

RCT™ RF Series

RF Admittance Level Transmitter



One Transmitter for All Applications

With RF Admittance technology, one transmitter handles all your applications (Liquids, granulars, slurries, interfaces; cryogenic to 500°F, full vacuum to 10,000 PSI)

Smart Advantages

Major advantages of the RCT RF:

- Ignores coatings on the sensor
- Built in tank strapping
- Choice of output in level, flow, weight or volume
- Factory precalibration available
- Choice of digital or 4-20 mA transmission
- Built-in self diagnostics
- Integral or remote electronics

Each System is available with:

- User definable display (percent or engineering units)
- Easy 2-point calibration
- Adjustable time delay provides signal damping
- Meter trim to adjust the output signal to a known plant standard
- Real-time view of input capacitance values
- Optional display/keypad for quick and easy setup and local indication

The RCT RF smart level transmitter provides remote calibration without having to empty and fill the vessel.

Configuration Without Changing Level

Configure the RCT RF quickly and easily before installation or on the vessel without moving the level. Simply key in the calibration data and walk away.

Remote Configuration

No longer is it necessary to “sniff” for hazardous gasses or to go out in inclement weather to calibrate your level transmitter. Configure the RCT RF from the convenience and comfort of the control room... or anywhere along the two-wire loop.

The RCT RF Series can also be configured with the HART® Model 275 Communicator or optional AMETEK Drexelbrook PC Software.

Easy Calibration Saves Time

Push button calibration is menu-driven through a full 4-digit LCD display that resides integral to the electronic unit. Hand-held communicators are not required for a fast and complete set-up.

Unsurpassed Accuracy

No other RF transmitter matches the accuracy, stability, and repeatability of the RCT RF. This translates into smoother operation and less downtime.

Compatibility with the Future

The standard HART protocol is a proven instrumentation protocol. Over a half million field instruments have been supplied by over 70 instrument manufacturers to process plants all over the world. The RCT RF is also compatible with Allen Bradley PLCs through their Smart Transmitter Interface products.

Continuous Level Measurement

RCT™ RF Series Level Transmitter

Performance Specifications Under Rated Conditions

Upper Range Limit (URL)

45,000 pF, approximately 650 feet (200m) for full scale, sensor dependent.

Recommended min. span²

1 pF, approximately .25" (6mm) of a conductive fluid and 1.5" (35mm) of an insulating fluid.

Output Signal Response Time

250 mSec

Accuracy¹ & 2

0.25 % of range

Combined temperature effect per 50°F (10°C)

0.1% of range

Output (two wire)

4 to 20 milliamps HART® protocol³

Supply Voltage

17 to 50 Vdc

Supply Voltage Effect

± 0.2% of output at maximum span per 39.2 volt change

Step Response

Less than 2 seconds to 90% of final value when damping = 0 sec.

Damping Time Constant

0 to 90 seconds, 1 second steps

Spark Protection (4 to 20 output)

10 Amperes

Spark Protection (Sensor)

10 Amperes (Center Wire to Shield or Shield to ground)

Load Resistance

600 Ohms @ 24 Vdc

Approvals Pending

FM - I.S. Class I Div. 1 / Div. 2

CSA - I.S. Class I Div. 1 / Div. 2

KEMA ATEX - II 1\2 GD EEx ia IIC T4

1 . Accuracy includes the combined effects of linearity, hysteresis, and repeatability. It refers to the transmitter only and is measured at reference conditions of 25 degrees C± 1° , 10 - 55% R.H. and 24 ± 1.2 Vdc, using an admittance standard (applied to transmitter sensor terminals) in place of the sensor.

2. Not all specifications apply at minimum span.

3. HART (Highway Addressable Remote Transducer) Registered tradename of the HART Foundation.

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Model Numbering

RCT RF Series

