Series 441 Programmable Temperature Transmitter Specifications

OUTPUT

Output (Analog)

Output signal	(4 to 20) mA or (20 to 4) mA
Transmission as	Temperature linear, resistance linear, voltage linear
Maximum load	($V_{power\ supply}$ - 8 V) / 0.025 A (current output)
Digital filter 1st degree	(0 to 8) s
Induced current required	≤ 3.5 mA
Current limit	≤ 25 mA
Switch on delay	4 s (during power up I_a = 3.8 mA)
Electronic response time	1 s

Failure Mode

Undershooting measurement range	Decrease to 3.8 mA
Exceeding measurement range	Increase to 20.5 mA
Sensor breakage/short circuit [1]	≤ 3.6 mA or ≥ 21.0 mA

Electrical Connection

Power supply	U_b = (8 to 30) V dc, polarity protected
Galvanic isolation (In/out)	$\hat{U}$ = 2 kV ac
Allowable ripple	U_{ss} ≤ 5 V at U_b ≥ 13 V, f_{max} = 1 kHz

ACCURACY

Reference conditions	Calibration temperature (23 ± 5) °C [73 ± 9] °F

Resistance Thermometer (RTD)

TYPE	MEASUREMENT ACCURACY
Pt100, Ni100 Pt500, Ni500 Pt1000, Ni1000	± 0.2 °C or 0.08% [2] ± 0.5 °C or 0.20% [2] ± 0.3 °C or 0.12% [2]

Resistance (Ω)

TYPE	MEASUREMENT ACCURACY	MEASUREMENT RANGE
Resistance	± 0.1 Ω or 0.08% [2]	(10 to 400) Ω
	± 1.5 Ω or 0.12% [2]	(10 to 2000) Ω

[1] Not for thermocouple
[2] % is related to the adjusted measurement range (the value to be applied is the greater)