RTD and Slidewire Transducers

For measuring temperature of transformer windings and other applications that do not require the accuracy of a linearized RTD reading, mTech makes a series of RTD and Slidewire Transducers. These ultra-linear devices convert a variable input resistance to a voltage, current or process output. For level measurement applications, inverse outputs are available with the output going from maximum to minimum while the resistance changes from minimum to maximum. The devices will accommodate 2, 3, or 4-wire connections to allow virtually every normally used input configuration.

RTD: To measure temperature where the resistance of the RTD changes in a fixed way with changes in temperature. The transducer actually measures resistance and produces an output proportional to the resistance.

Slidewire: For applications such as transformer tap position.

Standard Features

- 0.2% of reading accuracy
- Low temperature coefficient
- Exceptional long-term stability
- Narrow resistance spans
- Voltage, current, and process outputs
- Standardized wiring and mounting
- ABS DIN rail mount or metal surface mount cases

Specifications

Accuracy (@ 25°C ±2°C): 0.19% of reading ±0.01% of span

Temperature Range: -20°C to +70°C

Temperature Coefficient: 0.01%/°C, 100 ppm typical

Operating Humidity: 0-95% non-condensing

Output Ripple (Peak): 0.5% of span (max.)

Dielectric Test: 2,000 Vrms for 1 minute, 2,400 V for 1 second

Surge Withstand: ANSI C37.90a (IEEE 472); BEAMA 219; special 5 kV

Response Time: 200 msec to 90%, 400 msec to 99%

Calibration Adjustment: Span, ±10% standard; zero, ±2% standard

Power Requirement: 120 or 240 VAC, 3.5 watts

Available Models – RTD/Slidewire Transducers

To Order, Specify:

A. ENCLOSURE

Extruded Aluminum Metal, Surface Mount	RES
ABS DIN, Rail Mount	DRES

B. INPUT

Variable Resistance Standard	0
Variable Resistance Inverse	1
10 Cu 1.427 RTD	2
100 Pt 1.385 RTD (DIN)	3
100 Pt 1.392 RTD (REF)	4
120 Ni 1.672 RTD	5
200 Pt 1.385 RTD (DIN)	6
200 Pt 1.392 RTD (REF)	7
500 Pt 1.385 RTD (DIN)	8
500 Pt 1.392 RTD (REF)	9
Special	X

C. OUTPUT

0 ± 1 mA	0 - 10,000 Ohms	0
0 ± 3 mA	0 - 3,300 Ohms	1
0 ± 5 mA	0 - 2,000 Ohms	2
0 ± 10 mA	0 - 1,000 Ohms	3
4 - 20 mA	0 - 750 Ohms.	4
0 ± 100 mV	20 Ohms min.	5
0 ± 1 V	200 Ohms min.	6
0 ± 5 V	1,000 Ohms min.	7
0 ± 10 V	2,000 Ohms min.	8
1 - 5 V	1,000 Ohms min.	9
Special		X

D. AUXILIARY POWER

120 VAC	0
230 VAC	1
DC Aux Power (Please Specify)	K
Special	X

E. MEASURED UNITS

Ohms	O
Degrees Fahrenheit	F
Degrees Celsius	C
Degrees Kelvin	K

F. Zero Output from Transducer
State in Ohms or degrees Fahrenheit, Celsius, or Kelvin

G. Low End of Output Span
State in Ohms or degrees Fahrenheit, Celsius, or Kelvin

H. Top End of Output Span
State in Ohms or degrees Fahrenheit, Celsius, or Kelvin

I. SUFFIX (If Applicable)

25 to 125% Calibration	A
Case Ground Terminal①	G
Special	X

① Metal case models only.

EXAMPLE: DRES-5-4-0-F-0 °F-0 °F-100°F is the ordering code for an RTD Transducer in a DIN rail mount case, 120 Ni 1.672 RTD input, 4 - 20 mA 0 - 750 Ohms output, 120 VAC auxiliary power, degrees Fahrenheit measured unit, 0°F zero output, 0°F low end of output span, 100°F top end of output span.

See page 37 for connections.

ACGTECH

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