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I. PREFACE

1. Thank you

Thank you for purchasing test equipment. The thermometer you have purchased is simple to operate and will give you years of dependable service. Your meter carries a 3 year limited warranty. Please complete and return your warranty registration card.

2. Description

The Brighton 153/154 series thermometers offer versatility, speed, and accuracy. They utilize T-type thermocouple or thermistor temperature probes, have large easy to read displays, and are water and drop resistant. The auto power off feature helps extend battery life. The Brighton-W series are waterproof rated to IEC529 IP67 standards.

3. Applications

Applications include but are not limited to:

• Food service.

• Air temperature in heating and air conditioning applications.

• Surface temperature of machines and equipment.

4. Agency Listings

Waterproof models are IP67 rated to ICE standard 529.

II. GENERAL TESTING GUIDELINES

⚠ *WARNING : When making measurements, always follow the manufacturers test procedures of the item under test. Completely clean the probe shaft and tip prior to insertion into food products.*

➡ Completely clean the probe tip and shaft prior to insertion into food products.

➡ When making measurements, always follow the manufacturers test procedures of the item under test.

➡ Inspect the temperature probe for opens or shorts prior to use.

➡ Make sure the temperature probe is securely connected to the thermometer.

➡ Allow the temperature probe to cool prior to touching it after testing.

➡ Do not insert the temperature probe into an electrically charged medium

III. CONTROLS AND FUNCTIONS

1. Push buttons

SDT153L/LB

Button	Function Performed
⏻	Turns your meter on and off.

SDT154L/LB

Button	Function Performed
⏻	Turns your meter on and off.
HOLD	Turns data hold on and off.
REC	Activates record mode.
0.1/1	Selects resolution. (SDT141 series automatically selects 1°above 999.9°)
MAX/MIN	Cycles through the maximum and minimum recorded reading.
℃/℉	Selects Fahrenheit or Celsius display.

2. Input Jacks

Part Number	Description of Input Jack
SDT153L SDT154L	Lemo connector. Quick couple type connector.
SDT153LB SDT154LB	Lumberg connector. Screw collar type connector.

3. Display Annunciators

Annunciator	Description
oPEn	Displayed when no probe or a probe with a bad connection is connected to the meter.
T	Displayed when T-Type thermocouple probe is connected.
REC	Displayed when record mode is enabled.
MIN	Displayed when the minimum recorded reading is displayed.
MAX	Displayed when the maximum recorded reading is displayed.
HOLD	Displayed when display hold is enabled.
℃	Displayed when Celsius reading is enabled.
℉	Displayed when Fahrenheit reading is enabled.
BAT	Displayed when a low battery condition is detected.

IV. USING YOUR METER

1. Turning your Meter On and Off

The green button marked is used to turn your meter on and off.

1. To turn the meter on press and release the button.

2. To turn the meter on and disable auto power off press and hold the ℃/℉ button down then press and release the button. (SDT154 only)

3. A beep will sound and all segments of the display will turn on.

4. If a probe has not been inserted the display will read oPEn.

5. Pressing the button again will turn the meter off.

2. Connecting a Probe to Your Meter

Depending on the meter you have, follow these steps for connecting a probe to your thermometer.

SDT153L SDT154L	Align the probe connector with the input jack on the thermometer. Apply slight downward pressure while rotating the connector until it locks in place. To remove the probe, grasp the connector collar and pull out.
SDT153LB SDT154LB	Align the probe connector "key" with the key way or notch in the input jack on the thermometer. Press the connector into the jack. Screw the collar down to secure the connection. To remove the connector unscrew the collar and pull the connector out.

3. Selecting a Probe Type

Your thermometer is capable of using T-type or thermistor probes. The type of probe you should use depends on the application. A T-type thermocouple probe is included with your thermometer. The SDT153 and SDT154 automatically detects which type of probe has been connected to the input jack.

1. You can tell the difference between the Brighton T-Type thermocouple and thermistor probe:
   a) T-Type   Blue probe handle and/or cord.
   b) Thermistor   Black or white probe handle and/or cord.

2. Connect the temperature probe to the thermometer.

3. When a T-Type probe is connected the "T" annunciator will be displayed.

4. When a thermistor probe is connected the "T" annunciator will turn off.

4. Selecting Celsius or Fahrenheit Display(SDT154)

Your thermometer can display readings in either Celsius or Fahrenheit. Pressing the C/F button selects the required display.

1. With the meter on and a probe connected, press the C/F button to toggle between Celsius and Fahrenheit readings.

2. When Celsius is selected the "C" annunciator will be displayed.

3. When Fahrenheit is selected the "F" annunciator will be displayed.

5. Selecting Display Resolution(SDT154)

Your thermometer can display reading in 0.1° or 1° resolution from -328°F(-200°C) to 999.9°F and °C.

1. With the meter on and a probe connected, press the 0.1/1 button to toggle between 0.1° and 1° resolution.

2. Any temperature above 999.9° will be displayed with 1° resolution.

6. Taking a Temperature Measurement

!WARNING: Never insert the temperature probe into an electrically charged medium. Make sure the probe tip and shaft are thoroughly clean prior to insertion in food products.

