00815-0100-4725
English
Rev. AA

ROSEMOUNT SPECIFICATIONS

Model 8732C Magnetic Flowmeter Transmitter

1. EQUIPMENT DESCRIPTION

- A four-wire microprocessor based dc magnetic flowmeter transmitter with HART®-based digital communication capabilities.

2. REFERENCES

- Material supplied under this specification shall be in conformance with:
  - National Electrical Manufacturer's Association (NEMA) standard number ICS6, "Enclosure for industrial controls and systems," 4X.
  - Factory Mutual and CENELEC standards for explosion-proof enclosures.
- Manufacturer must be certified as meeting the requirements of ISO 9001.

3. ENVIRONMENTAL CONDITIONS

- The instrument selected shall be suitable for the following conditions:
  - Humidity: 0–100% relative humidity.
  - Ambient temperature limit: –40 to 165 °F (–40 to 74 °C) without local display.
    –22 to 158 °F (– 30 to 70 °C) with local display.
- Transmitter shall have a dual-compartment housing with a moisture barrier totally isolating the electronic circuitry from field wiring and communication terminals.

4. ELECTRICAL

- Transmitter shall be certified for use in hazardous areas by a recognized authority such as Factory Mutual.
- Electrical connections shall be a choice of ¾–14 NPT, CM20, or PG13.5 conduit.

5. POWER SUPPLY

- Transmitter shall operate on 90 to 250 V ac, 50 or 60 Hz.

6. FLOW RATE RANGES

- Transmitter shall be capable of processing signals from flow applications traveling between 0.04 and 30 feet per second for flowtube sizes ranging from 0.15 to 60 inches. Upper range value shall be adjustable between –30 and 30 feet per second.

7. OUTPUTS

- Outputs shall be a 4–20 mA analog signal with a superimposed HART digital signal, switch selectable as internally or externally powered. Analog output shall be adjustable remotely with a field communicator or control system. A simultaneous, independently scaleable pulse/frequency output (0 to 1000 Hz) shall also be available.
- Instead of the pulse output, an auxiliary output shall be available and shall consist of a externally powered off switch closure to indicate either a reverse or zero flow condition.

8. DATA STORAGE

- Flowmeter data shall be stored in a nonvolatile memory.
- Data integrity shall be protected by an 8-bit checksum.
- Message integrity shall be verified by vertical and longitudinal parity checks.

9. SOFTWARE FUNCTIONALITY

- Transmitter shall be capable of simultaneous communication over the 4–20 mA signal.
- The transmitter shall perform continuous diagnostics, be capable of self-test functions, and be able to give specific diagnostic information.
- The configuration capabilities of the transmitter shall allow the user the ability to input and store information including range values, engineering units, flow tube size, damping, coil pulse mode, totalizer display, flow rate display, pulse mode, transmitter tag number, transmitter serial number, descriptor, messages, flowtube tag number, flowtube serial number, liner material, electrode type, electrode material, flange type, and flange material.
- Transmitter shall provide two user selectable coil drive frequencies.
- Transmitter shall provide digital signal processing capabilities for reducing process noise. Included in this routine shall be the ability to adjust transmitter response time.
- Transmitter shall be capable of providing empty pipe indication.
- Software security shall be user selectable.
- Upscale/downscale alarms shall be user selectable.
- Process variable information shall be available digitally.

10. PERFORMANCE

- The transmitter shall meet the following performance criteria as a minimum:
  - Accuracy:
    With model 8705 flowtube:
    System accuracy shall be ±0.5% of rate from 1 to 30 feet per second. Between 0.04 and 1.0 feet per second the system shall have accuracy of ±0.005 feet per second. Analog output has the same accuracy as frequency output plus an additional 0.05% of span.
    With model 8711 flowtube:
    System accuracy shall be ±0.5% of rate from 3 to 30 feet per second. Between 0.04 and 3 feet per second the system shall have an accuracy of ±.015 feet per second. Analog output has the same accuracy as frequency output plus an additional 0.05% of span.
  - Stability: ± 0.1% of rate over six months.
  - Ambient temperature effect: ± 0.25% of rate over entire temperature range.

11. OPTIONS

- The following options shall be available:
  - Illuminated indicating LCD meter that includes totalized flow display with front panel optically operated keys, allowing full communication.
  - Transient protection circuitry.
  - Non-volatile totalizer.
  - Integral mount configuration.

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