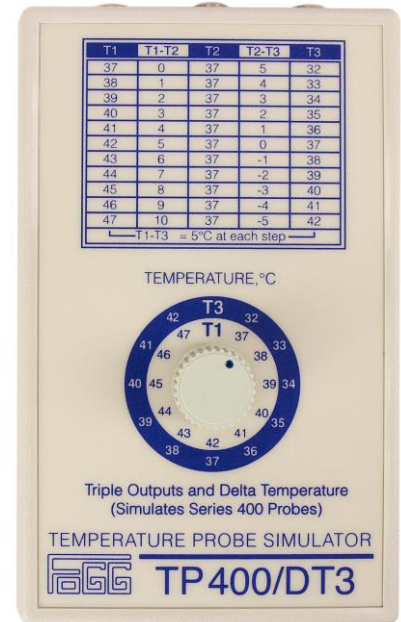


Triple Outputs and Delta Temperatures

- Setup • Demonstrate • Troubleshoot
- Verify and test temperature monitors that use YSI 400 Series Thermistor Temperature Probes.
- Simulate 3 temperatures simultaneously with 11 sets of values:
 - T1: 37 to 47°C in one-degree steps.
 - T2: 37°C at all settings.
 - T3: 32 to 42°C in one-degree steps.
- Simulate 3 delta temperatures (ΔT) with 11 sets of values:
 - Δ T1-T2: 0 to 10°C in one-degree steps.
 - Δ T2-T3: +5 to -5°C in one-degree steps.
 - Δ T1-T3: 5°C at all settings.
- Temperature accuracy of $\pm 0.05^\circ\text{C}$ for all settings.
- Certificate of Conformance traceable to NIST is available.



The TP400/DT3 Temperature Probe Simulator is intended primarily for setup, demonstrating, and troubleshooting temperature measuring instruments that use up to three YSI* 400 Series Temperature Probes**. When substituted for the probes, the Simulator provides three precise and stable outputs for setup and demonstration of temperature measurement instruments. It also simulates three temperature differences (ΔT) for use with instruments that display ΔT between two or three measurement channels. Since the Simulator eliminates the probes as variables, it helps determine whether measurement problems are caused by the probes or the measuring instrument.

Other useful applications of this Simulator include training personnel in the correct setup and operation of temperature measuring instruments and in quickly identifying malfunctioning temperature probes.

Cables are available to connect the Simulator to most temperature measuring instruments. Typical instruments are electronic thermometers, temperature monitors, incubators, hypothermia systems, and temperature controlled analytical laboratory instruments.

Technical Information

Simulated Temperatures:

T1: Switch selectable in 11 steps.											
°C	37	38	39	40	41	42	43	44	45	46	47
°F	98.6	100.4	102.2	104	105.8	107.6	109.4	111.2	113	114.8	116.6
T2: Fixed Output of 37°C (98.6°F)											
T3: Switch selectable in 11 steps.											
°C	32	33	34	35	36	37	38	39	40	41	42
°F	89.6	91.4	93.2	95	96.8	98.6	100.4	102.2	104	105.8	107.6

Delta Temperature (ΔT) relationships, Output-to-Output:

T1-T2 Outputs, for T1 switch setting of:											
	37	38	39	40	41	42	43	44	45	46	47
ΔC°	0	1	2	3	4	5	6	7	8	9	10
ΔF°	0	1.8	3.6	5.4	7.2	9	10.8	12.6	14.4	16.2	18
T2-T3 Outputs, for T3 switch setting of:											
	32	33	34	35	36	37	38	39	40	41	42
ΔC°	5	4	3	2	1	0	-1	-2	-3	-4	-5
ΔF°	9	7.2	5.4	3.6	1.8	0	-1.8	-3.6	-5.4	-7.2	-9

T1-T3 = $\Delta 5C^\circ$ at all steps ($\Delta 9F^\circ$).

Simulated Temperature Accuracy: $\pm 0.05^\circ\text{C}$ at each setting.

Output Connectors: Three $\frac{1}{4}$ " phone jacks.

Size: 3.6"W x 5.75"H x 2.2"D including knob.

Weight: Approximately 9 Ounces net (0.25Kg), 1.5 pounds shipping (0.68Kg).

ORDERING INFORMATION

The Simulator requires from one to three Cables (ordered separately) to connect it to the temperature measuring instrument. Each Simulator is supplied with a User's Manual. A Certificate of Conformance traceable to NIST is available.

* Yellow Springs Instrument Company, Inc.

** Or equivalent probes such as: Omega, Sensor Scientific, TEGAM, Thermometrics and others.

