

NUS-710DU0TR Master (RTD) Trip Unit

The NUS-710DU trip units are form, fit and function replacements for the corresponding trip units in the Emerson-Rosemount Model 710DU Trip/Calibration System.

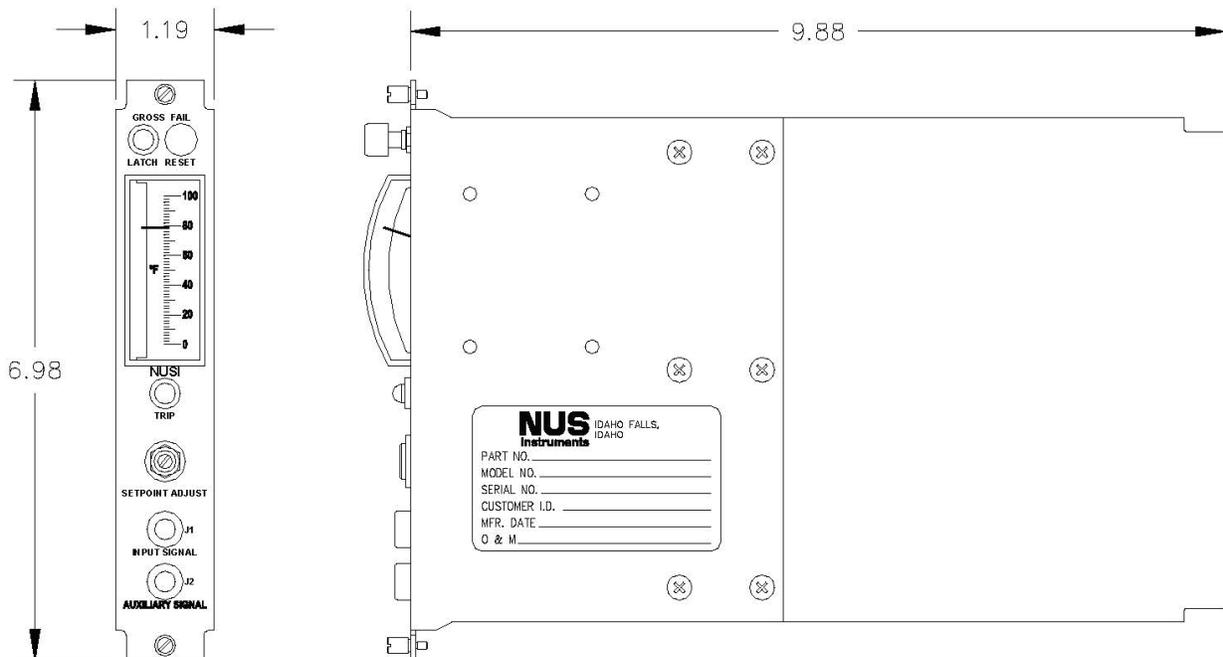
The Master (RTD) Trip Unit is almost identical to the Master (4 to 20 mA) Trip Unit. The only differences are in the input circuit, in the auxiliary analog output circuit, and in the calibrate command circuit.

One Master Trip Unit is required for each 3-wire RTD. This trip unit produces a trip output signal when the input signal passes through a pre-set trip point, and a gross failure signal when the input signal is outside pre-set high or low limits.

In addition to trip and gross failure outputs, the Master Trip Unit also produces two buffered analog output voltages proportional to the input signal. One analog output is used to drive up to seven Slave Trip Units, thereby establishing as many as eight trip points (one for Master and seven for Slaves) for a single input signal. The second analog voltage, designated as the auxiliary analog output, is used to drive external recording or monitoring equipment.



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Master (RTD) Trip Unit

SPECIFICATIONS

Input:	Shielded, 3-wire, platinum RTD, 100 Ω
Output:	24 Vdc (nominal) for trip, gross failure, and calibration status 12 Vdc (nominal) for trip status
Power Supply Voltage:	22 Vdc to 28 Vdc
Fuses	F1 & F2: 1.5 A, fast acting, 250 Vac, type 3AG, axial leads
Ambient Temperature:	60 °F to 90 °F (15.6 °C to 32.2 °C) (normal operation) To 160 °F (71.1 °C) (for 24 hours once per year) To 185 °F (85 °C) for 6 hours, then to 150 °F (65.6 °C) for 8 hours post-accident
Relative Humidity:	40% to 50% (normal operation) To 90% (for 24 hours once per year) To 90% (for 14 hours post-accident)
Radiation Limits:	10 ⁵ rad (air) TID gamma over 20 years (normal operation) 2 x 10 ⁵ rad (air) TID gamma in 24 hours (accident)
Analog Output Accuracy:	$\pm 0.15\%$ (60 °F to 90 °F) $\pm 0.35\%$ / 100 °F (over 90 °F)
Trip Point Repeatability:	<u>Normal operation (temperature, humidity and radiation)</u> $\pm 0.75\%$ <u>Extended temperature and humidity (for 24 hours once per year)</u> $\pm 1.50\%$ / 100 °F over 90 °F at 90% RH <u>Accident temperature and humidity</u> $\pm 2.00\%$ <u>Accident radiation ($\leq 8 \times 10^4$ rad TID)</u> $\pm 4.0\%$ <u>Accident radiation ($> 8 \times 10^4$ to tested limit of 2.2×10^5 rad TID)</u> $\pm 24.0\%$
Connections:	The NUS-710DU trip units are designed to mount within an Emerson-Rosemount or Scientech Card File. The rear edge of each card includes a single-sided edge connector with gold-plated contacts. All electrical connections are made at screw-type terminations on the rear of the Card File connector.
Seismic Qualification:	Tested to a ZPA of 1.17 g OBE and 1.75 g SSE per IEEE 344-1975, as documented in NUS-A385QA, based on Rosemount report D8200037.

HOW TO ORDER

Order NUSI model number NUS-710DU0TR.

CONTACT INFORMATION:

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