



field instrumentation for the process industry **100 Series**



NEW - 3 YEAR WARRANTY ON ALL INSTRUMENTS!

The 100 series instruments are a range of economical yet highly accurate Process Instruments for use in Field Mounting applications where a robust weatherproof IP67 instrument can provide the best solution.

All versions feature simple programming, large clear displays with models 103D, 104D, 120A and 150A having input signal input linearization for better accuracy.

Accuracy . Quality . Performance

Loop Powered Rate Totaliser 104A



The 104A Loop Powered Rate Totaliser is designed to operate with any flowmeter which produces a 4-20mA output, including differential pressure devices, magnetic or vortex flowmeters. The 104A is powered entirely from the 4-20mA current loop and has a maximum of 2.5 volts drop across the input.

The Rate Totaliser is fully programmable with linear or square law input relationships, programmable span, cutoffs and conversion factors. A non-volatile memory stores all set up parameters and totals without the need for internal batteries or external power.

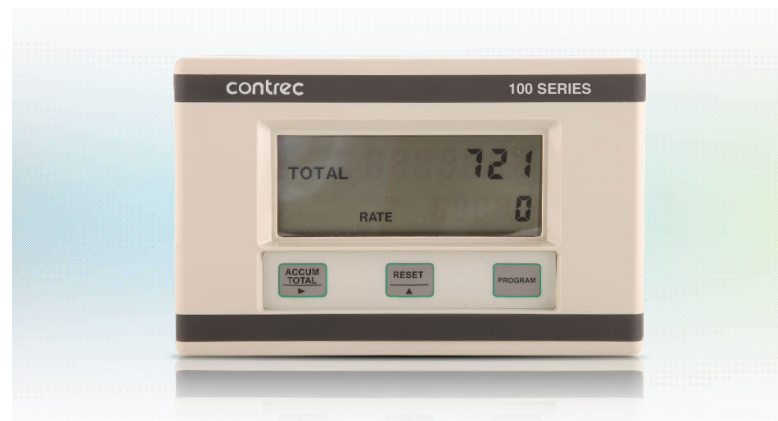
High and low alarms are standard via optically isolated solid state relay outputs. Alternatively, the high alarm output can be programmed to provide a scaled pulse output proportional to the total.

Watertight Enclosure

The 104A Rate Totaliser is housed in a rugged, yet attractive, IP67 (Nema 4X) polycarbonate enclosure which is completely watertight. A wall mounting bracket is supplied as standard, while a 2" pipe mounting bracket is available as an option.

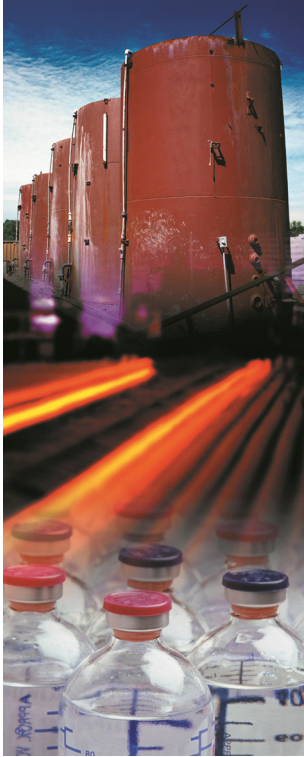
FEATURES

- Powered by a 4-20 Loop
- Displays Rate, Total and Accumulated Total
- Linear or Square Law Inputs
- High and Low flowrate alarms
- Pulse Output
- Fully Programmable
- Watertight to IP67 (Nema 4X)
- Wall and Pipe Mounting
- CE Compliant





Field Mounted Rate Totaliser 103D



The 103D Field Mounting Rate Totaliser requires no external power 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.