1. Turn the meter on.

2. Connect a temperature probe to the thermometer.

3. Select Fahrenheit or Celsius display.(SDT154)

4. Select 0.1° or 1° resolution.(SDT154)

5. Insert the temperature probe tip into or onto the item under test.

6. Allow the reading to stabilize.

7. The temperature reading can be seen on the display.

Depending on the model, the SDT series thermometers have additional features that can be useful while performing tests. Please see "Additional Features".

V. ADDITIONAL FEATURES

1. Using Record (SDT154)

Record mode allows you to view the minimum and maximum recorded reading over a period of time. Once activated the meter will begin recording and the actual reading will still be displayed. Pressing the MAX/MIN button allows you to cycle through the minimum and maximum recorded reading.

1. Follow the steps outlined in "Taking Measurements".

2. Press the REC button to begin recording. The REC annunciator will be displayed.

3. Press the MAX/MIN button to display the minimum recorded reading. The MIN annunciator will illuminate when the minimum reading is displayed.

4. Press the MAX/MIN button to display the maximum recorded reading. The MAX annunciator will illuminate when the minimum reading is displayed.

5. Press the MAX/MIN button and the meter will return to normal display mode.

6. To stop recording press the REC button. The REC annunciator will turn off.

NOTE:If recording for more than 20 minutes, auto power off must be disabled. Please see "Turing Your Meter On and Off".

2. Using Hold(SDT154)

Hold allows the reading on the display to be frozen.

1. Follow the steps outlined in "Taking Measurements".

2. Press the HOLD button to freeze the display. The HOLD annunciator will illuminate.

3. Press the HOLD button again to return to normal operation.

3. Using MAX/MIN(SDT154)

The MAX/MIN button allows the recorded minimum and maximum reading to be displayed. This feature is used with record mode as explained earlier.

1. Follow the steps outlined in "Taking Measurements".

2. Press the MAX/MIN button to display the minimum reading recorded. The MIN annunciator will be displayed.

3. Press the MAX/MIN button to display the maximum reading recorded. The MAX annunciator will be displayed.

4. Press the MAX/MIN button again to return to normal operation.

VI. TECHNICAL INFORMATION

1.Specifications

General

Power Supply	9 Volt Alkaline Battery
Battery Life	100hrs. Typical
Auto Power Off	After 20 minutes
Size(H ×L ×W)	1.8" ×6" ×3" (45 ㎜×154 ㎜×75.5 ㎜)
Weight	7.3oz(204g)

Accuracy

T-Type Thermocouple (Blue probe cord)

Range	Resolution	Accuracy
-328℉ to 750℉	0.1℉ (-328℉ to 400℉) 0.2℉ (400℉ to 750℉)	±0.3% of reading ±1.8℉
-200℃ to 400℃	0.1℃ (-200℃ to 400℃)	±0.3% of reading ±1℃

Thermistor (Black or white probe cord)

Range	Resolution	Accuracy
-40℉ to 220 ℉	0.1℉	±0.9℉ (32℉ to 158℉) ±1.8℉ Remainder of range
-40℃ to 110 ℃	0.1℃	±0.5℃ (0℃ to 70℃) ±1℃ Remainder of range

VII. ACCESSORIES

1. Standard Accessories

Part Number	Description
BA9A	9V Alkaline Battery
	Carrying case
SAT11L	Standard T-type chisel probe
	(SDT153L/SDT154L)
SAT11LB	Standard T-type chisel probe
	(SDT153LB/SDT154LB)

2. Optional Accessories

Brighton Electronics offers a full line of temperature probes for most applications. Please contact your distributor or Brighton Electronics for information on optional probes.

VIII. TROUBLE SHOOTING AND MAINTENANCE

Problem	Possible Cause
Will not power up	Dead battery
	Battery not completely connected to battery snap
	Broken or frayed wire form battery to circuit board
All reading are high	Low battery. Battery may be so weak the low battery indicator won' t turn on.
Powers off while trying to record	Auto power off not disabled. Please refer to "Turning your meter on/off"
Incorrect or no readings	Low or dead battery
	Bad probe
	Probe connected to thermometer incorrectly
	Incompatible probe connected to thermometer

Battery replacement: Your meter will display BAT when the internal battery voltage drops to a predetermined low level. The meter will still function properly for approximately 1 hour, but the battery should be replaced as soon as possible. To replace the battery follow these steps:

1. Disconnect the temperature probe from the thermometer.

2. Remove the six screws from the back cover.

3. Carefully pull the back housing away from the front housing.

4. Remove the old battery and install the new battery.

5. Carefully attach the back housing to the front. Make sure the battery leads are not pinched between the two housings.

6. Insert and tighten the six back screws.

Cleaning your meter: Only use a mild detergent and a damp cloth to clean your meter and rubber boot.

Calibration: Brighton Electronics recommends your thermometer be checked for proper calibration once per year. This can be performed by a calibration laboratory or by returning your meter to Brighton Electronics, Inc..

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