WIKA TI.80

WIKA TI.80 Solar Digital Thermometer Instruction Manual

Model: TI.80 (80025D1G4)

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your WIKA TI.80 Stainless Steel 304 Solar Digital Thermometer. Please read these instructions carefully before using the device to ensure safe and efficient operation. The WIKA TI.80 is designed for accurate temperature monitoring in various industrial and scientific applications, including biotechnical and chemical processing, composting, aviation, and power generation.

2. Product Features

- **Solar-Powered Operation:** Utilizes a 3V solar cell, requiring only 35 lux of light for continuous operation.
- **Wide Temperature Range:** Measures temperatures from -50 to +300 degrees Fahrenheit (-50 to +150 degrees Celsius).
- **High Accuracy:** Provides temperature readings with an accuracy of ±1% of the scale.
- **Durable Construction:** Features a stainless steel 304 body and stem, offering corrosion resistance and high-temperature durability.
- **Digital LCD Display:** Clear LCD provides temperature updates every 15 seconds.
- **Versatile Stem:** Back-mounted stem with a thermistor sensor, available in lengths from 2.5 inches to 24 inches.
- **Standard Connection:** Equipped with a 1/2 inch NPT connection for easy integration.

3. Safety Information

Observe the following safety guidelines to prevent injury and damage to the instrument:

- Do not exceed the specified temperature range of -50 to +300°F (-50 to +150°C).
- Ensure proper sealing of the 1/2 inch NPT connection to prevent leaks in pressurized systems.
- Handle the stem with care to avoid bending or damaging the thermistor sensor.
- Do not attempt to disassemble the unit. Refer servicing to qualified personnel.
- Keep the solar cell clean and unobstructed to ensure adequate power supply.

4. Components Overview

The WIKA TI.80 thermometer consists of the following main components:

- **Display:** Digital LCD screen showing temperature readings.
- **Solar Panel:** Integrated black panel below the display, responsible for powering the unit.
- **Casing:** Round, stainless steel housing protecting internal components.
- **Stem:** Stainless steel probe extending from the back, containing the thermistor sensor.
- **Process Connection:** 1/2 inch NPT thread at the base of the stem for mounting.

This image displays the WIKA TI.80 Solar Digital Thermometer. It features a round, stainless steel casing with a digital LCD screen showing a temperature reading of 74.5°F. Below the screen is a black solar panel, and the text 'SOLAR POWERED -50/300°F' is visible. A stem extends from the back of the unit.

5. Installation and Setup

Follow these steps for proper installation:

1. **Select Mounting Location:** Choose a location that allows the solar panel to receive at least 35 lux of ambient light. Avoid direct sunlight if it could lead to overheating beyond the specified operating limits of the display.
2. **Prepare Connection Point:** Ensure the process connection point is clean and compatible with a 1/2 inch NPT thread.
3. **Install Thermometer:** Thread the thermometer's 1/2 inch NPT connection into the prepared port. Use appropriate sealing tape or compound to ensure a leak-free connection. Tighten securely, but do not overtighten to avoid damaging the connection or the thermometer casing.
4. **Verify Stem Immersion:** Ensure the stem is adequately immersed in the medium to be measured for

accurate readings. The thermistor sensor is located at the tip of the stem.

5. **Initial Power-Up:** Once installed and exposed to sufficient light, the thermometer will power on automatically and begin displaying temperature readings within a few seconds.

6. Operation

The WIKA TI.80 is designed for straightforward operation:

- **Reading the Display:** The current temperature will be shown on the digital LCD screen. The unit of measurement (°F or °C) will be indicated next to the numerical value.
- **Temperature Updates:** The display updates approximately every 15 seconds, providing near real-time temperature monitoring.
- **Solar Power Indicator:** The thermometer operates continuously as long as sufficient light (35 lux or more) is available to the solar cell. No battery replacement is required under normal operating conditions.

7. Maintenance

Regular maintenance ensures optimal performance and longevity of your thermometer:

- **Cleaning:** Wipe the display and solar panel with a soft, damp cloth to remove dust and debris. Do not use abrasive cleaners or solvents, as these can damage the display or casing.
- **Solar Cell Care:** Ensure the solar panel remains clean and unobstructed to guarantee continuous power supply.
- **Inspection:** Periodically inspect the thermometer for any signs of physical damage, corrosion, or loose connections. Address any issues promptly.
- **Product Care Instructions:** The manufacturer recommends wiping clean for general product care.

8. Troubleshooting

If you encounter issues with your WIKA TI.80 thermometer, consider the following:

- **No Display:**
  - Check if the solar panel is receiving adequate light (at least 35 lux). Move the thermometer to a brighter location if necessary.
  - Ensure the solar panel is clean and free from obstructions.
- **Inaccurate Readings:**
  - Verify that the stem is fully immersed in the medium being measured.
  - Confirm that the thermometer is operating within its specified temperature range.
  - Ensure the stem is not bent or damaged.
- **Intermittent Display:** This may indicate insufficient or fluctuating light conditions for the solar cell.

If problems persist after following these steps, contact WIKA customer support for further assistance.

9. Specifications

Model	TI.80 (80025D1G4)
Brand	WIKA
Temperature Range	-50 to +300°F (-50 to +150°C)
Accuracy	±1% of the scale
Power Supply	3V Solar Cell (operates on 35 lux)
Stem Material	Stainless Steel 304
Stem Diameter	0.25 inches
Connection Type	1/2 inch NPT
Mounting	Center Back Mount
Display Type	LCD
Response Time	30 seconds (30000 Milliseconds)
Manufacturer	WIKA Instrument Corporation
Certification	ISO 9001

10. Warranty and Support

WIKA Instrument Corporation products are manufactured under strict quality control standards, meeting ISO 9001 certification. For specific warranty details, technical support, or service inquiries, please refer to the official WIKA website or contact your authorized WIKA distributor. Ensure you have your model number (TI.80 or 80025D1G4) available when seeking support.
For more information, visit the official WIKA website:www.wika.com