



352/353/354
Digital Temperature Tester
Instruction Manual

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A. INTRODUCTION

1. Congratulations!!

Thank you for purchasing TPI brand products. The thermometer is easy to use and is built to last. It is backed by a 3 year limited warranty.

Please remember to complete and return your product warranty registration card.

2. Product Description

The 352/353/354 are hand-held, water resistant thermometers designed for measuring the temperature of food products, food storage and food cooking appliances. The 352/353/354 accept either thermistor (most accurate) or T-type thermocouple probes (352 accepts thermistor only) depending on the desired accuracy and temperature range.

The 352/353/354 come complete with the following accessories:

Instrument

Protective Boot

Temperature Probes(s)

Battery

Instruction Manual

3. EC Declaration of Conformity

This is to certify that models 352/353/354 conform to the protection requirements of the council directive 89/336/EEC, in the approximation of laws of the member states relating to Electromagnetic compatibility by application of the following standards:

| | |
|-------------------|--------------------------------|
| EN 50081-1 | 1992 Emissions Standard |
| EN 50082-1 | 1992 Immunity Standard |

To ensure conformity with these standards, this instrument must be operated in accordance with the instructions and specifications given in this manual.

B. SAFETY CONSIDERATIONS

WARNING: Please follow manufacturers test procedures whenever possible. Make sure probe tip and shaft are thoroughly cleaned before inserting into any food product.

GENERAL GUIDELINES

ALWAYS

- Test the 352/353/354 before using it to make sure it is operating properly by turning on the instrument, attaching temperature probe and testing room temperature.
- Inspect the temperature probes before using to make sure there are no breaks.
- Double check all connections making sure of secure and proper fit before testing.

NEVER

- Insert the probe into food product unless tip and shaft are sterilized.
- Touch the probe tip and shaft after it has been sterilized.
- Insert the probe into an electrically charged medium.
- Touch the probe tip and shaft after it has been in hot material.

C. TECHNICAL DATA

1. Features and Benefits

| | |
|--|---|
| Water Resistant | Operates in any environment encountered in food service applications. |
| Min/Max and REC (354 only) | Records Minimum and Maximum temperature readings during a test period. The REC button activates the Min/Max function. |
| Data Hold (354 only) | Maintains the reading on the display for hard to read areas. |
| 0.1/1 Degree Resolution (354 only) | Selectable between 0.1 and 1 resolution on the display for more accurate readings. |
| °C/°F Selectable (354 only) | Displays readings in Fahrenheit or Centigrade. |
| Auto Power Off | Automatically shuts off after 30 minutes of inactivity. (352 powers off after just 3 minutes.) |
| Open Probe Indication | Display will read "OPEN". |
| 3 Year Warranty | Covered by a standard 3 year warranty. |

2. Product Applications

Use the 352/353/354 for the following food service applications:

Ensure the safety and quality of food prepared by measuring temperatures of:

- **Ovens**
- **Foods, liquids in the baking/cooking processes**
- **Grills**
- **Steam Tables**
- **Food storage areas, freezers and refrigerators**
- **Between packs in transport**

3. Specifications

Thermistor Probe

| Range | Resolution | Accuracy |
|----------------|------------|---------------------------|
| -40° to 220°F | 0.1°F | ±1°F (32° to 158°F); ±2°F |
| -40° to 110°C* | 0.1°C | ±0.5°C (0° to 70°C); ±1°C |

T-Type Thermocouple (353/354 only)

| Range | Resolution | Accuracy |
|-----------------|-----------------------|------------------------|
| -328° to 750°F | 0.1°F | ±0.3% of reading, ±2°F |
| | (-328 to 400°F) | |
| | 0.2°F (-328 to 400°F) | |
| -200° to 400°C* | 0.1°C | ±0.3%, ±1.8°C |
| | (-200 to 400°F) | |

*354 only

General Specifications

| | |
|------------------|---|
| Power Supply | "9V" Battery |
| Battery Life | 200 hrs. Typical |
| Size (H x L x W) | 40mm x 190mm x 65mm (1.5in x 7.25in x 2.5in) |
| Weight | 315g (11.1 oz) |

D. MEASUREMENT TECHNIQUES

1. Controls and Functions:

Push Buttons



Turns 352/353/354 on and off.

Push Buttons (354 only)

°C/°F Selects between fahrenheit or centigrade measurement.

MIN/MAX When key is pressed once, the Min/Max feature is activated. When pushed again, the Min value is displayed. Push a third time to display Max value. Push one more time to display actual value.

REC Activates the Min/Max function.

0.1/1 Selects the resolution on the LCD.

D-H Freezes the reading on the display.

2. Step by Step Procedures:

a. Measuring Temperature

Measurement Procedure:

1. Connect the temperature probe to the 352/353/354.
2. Turn on the 352/353/354.
3. Select °F or °C (354 only).
4. Select 0.1 or 1 degree resolution (354 only).
6. Insert the tip of the probe into the substance/surface to be measured.
7. Read temperature on the LCD allowing approximately 30 seconds for the reading to stabilize.

Optional Functions: (354 only)

9. MIN/MAX: Record the minimum and maximum temperature over a given time period. Use the REC button to clear and reset the MIN and MAX values.
12. D-H will freeze the reading on display.

E. ACCESSORIES

The following optional accessories are available for the 352/353/354:

| <u>Probe Type</u> | <u>Item #</u> | <u>Description</u> |
|-------------------|---------------|---------------------------|
| T-Type* | FT11L | 1.5mm x 100mm stem, white |
| | GT31L | Exposed bead, white |
| Thermistor | CX12L | Between pack |
| | FX11L | 3.3mm x 100mm stem |
| | GX14L | Exposed bead, white |
| | VX11L | Test cap, -18° C |
| | VX12L | Test cap, 0° C |
| | VX13L | Test cap, 70° C |

* For 353/354 only.

F. MAINTENANCE

1. **Battery Replacement:** The 352/353/354 will display a battery symbol when the internal 9 Volt battery needs replacement. Replace battery as follows:
 - a. Disconnect and remove all temperature probes from the 352/353/354.
 - b. Loosen the four screws from the back cover of the 352/353/354.
 - c. Remove the battery cover.
 - e. Remove old battery and replace with new battery, observing the correct polarity.
 - f. Reassemble the instrument in reverse order from above.

2. **Cleaning your 352/353/354:**
Use a mild detergent and water to clean the surfaces of the 352/353/354.

G. TROUBLE SHOOTING GUIDE

Problem

Probable Causes

Displays “oPEn”

- No probe attached.
- Broken wire in probe.

Does not Power Up

- Dead or defective battery.
- Broken wire from battery snap to PCB.

WARRANTY

Please refer to product warranty card for warranty statement.



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