

214Di BATCH CONTROLLER

The 214Di will batch a preset quantity of liquid in Intrinsically Safe areas.

Easy to use ✓

- Quick and easy to set up
- Simply press the run button to batch
- Displays batch quantity
- Stores an accumulated total
- Preset to your requirements

Simple to install ✓

- Minimal cabling required
- Mounts on the pipe, wall or flowmeter

Accurately batches liquids ✓

- Save time
- Reduce waste and costs
- Improve product quality
- One or two stage valve control

Versatile ✓

- Works with most flowmeters
- Watertight front



Application

This instrument is used in hazardous areas to automatically batch a precise quantity of liquid. It accepts pulsed frequency signals such as those generated by turbine, positive displacement or pelton wheel flowmeters.

Operation

To start a batch you simply press the run button. It will control pumps and valves to deliver your required volume of liquid. One display will show you the batch count whilst the other will show the preset quantity.

Setup

The setup is easy using the keypad and it can be supplied preset for your application. The displays can be set for any units e.g. litres or gallons. During setup the pulses per litre, decimal point positions and valve delays are entered.

Installation

The 214Di requires a DC power supply and batteries provide back up so that totals are not lost if power is interrupted. It is mounted directly on to your flowmeter, wall or pipe.

The two transistor outputs can be used to control valves and pumps. This allows for one or two stage batching with slow start up and/or slow shutdown of the batching process. The first output will energise at the start of the batch and de-energise when the batch is complete. The second output can be set to energise at a fixed time after the start, and to de-energise at a fixed quantity before the end of the batch.

Intrinsically Safe Installation

The 214Di is certified for use in Class 1 Zone 1 hazardous areas with approved sensors and solenoids such as the Apollo IS coil and Namur sensor.

Construction

The instrument is housed in a polycarbonate enclosure that is weatherproof. Cables are inserted through waterproof cable glands.

214Di Batch Controller

Specifications

Display:	LCD which is continuously powered
Batch total:	7 digits 10mm high Resettable from the front panel
Accumulated total:	Displayed when the ACCUM TOT button is pressed
Preset:	4 digits 8.5 mm high
K-factor:	The pulses per unit of measurement (eg pulses/litre) is programmable in the range 0.0001 to 999,999
Decimal points:	The decimal point positions are adjustable
Frequency range:	0.1 Hz to 5 KHz
Signal type:	Selectable for sinewave (15mV peak to peak min), open collector, reed switch or pulse.
DC power input:	9-28 V at 4mA maximum

Battery backup

Type:	Two lithium battery packs
Battery function:	The backup batteries will power the instrument for up to 5 years if no DC power is provided. The batteries will not power a sensor or solenoids.

Outputs

Outputs:	Two open collector outputs suitable for driving DC solenoids or external relays.
Switching power:	200 mA 30 VDC maximum
Saturation voltage:	0.8 V DC max across the output in the "on" state.
Isolation:	Both outputs are separately isolated. A barrier is required to provide DC power to the instrument and to power the I.S solenoids or relays. Only certified intrinsically safe solenoids may be used for I.S applications. Generally, it is preferable to use a pneumatic system with the solenoid valves controlling the air to larger pneumatic valves.

Physical

Temperature:	-20°C to 60°C
Mounting:	Universal mounting bracket supplied for mounting on a wall or panel.
Mounting options:	1. Pipe mounting kit available to fix the unit on to a pipe. 2. Adapter for mounting the instrument on to flowmeters.
Protection:	Sealed to IP67
Cable entry:	By cable glands.

Hazardous Area Approval

ATEX:	II 2G EEx ia IIB T3
Maximum ambient temp:	60 °C

The maximum input parameters from certified coils or other I.S devices which produce a pulse output are:

$$U_i = 24V \quad P_i = 320mW \quad I_i = 20 \text{ mA}$$

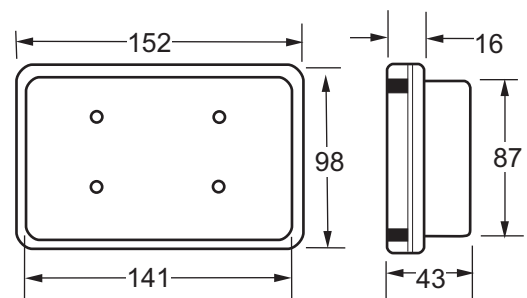
The maximum allowed capacitance and inductance including any cabling is:

$$C_{(ext)} = 60 \mu F \quad L_{(ext)} = 1.5H$$

The maximum voltage and current produced by the 214i is:

$$U_o = 10.0 V \quad I_o = 9.0 \text{ mA}$$

Dimensions



All dimensions in mm.

Contact our flow measurement specialists for advice on your application

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