The T287 is a programmable two-wire transmitter that is configured to provide an isolated 4-20mA signal in proportion to the input signal. The T287 accepts thermocouple, 2-wire, 3-wire, or 4-wire RTD, potentiometer, resistance and millivolt inputs. The T287 supports either single or dual inputs. In the dual input mode, either input can be selected to control the output, or math functions can be applied in which both inputs have an effect on the output. The functions available are Sum, Difference, Average, Higher of the two or Lower of the two inputs. Typical applications include providing accurate, stable signals to distributed control systems (DCS), supervisory control and data acquisition systems (SCADA), environmental monitoring and control systems (EMCS), data acquisition and control systems (DACS) and custody transfer/pipeline systems.

Configuration is performed by connecting the transmitter to a standard (9-pin RS-232) PC serial port using an isolated interface adapter, and running a user-friendly Windows-based program. All of the configuration information can be defined and modified using only a PC, the interface adapter, and the transmitter. No loop supply, input simulation or meter on the output is required. The fully isolated adapter reduces the risk of damage to the PC which can be caused by spikes and surges on field wiring entering the computer via its unprotected serial port.

The T287 yields higher accuracy and long-term stability with lower power consumption than prior generation transmitters. The T287 automatically performs self-tests and auto-calibration while in service, resulting in a stability of better than ±0.1% of span over 12 months.
Specifications

Input Types:
- Thermocouples:
  - Most standard types & all special types using customer defined tables & polynomials.
- RTD:
  - 2-, 3- & 4-wire, Pt-100, Ni-110, Ni-120 & other RTDs. Includes Callendar-Van-Dusen adaptation and custom sensors linearization with user defined tables and polynomials.
- DC mV: -10 to 100mV
- Potentiometers: 0 to 20k Ohms
- Resistance: 0 to 400 Ohms

General Specifications:
- Minimum Range: 2mV
- Output: 4-20mA
- Supply Voltage: 9-40VDC @ no load, reverse polarity protected
- Maximum Load:
  \[ R_{\text{max}} = \left( \frac{V_{\text{supply}} - 9V}{20mA} \right) \]
- Operating Temperature: -40 to 85°C
- Storage Temperature: -55 to +125°C
- Humidity: 0 to 95% RHNC
- Response Time:
  - 0.3 seconds, to 90% of input (>3 updates/sec)

Damping Factors:
- Programmable 0 to 64 seconds, to 0 to 120% of input range, using config software

Stability:
- Better than ±0.1% of span for 12 months

Isolation:
- 2000VDC, input to output

RFI Protection:
- <1% effect of span at 20-1000MHz and at field strength of 20V/m

Performance Specifications:
- Output Resolution:
  - 0.015% of span (2.5uA)
- Output Linearity (D/A):
  - Better than 0.02% of output span

Sensor Linearization:
- Better than 0.1°C for RTDs
- Better than 0.2°C for Thermocouple

Cold Junction Compensation:
- Automatic to within ±0.7°C for all thermocouples

Temperature Stability:
- 0.015%/°C combined zero and span.

Supply Voltage Effect:
- < ±0.003% per volt.

Calibration:
- Automatic, unit includes all calibration parameters. The unit performs periodic zero and span self-test, and auto-calibration.

Input Linearity:
- Better than 0.01% of span (mV input)

Terminal Assignments

Ordering Information
Models & Accessories
- Specify:
  1. Model: T287-0000

Accessories
- AP9046 Action Pak 24/40VDC, 65mA Loop Power Supply
- V560/565 3-1/2 digit remote loop powered indicator with wide ranging display.
- T25H-0000 Head Mount Enclosure - 1/2 NPT for Thermowell and Conduit.

Factory Assistance
For additional information on calibration, operation and installation contact our Technical Services Group:
703-669-1318
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