

RCT™ RF Series

RF Admittance Level Transmitter Featuring the Universal III™ Mark II Electronics



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)

Easiest Calibration Ever - Local or Remote

Configure this transmitter from anywhere along the two-wire loop without changing the level in the vessel. Or... calibrate via local display / keypad without the need for handheld communicators.

Smart Advantages

Major advantages of the RCT RF:

- Ignores coatings on the sensing element
- Built in tank strapping
- Choice of output in level, flow, weight or volume
- Factory pre calibration
- Choice of digital or 4-20 mA transmission
- Built-in self diagnostics

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

Configuration Without Changing Level

- Use your existing HART® 275 handheld communicator or Drexelbrook's PC software to configure the transmitter.
- Use an optional low cost Display / Keypad for local indication. Calibration and configuration without costly handheld communication terminals or expensive PC based systems.

Eliminate Routine Maintenance

- No moving parts to break or wear out
- No need for routine maintenance or re calibration

Compliant with System Validation

- PC based software allows full documentation for validation requirement.

Tamper Proof

No adjustments on the transmitter; prevents unauthorized "tweaking" or inadvertent changes in calibration

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)

40,000 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.

Accuracy¹ & 2

0.25 % of range

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

1% of range

Output (two wire)

4 to 20 mA HART® protocol³

Supply Voltage

17 to 30 Vdc

Supply Voltage Effect

± 0.2% of output at maximum span from 12 to 30 vdc

Step Response

Less than 1 second 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

750 Ohms @ 24 Vdc

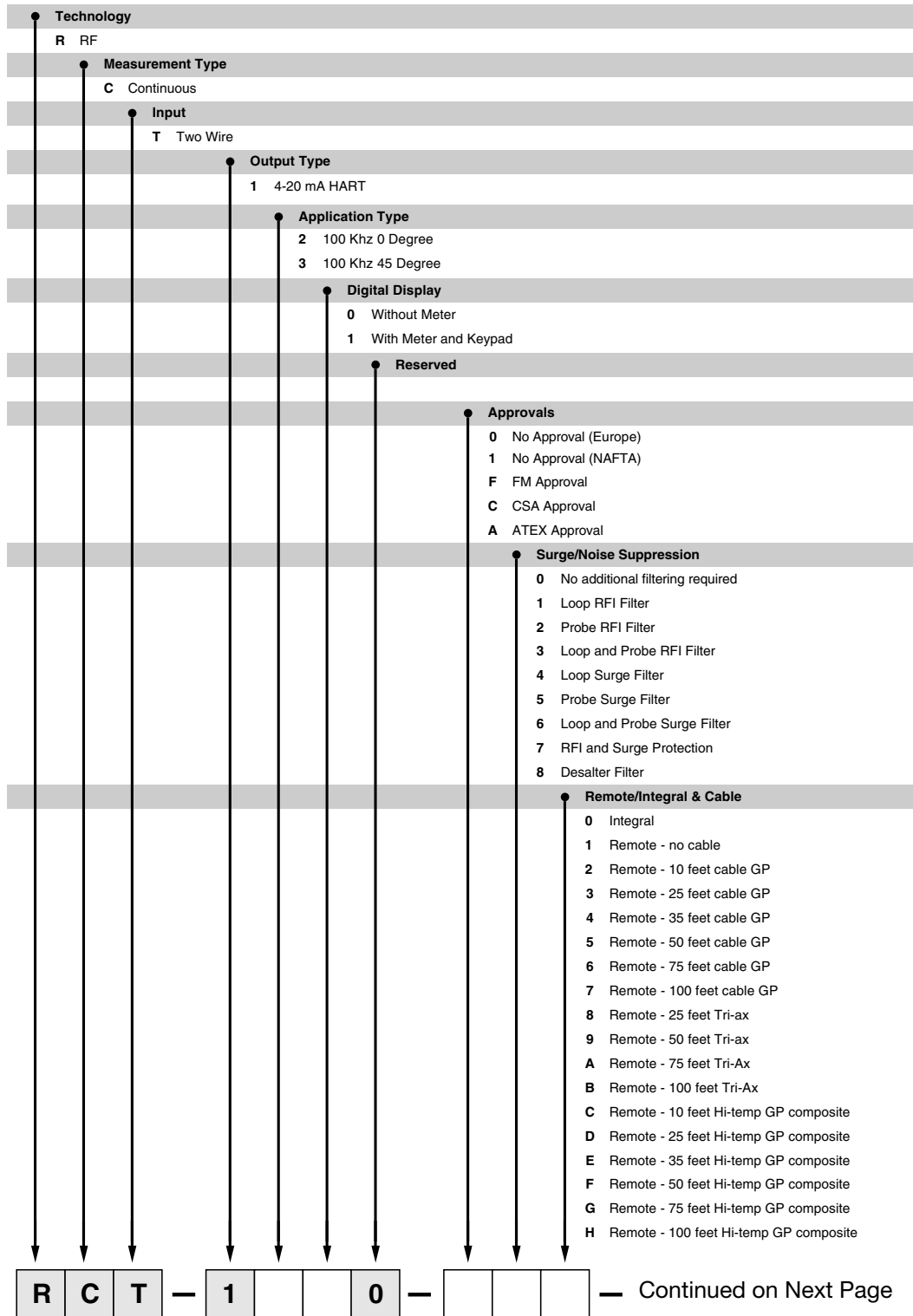
- 1 . Accuracy includes the combined effects of linearity, hysteresis, and repeatability. It refers to the transmitter only and is measured at reference conditions of 25 degrees C ± 1° , 10 - 55% R.H. and 24 ± 1.2 Vdc, using an admittance standard (applied to transmitter sensor terminals) in place of the sensor.
2. Not all specifications apply at minimum span.
3. HART (Highway Addressable Remote Transducer) Registered tradename of the HART Foundation.

