

# RA33 Batch Controller

## Recording and controlling of batch operations



More information and current pricing:

[www.at.endress.com/RA33](http://www.at.endress.com/RA33)

### Benefits:

- Fixed and automatic after-run correction for constant, extremely accurate results
- Higher quality through fast and exact dosing
- Optional volume correction for mineral oils as per ASTM D1250-04
- Detailed logging of protocols (preset counter, volume counter, batch name and number) as well as error messages and changes of operating parameters
- Standard models are suitable for connecting and supplying all common flow transmitters, temperature sensors and density sensors
- Remote control option to start and abort batch runs
- Daily, monthly and annual statistics on the batch run size and quantity

### Specs at a glance

- **Input** 1 x analogue (I) / pulse (for flow) 1 x RTD (for temperature) 1 x analogue (I) (for density) Loop power supply 24V DC (+/-16%)
- **Output** 1 x analogue (I) / pulse (active) 2 x open collector
- **Display** 160 x 80 Dot-Matrix LCD with white backlit Colour change in case of alarm event Active display area 70 x 34 mm
- **Calculations** Volume calculation

**Field of application:** The Batch Controller RA33 is designed to record flow and control output signals for valves and pumps to ensure the exact dosing of predefined batch quantities. The measured volume can be corrected with the temperature/density compensation function. The filling process can be optimized with an automatic or fixed after-run correction. Mineral oils can be corrected according to the ASTM D1250-04 standard.

---

## Features and specifications

---

Energy & Application Manager	<b>Measuring principle</b> Application manager
	<b>Measuring principle</b> Batch controller
	<b>Function</b> Filling & dosing
	<b>Calculations</b> Volume calculation
	<b>Number of applications</b> 1
	<b>Data storage</b> yes
	<b>Calculation standards</b> ASTM D1250-04
	<b>Communication</b> RS232 USB Ethernet Modbus TCP Modbus RTU
	<b>Power supply</b> Not defined
	<b>Loop power supply</b> Low voltage power supply: 100 bis 230 V AC (-15% / +10%) Small voltage power supply: 24 V DC (-50% / +75%) 24 V AC ( $\pm$ 50%)

---

**Energy & Application Manager****Protection class**

IP65

**Input**

1 x analogue (I) / pulse (for flow)  
1 x RTD (for temperature)  
1 x analogue (I) (for density)  
Loop power supply 24V DC (+/-16%)

**Output**

1 x analogue (I) / pulse (active)  
2 x open collector

**Dimensions (WxHxD)**

144 x 144 x 103.1 mm (5.67" x 5.67" x 4.06")

**Operation**

3 operation buttons and 14 function buttons for batch operation or via FieldCare  
Read out of historical / logged data via Field Data Manager software (SQL database and visualization interface)  
Selectable language

**Display**

160 x 80 Dot-Matrix LCD with white backlit  
Colour change in case of alarm event  
Active display area 70 x 34 mm

**Software functions**

Volume calculation  
1 or 2 stage operation  
Manual and automatic overrun correction  
Volume correction factor (VCF) according ASTM D1250-04 for generalized crude oils, refined products and lubricating oils

---

---

**Energy & Application Manager** **Certificates**  
CE  
CSA GP  
NTEP (USA)

---

**Acquisition / Evaluation** **Measuring principle**  
Batch controller

---

**Function**  
Filling & dosing

---

**Certification**  
CE  
UL listed  
CSA GP

---

**Input**  
1 x analogue (I) / pulse (for flow)  
1 x RTD (for temperature)  
1 x analogue (I) (for density)  
Loop power supply 24V DC (+/-16%)

---

**Output**  
1 x analogue (I) / pulse (active)  
2 x open collector

---

**Relay output**  
2 x relay

---

**Auxiliary power supply / Loop power supply**  
Low voltage power supply:  
100 bis 230 V AC (-15% / +10%)  
Small voltage power supply:  
24 V DC (-50% / +75%), 24 V AC ( $\pm$ 50%)

---

**Acquisition / Evaluation****Dimensions (wxhxd)**

144 x 144 x 103.1 mm  
(5.67" x 5.67" x 4.06")

---

**Software**

Volume calculation  
1 or 2 stage operation  
Manual and automatic overrun correction  
Volume correction factor (VCF) according ASTM D1250-04 for  
generalized crude oils, refined products and lubricating oils

---

**Operation**

3 operation buttons and 14 function buttons for batch operation or via  
FieldCare  
Read out of historical / logged data via Field Data Manager software  
(SQL database and visualization interface)  
Selectable language

---

**Display**

160 x 80 Dot-Matrix LCD with white backlit  
Colour change in case of alarm event  
Active display area 70 x 34 mm

---

More information [www.at.endress.com/RA33](http://www.at.endress.com/RA33)