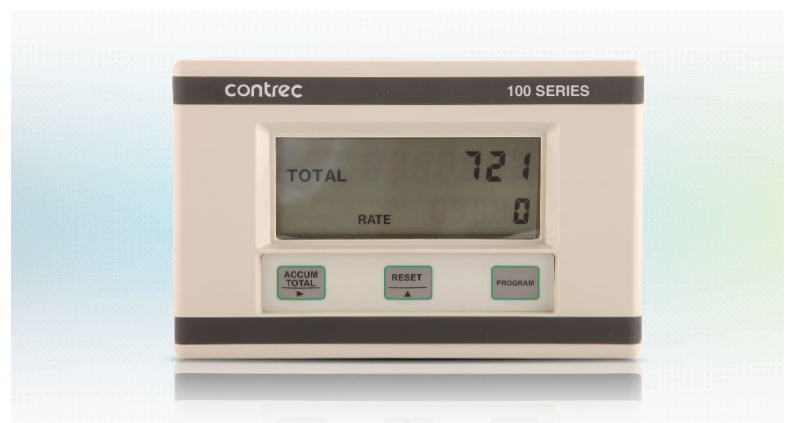
DC Powered

The 103D is powered from a 9-28 Volts DC supply. For installation in hazardous areas a certified intrinsically safe version is available (Please see Model 202D)

The DC powered version will operate from an external power source between 9 and 28 Volts and draws no more than 4mA. This enables the 103D to be powered from AC mains adaptors and eliminates the need to run mains voltages in the field. Lithium batteries provide totaliser and programming retention if the DC power supply is interrupted.

FEATURES

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



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Field Mounted Rate Totaliser 104D



The 104D Field Mounting Rate Totaliser requires no external power 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.

Loop Powered

The 104D is loop powered via a 4-20mA output.

Watertight Field Mounting Enclosure

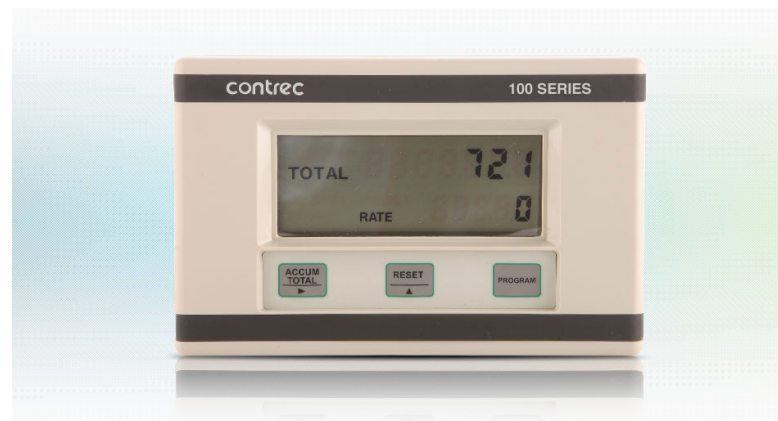
The 104D Rate Totaliser is housed in a rugged yet attractive IP67 (Nema 4X) rated polycarbonate enclosure which is completely watertight. This enables the instrument to be wall mounted using a special universal bracket. A 2" pipe mounting bracket is also available.

Fully User Programmable

K-factor, decimal point positions, filter constants and time base are fully user programmable. Rate and Totals can also be displayed in different engineering units such as gallons per minute and barrels.

FEATURES

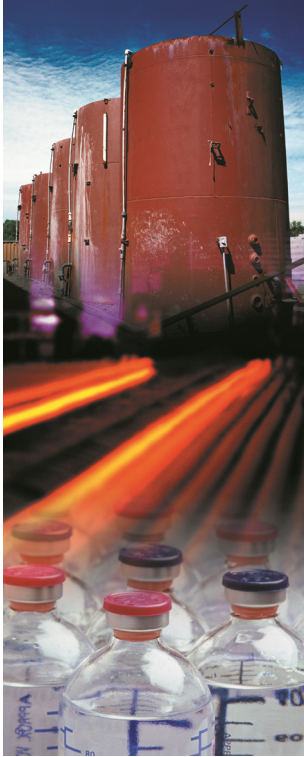
- Displays Rate, Total and Accumulated Total
- Loop DC Powered
- Watertight to IP67 (Nema 4X)
- Wall and Pipe Mounting
- Fully Programmable
- 4-20mA Output
- High and Low Flowrate Alarms
- CE Compliant



Accuracy . Quality . Performance



Frequency/Pulse Input Batch Controller 114D



The Model 114D Batch Controller is designed for flow applications where the precise control of batch quantities is required. Batch Total, Accumulated Total and Preset values can all be displayed on the large LCD display.