Continuous Level Measurement

RCT™ RF Series Level Transmitter

Model Numbering

RCT RF Series



Continuous Level Measurement

RCT™ RF Series Level Transmitter

Model Numbering (Continued)

Sensing Element	Sensing Element	Sensing Element	Sensing Element
0 0 700-1202-001	3 0	6 0 700-0204-038	8 0 700-0001-051
0 1 700-1202-012	3 1 700-0029-001	6 1 700-0204-002	8 1 700-0001-052
0 2 700-1202-014	3 2 700-0029-002	6 2 700-0204-048	8 2 700-0001-053
0 3 700-1202-018	3 3 700-0029-003	6 3 700-0204-022	8 3 700-0001-054
0 4 700-1202-041	3 4 700-0029-004	6 4 700-0204-024	8 4 700-0001-061
0 5 700-1202-041 (91-303)	3 5 700-0029-005	6 5 700-0204-049	8 5 700-0001-062
0 6 700-1202-031	3 6 700-0029-021	6 A 700-0005-009	8 6 700-0001-063
0 7 700-1202-010	3 7 700-0029-022	6 B 700-0005-036	8 7 700-0001-064
0 8 700-1202-041 w/conc	3 8 700-0029-023	6 C 700-0005-045	8 8 700-0002-041
0 9 700-1202-033	3 9 700-0029-024	6 D 700-0005-095	8 9 700-0002-042
1 0 700-0001-018	3 A 700-0029-025	6 E 700-0005-285	8 A 700-0002-043
1 1 700-0201-005	3 B 700-0029-066	6 F 700-0005-385	8 B 700-0002-044
1 2 700-0201-005 Hast. C	3 C 700-0029-102	6 G 700-0205-002	8 C 700-0002-051
1 3 700-0201-036	3 D 700-0029-103	6 H 700-0205-005	8 D 700-0002-052
1 4 700-0202-002	3 E 700-0029-104	6 I 700-0205-015	8 E 700-0002-053
1 5 700-0202-043	3 F 700-0029-105	6 J 700-0205-018	8 F 700-0002-054
1 6 700-0002-360	3 G 700-0029-106	6 K 700-0205-020	8 G 700-0002-061
1 7 700-0202-036		6 L 700-0205-075	8 H 700-0002-062
1 8 700-0001-022	4 0 700-0005-018	6 M 700-0205-079	8 I 700-0002-063
1 9 700-0001-016	4 1 700-0005-018 91-13		8 J 700-0002-064
1 A 700-0001-024 Hast. C	4 2 700-0005-019	7 0 700-0008-122	9 0 700-0001-034
1 B 700-0001-026 CS	4 3 700-0005-028	7 1 700-0008-124 Hast C	9 1 700-0001-040
1 C 700-0001-026 316SS	4 4 700-0005-029	7 2 700-0008-126 CS	9 2 700-0001-044
1 D 700-0001-074 CS	4 5 700-0005-035	7 3 700-0008-126 316SS	9 3 700-0001-045
1 E 700-0001-074 316SS	4 6 700-0005-035 91-130	7 4 700-0008-134	9 4 700-0001-324
