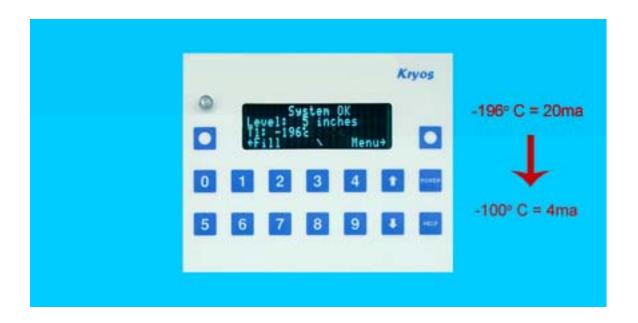
PACER DIGITAL SYSTEMS

Analog Signal for Temperature

Independent 4-20 ma output can be added to any product



A programmable two-wire transmitter is configured to provide an isolated 4-20ma signal in proportion to the temperature. This device accepts a type T thermocouple and can be tied into the cryogenic control system or can operate as an independent device. The device is also capable of supporting either single or dual inputs where both inputs have an effect on the output. The functions available are Sum, Difference, Average, Higher of the two or Lower of the two. This device can provide an accurate and stable signal to a supervisory control, a data acquisition system and environmental monitoring.

This device uses microprocessor technology that yields higher accuracy and long-term stability with lower power consumption. This transmitter performs frequent self-tests and auto-calibration while in service, resulting in very stable, long-term performance. The stability is greater than .1% of span over 12 months.



Analog Signal for Temperature

Input Type

Type T Thermocouple

General Specifications

Minimum Range 2mV Output 4-20mA

Supply Voltage 9-40VDC (@ no load), reverse polarity protected

Maximum Load $R_{max} = (V_{supply} - 9V) / 20mA$ Operating Temperature $-40 \text{ to } 85^{\circ}\text{C}$

Operating Temperature -40 to 85°C Storage Temperature -55 to +125°C Humidity 0 to 95% RHNC

Response Time .3 seconds, to 90% of input (>3 updates per second)

Damping Factors Programmable 0 to 64 seconds, 0 to 120% of input range

Stability Better than +/- .1% of span for 12 months

Isolation 2000 VDC, 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 0.2oC 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 the calibration parameters.

The unit performs periodic zero& span self-test and

auto calibration.

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