



## NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Console Controller  
Wholesale Meter Register, Controller, Digital Electronic  
Model: RA-33

Category 2 Sealing

**Submitted By:**

Endress+Hauser Flowtec AG  
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**Standard Features and Options**

- Pulse/frequency input 0 to 12.5 kHz
- 2 Relay Outputs
- 2 Digital Outputs
- Communication Interfaces
  - USB Interface (CDI Protocol)
  - Ethernet TCP/IP (optional)
  - RS232 Printer Interface (optional)
  - RS485 (optional)
  - MODBUS TCP (optional)
  - MODBUS RTU (optional)
- Safety Approval
  - CSA General Purpose
  - UL Listed

**Model Designation:** The batch controller model code begins with RA33. There are various letter and number combinations in the model matrix which are non-metrological. The NTEP approved RA33 is identified with a letter number pair L2 in the model code matrix.

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages. \*Editorial changes, not affecting the type or metrological content, corrected this certificate.

  
Brett Gurney  
Chairman, NCWM, Inc.

  
James Cassidy  
Committee Chair, NTEP Committee  
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## Endress+Hauser Flowtec AG Console Controller / RA-33

**Application:** The Endress+Hauser RA33 is intended for use as the indicating element and controller for stationary systems. It is designed to be used in conjunction with optional control valves and pumps. The Endress+Hauser RA33 must be interfaced with any NTEP certified and compatible volumetric of mass meter. The Endress+Hauser RA33 may indicate in mass or volumetric units.

**Identification:** The identification information appears on a label on the left side of the indicator when facing the display.

**Sealing:** The Endress+Hauser RA33 utilizes a Category 2 sealing method. An internal switch is used to secure the program in the write protection mode. A physical seal is threaded through a sealing screw and tabs on the display cover and body of the housing located at the bottom right of the RA33.

**Operation:** The Endress+Hauser RA33 is a programmable load controller used for the delivery of liquid product typically found in loading rack applications. The Endress+Hauser RA33 provides digital outputs to printing devices and auxiliary consoles.

**Test Conditions:** The emphasis of the evaluation was on the system's design, operation, accuracy, identification, programmable features interaction with accessory equipment and on the content of the printed ticket. The device was tested for accuracy, identification, sealing, and agreement of indications.

**Evaluated By:** Randy Ramsey (NC), Hunter Hairr (NC)

**Type Evaluation Criteria Used:** *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices, 2019 Edition. NCWM Publication 14 Measuring Devices, 2018 Edition.*

**Conclusion:** The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

**Information Reviewed By:** J. Truex (NCWM)

### **Examples of Device:**



Endress+Hauser RA33 Controller



External Physical Seal



Internal Write Protection Switch