The 114D has an input conditioning circuit which will accept pulse or frequency flow signals generated by turbine, positive displacement, paddlewheel or other flowmeters.

Configurable link positions enable the input circuit to be configured for the different signal types.

DC powered with battery backup

The 114D will operate from an external power source between 9 and 28 Volts and draws no more than 4mA.

Lithium batteries provide backup if the DC power is interrupted so that totals are not lost. The solenoids or sensors, however, may still require external power.

Solid state outputs provide control to solenoids and relays, and can sink up to 200mA.

FEATURES

- Displays Batch Total, Accumulated Total and Preset
- One or two stage valve control
- Watertight to IP67 (Nema 4X)
- Wall and Pipe Mounting
- Fully Programmable
- CE Compliant





Level Monitor 120



The Model 120 Level Monitor accepts a 4-20mA signal from a wide range of level sensors, including pressure transmitters, ultrasonic sensors or capacitance probes, and displays both level and tank contents on a large LCD display.

Solid state relay outputs provide up to four level alarms and a 25 point non-linearity correction table allows the instrument to be programmed to fit most tanks.

The Level Monitor is powered entirely from the 4-20mA current loop and, therefore, requires no external power or batteries.

The instrument is fully programmable with setup parameters such as span, offset, alarm levels, etc, stored in a non-volatile memory which will retain all data for more than 10 years without power.

The Model 120 is housed in an attractive IP67 (Nema 4X) polycarbonate enclosure which is completely watertight.

A wall mounting bracket is supplied as standard, while a 2" pipe mounting bracket is available as an option.

FEATURES

- Powered by 4-20 Loop
- Non-linear Tank Correction
- Watertight to IP67 (Nema 4X)
- Four Level Alarms
- Level Bar Graph Display



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Process Indicator 150



The Model 150A process indicator accepts a 4-20mA signal from a wide range of transducers such as pressure and temperature transmitters, weigh scales, pH sensors, flowmeters or level transmitters. The indicator will display the signal level on the bar graph and the scaled process variable on a large LCD display.

Solid state relay outputs provide up to four level alarms and 25 point non-linearity correction table allows the instrument to be programmed for non-linear signals.

The process indicator is powered entirely from the 4-20mA current loop and, therefore, requires no external power or batteries.

The instrument is fully programmable, with setup parameters such as span, offset, alarm levels, etc, stored in a non-volatile memory which will retain all data for more than 10 years without power.

The Model 150 is housed in an attractive IP67 (Nema 4X) polycarbonate enclosure which is completely watertight.

A wall mounting bracket is supplied as standard, while a 2" pipe mounting bracket is available as an option.

FEATURES

- Powered by a 4-20 Loop
- Four Alarms
- Watertight to IP67 (Nema 4X)
- Non-linear signal correction
- Signal Bar Graph Display
- Wall and Pipe Mounting
- CE Compliant





Technical Specifications & Order Codes

Instrument	104A	120A	150A	103D	104D	114D
Application						
Analogue to Frequency	Yes					
Frequency to Analogue				Yes	Yes	
Flow	Yes		Yes	Yes	Yes	Yes
Batching						Yes
Level		Yes	Yes			
Process			Yes			
Input						
Analogue	Yes	Yes	Yes			
Frequency				Yes	Yes	Yes
Features						
Linearisation	Yes	Yes	Yes	Yes	Yes	
Bargraph		Yes	Yes			
Totalisation	Yes			Yes	Yes	Yes
Outputs						
Analogue (2 wire)				Yes	Yes	
Alarm/Relay	One or Two*	Four	Four	One or Two*	One or Two*	Two
Pulse/Frequency	One*			One*	One*	
Specifications						
Uncertainty (% of span)	0.05 %	0.05 %	0.05 %	0.05 %	0.05 %	0.05 %
Update time	0.5 secs	0.5 secs	0.5 secs			
Loop powered	Yes	Yes	Yes	DC Powered	Yes	DC Powered
Voltage drop (max)	2.5 V	2.5 V	2.5V	2.5V	2.5V	
IP67/Nema 4X	Yes	Yes	Yes	Yes	Yes	Yes

* Choose between second alarm or pulse output

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