1 F 700-0001-074 Hast. C	4 7 700-0005-048	7 5 700-0008-136	9 5 700-0002-027 90-635
1 G 700-0001-344	4 8 700-0005-054	7 6 700-0008-144	9 6 700-0002-029
1 H 700-0001-344 91-175	4 9 700-0005-085	7 7 700-0008-144 91-77	9 7 700-0002-033
	4 A 700-0005-085 Hast C	7 8 700-0008-144 91-299	9 8 700-0002-040
2 0 700-0209-002	4 B 700-0005-096	7 9 700-0008-174 CS	9 9 700-0002-057 90-523
2 1 700-209-002 91-112	4 C 700-0005-348	7 A 700-0008-174 316SS	9 A 700-0002-057 91-006
2 2 700-0209-024	4 D 700-0005-354	7 B 700-0008-174 Hast C	9 B 700-0002-057 91-232
2 3 700-0002-023	4 E 700-0205-078	7 C 700-0008-222	9 C 700-0002-059
2 4 700-0002-024 316SS		7 D 700-0008-222 91-269	9 D 700-0002-321 90-674
2 5 700-0002-024 Hast C	5 0 700-0207-001	7 E 700-0008-242	9 E 700-0003-009
2 6 700-0002-027	5 1 700-0207-002	7 F 700-0018-122	9 F 700-0004-031
2 7 700-0002-027 91-220	5 2 700-0207-003	7 G 700-0018-124 Hast C	9 G 700-0004-050
2 8 700-0002-028	5 3 700-0207-004	7 H 700-0018-126 CS	9 H 700-0005-018 91-26
2 9 700-0002-036	5 5 700-0207-006	7 I 700-0018-126 316SS	9 I 700-0005-018 91-195
2 A 700-0002-037	5 6 700-0201-025	7 J 700-0018-134	9 J 700-0005-348 91-59
2 B 700-0002-056	5 7 700-0201-026	7 K 700-0018-136	9 K 700-0009-002
2 C 700-0002-057	5 8 700-0201-027	7 L 700-0008-144	9 L 700-0009-024
2 D 700-0002-057 91-120	5 9 700-0201-051	7 M 700-0018-144 91-77	9 M 700-0009-057
2 E 700-0002-224 316SS	5 A 700-0201-052	7 N 700-0018-144 91-299	9 N 700-0011-001
2 F 700-0002-224 Hast C	5 B 700-0201-058	7 O 700-0018-174 CS	9 O 700-0011-003
2 G 700-0002-227	5 C 700-0201-059	7 P 700-0018-174 316SS	9 P 700-0011-004
2 H 700-0002-321	5 D 700-0202-053	7 Q 700-0018-174 Hast C	9 Q 700-0011-015
2 I 700-0002-363	5 E 700-0202-054	7 R 700-0018-222	9 R 700-0021-001
	5 F 700-0202-056	7 S 700-0018-222 91-269	9 S 700-0021-002
			9 T 700-0021-003
			9 U 700-0021-007
			9 V 700-9000-494
			N N System without Sensing Element



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