DT52

DIGITAL THERMOMETER

8030 SW Nimbus • Beaverton, OR 97008
(503) 644-8723 • Fax: (503) 643-6322

Effective 7/6/01

INTRODUCTION

This instrument is a microprocessor-based, digital thermometer designed to use external K-type or J-type thermocouples as temperature sensors. Two K-Type thermocouples (part #ATT29A) are supplied with the thermometer.

FEATURES OF THE DT 52

- Ruggedized to withstand a 10 foot drop.
- Tactile rubber button keypad.
- Accepts K and J-type thermocouples.
- Water resistant casing.
- Displays temperature in °C or °F.
- Monitors temperatures in 2 zones (T1 and T2).
- Calculates temperature differential between probes T1 and T2.
- RECord mode starts minimum/maximum measurement recording.
- Minimum/Maximum temperature memory.
- SCAN mode cycles the display from T1 to T2 and then T1-T2 (differential).
- DATA HOLD function "freezes" last displayed reading.
- Open probe indication.
- Low battery indication.

Specifications:

Range: J-TYPE: -328° to 1,832° F/
-200° to 1,000° C
K-TYPE: -418° to 2,507° F/
-250° to 1,375° C

Resolution: 0.1°C or 0.2°F

Accuracy: (Thermocouple error not included)

T1, T2	K-TYPE:	±(0.1% of reading, +0.7°C)
		±(0.1% of reading, +1.3°F)
	J-TYPE:	±(0.1% of reading, +0.8°C)
		±(0.1% of reading, +1.4°F)
T1-T2	K-TYPE:	±(0.1% of T1-T2, +1.0°C)
		±(0.1% of T1-T2, +1.8°F)
	J-TYPE:	±(0.1% of T1-T2, +1.2°C)
		±(0.1% of T1-T2, +2.2°F)

Battery Replacement:

1. Remove the temperature leads from the DT52.
2. Remove the 6 retaining screws from the back cover of the DT52.
3. Remove the back cover and replace the battery.
4. Replace the back cover and retaining screws.

ACCESSORIES

Stock No. J-Type temperature sensors

ATT19 ... 4' oven temperature probe
ATT27 ... 4' disposable temperature probe
ATT30 ... Liquid immersion probe
ATT47 ... Surface probe with 8" tip
ATT48 ... Right angle surface probe
ATT49 ... Air probe with 8" tip
ATT54 ... Heavy-duty liquid immersion probe/ 6" tip
ATT39 ... Handle for interchangeable probe tips
ATT40 ... Surface probe, 8" interchangeable
ATT41 ... Liquid immersion probe 8" interchangeable
ATT42 ... Air probe, 8" interchangeable

Stock No. K-Type temperature sensors

ATT29 ... 4' temperature probe (general purpose)
ATT29A 4' Teflon sleeved temperature probe
ATT36 ... Surface probe with 8" tip
ATT37 ... Right angle surface probe
ATT38 ... Air probe with 8" tip
ATT50 ... Liquid immersion probe with 8" tip
AT43 ..... Handle for interchangeable probe tips
ATT44 ... Surface probe 8", interchangeable
ATT46 ... Air probe 8", interchangeable
ATT59 ... Heavy-duty surface probe with 8" tip
ATT60 ... Heavy-duty air probe with 8" tip
ATT61 ... Heavy-duty liquid immersion probe w/ 8" tip

Carrying case

AC130

Battery

AB9

DISPLAY FEATURES

NUMERIC DISPLAY

The numeric display shows the temperature of either T1, T2, or T1-T2 (differential).

°F/°C ANUNCIATORS

This annunciator indicates whether the DT52 readings are in degrees Celsius or degrees Fahrenheit.

SCAN mode

By entering SCAN mode, the display cycles between T1, T2, T1-T2 and then repeats.

RECord symbol indicates that the thermometer is recording minimum and maximum temperatures.

K and J thermocouple type annunciators indicate what type of sensor the thermometer is set up to measure.

T1-T2 annunciator shows that the instrument is set up for differential measurement between the two temperature probes.

MIN annunciator appears when the minimum temperature is being displayed.

MAX annunciator appears when the maximum temperature is being displayed.

BAT annunciator appears when the battery needs to be replaced.

HOLD annunciator appears when the instrument is on data hold to "freeze" the display.

oPEn displayed on display lets the operator know that there is either no probe fitted or that the probe is damaged and needs to be replaced.

Measuring Procedures:

Warning:

To avoid electrical shock, do not use the DT52 when voltages are present at the measurement area. Also, to avoid damage to the DT52 or possible burns, do not use this instrument for temperature measurements in microwave ovens.

NOTE: To prolong temperature lead life, avoid kinking or stretching the probe wires.

Temperature Measurement:

Remember: Before taking temperature measurements, make sure that the thermometer is set up for the correct thermocouple type. To do this, press the K/J button to select either K-type or J-type to match the thermocouple being used.

A. Single probe temperature measurement

1. Insert probe into either T1 or T2 jack on top of the instrument.
2. Turn power on by pressing the "ON/OFF" button. (At this time the DT52 will go through a self-test routine to ensure that all segments of the LCD are operating.)
3. By pressing the T1/T2 button, select the input jack that the temperature probe was inserted into.
4. The DT52 will now show the temperature of the selected input jack. If readings of the second probe are required, insert the second probe into the free jack and press the T1/T2 button. Readings of the second probe will now appear on the display.

NOTE: To determine which probe is being measured at any one time, the probe annunciator can be read on the lower left of the display.

B. Differential temperature measurement
1. Insert probes into both the T1 and T2 temperature input jacks on the top of the instrument.
2. Turn power on by pressing the "ON/OFF" button. (At this time the DT52 will go through a self-test routine to ensure that all segments of the LCD are operating.)
3. Press the T1-T2 button. At this point the display will read the differential between T1 and T2.
4. To return to normal measurement, press the T1/T2 button.

C. RECording minimum and maximum temperatures.
1. Turn the unit on and wait for self-test routine to stop.
2. Select the desired probe that will be recorded by pressing T1/T2 or select T1-T2 to record differential minimum and maximum temperatures.
3. Position temperature probe(s) at desired location of measurement.
4. Press the REC button At this point the DT52 will start recording minimum and maximum temperatures of the selected probe(s) and hold the readings in memory until recalled with MIN/MAX button.

D. Reading MINimum/MAXimum temperatures from memory.
1. After temperatures have been recorded (step C above) press the MIN/MAX button. When pressed the first time, the display will read the MAXimum temperature recorded. When pressed again, the DT52 will display the MINimum temperature recorded. Press one more time and normal measurement resumes.

NOTE: To stop recording, press the REC button once more and the REC annunciator will turn off. RECord mode is now turned off.

Cleaning Instructions:
NOTE: This unit is not water proof. Do not immerse while cleaning. Use a clean, damp cloth with mild detergent for cleaning the casing of the DT52. Do not use solvents or petroleum distillates for cleaning the DT52.

Trouble-Shooting
If the DT52 "locks up" or stops functioning properly, disconnect the battery for two minutes and then reconnect. This will reset the microprocessor of the DT52. If the problem still persists, replace the battery with a fresh one.

How to Obtain Warranty Performance: Attach to the product your name, address, description of problem, phone number and proof of date of purchase. Package and return to:

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limitations may not apply to you. To the extent any provision of this warranty is prohibited by federal and state law and cannot be preempted, it shall not be applicable. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Quality, Value& Service
that make a world of difference...

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