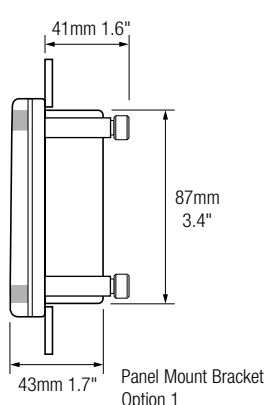
Battery Life: 2 years

DIMENSIONS

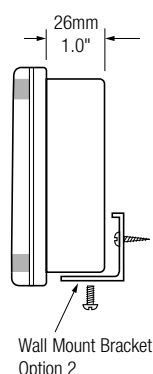
Overall Sizes

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

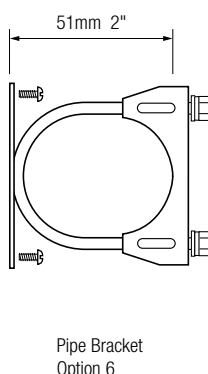
Panel Mount



Wall Mount (standard glands)



Pipe Mount Adapter



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

Instruments within the Contrec family:

100 Series – Accurate process instruments for field mounting applications

200 Series – Intrinsically safe, precise and reliable process instruments

400 Series – Rugged and dependable batch and flow control solutions

505 Series – Next generation flow instruments for a variety of applications

515 Series – Precise flow and batch control for more complex applications

1000 Series – Robust load computers for petroleum and chemical applications

TRAC 40 – Vehicle mount custody transfer approved registers



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