

DP-110

IN-DUCT DIGITAL PSYCHROMETER

OPERATIONS MANUAL

**Humidity & Temperature Meter with
Wet Bulb Temperature and
Dew Point Temperature**

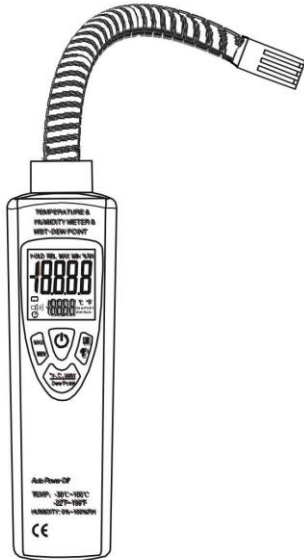


TABLE OF CONTENTS

TITLE	PAGE
INTRODUCTION	3
FEATURES	3
SPECIFICATIONS	4
METER DESCRIPTION	6
HUMIDITY AND TEMPERATURE MEASUREMENTS	8
BATTERY REPLACEMENT	8
WARRANTY	9

1. INTRODUCTION

The In-Duct Digital Psychrometer has been designed to combine the functions of a Humidity Meter, Temperature Meter, Wet Bulb Temperature Meter and Dew Point Temperature Meter; all in one easy to use, compact instrument.

The DP-110 is an ideal Humidity & Temperature Meter with nearly unlimited practical applications for HVAC/R, industrial maintenance, and professional engineering.

2. FEATURES

- Fast Response Time %RH: 10 Sec. (90% at 25°C still air)
- 6" Flex-neck probe for in-duct measurements
- High Accuracy
- Dew Point Temperature (-30°C~100°C/-22°F~212°F)
- Wet Bulb Temperature (0°C~80°C/32°F~176°F)
- Resolution 0.01%RH, 0.01°C/0.01°F
- Max/Min and Hold functions
- Dual Display, Temperature & Humidity
- Auto Power Off, with disable Auto Power Off mode
- Backlight
- Compact Design
- Size (H*W*D): 225*45*34mm (not including flex probe)
- Weight: 200g

3. SPECIFICATIONS

Display: 4 ½ digit, dual LCD display with backlight

Sensor Type: A single chip relative humidity and temperature sensor module


Response Time: %RH: 10 seconds (90% at +25°C still air)

Accuracy Note: Accuracy is specified for the following ambient temperature range: 64 to 82°F (18 to 28°C)

Sampling Rate: 2.5 samples per second

Polarity: Automatic, (-) negative polarity indication.

Out of Range: "Hi" for over-range, "Lo" for under-range


Low Battery Indication: The " " is displayed when the battery voltage drops below the operating level.

Operating Conditions:

-22 to 212°F (-30 to 100°C); < 80% RH, non-condensing

Storage Conditions: 14 to 140°F (-10 to 60°C); <80% RH non-condensing

Auto Power Off: Meter automatically shuts down after approximately 15 minutes of inactivity

Disable Auto Power Off: While meter is off, press and hold Hold/Backlight button then power on meter. After the full display appears, release both buttons. Auto Power Off icon " " will not appear on the LCD. The unit will not auto power off now.

Power: One standard 9V, NEDA1604 or 6F22 battery.

Dimensions/Wt.: 225 (H) x 45 (W) x 34 (D) mm/200g

Humidity / Temperature Measurement Range:

Humidity: 0%~100%RH

Temperature: -30°C~ 100°C, -22°F~ 212°F

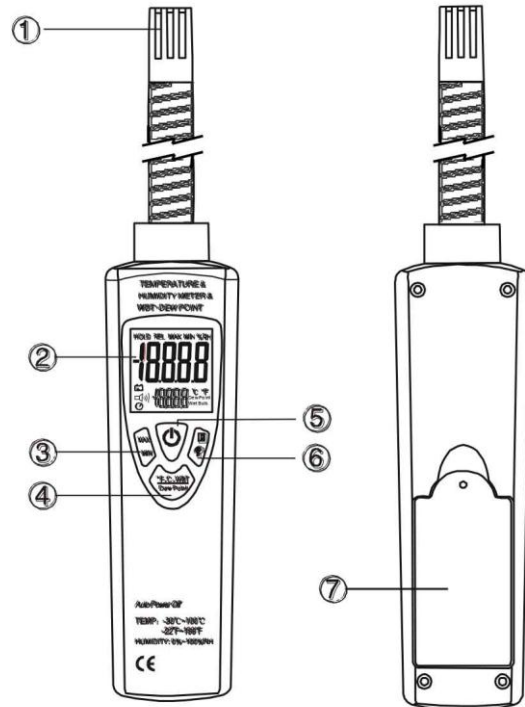
Resolution: 0.01% RH, 0.01 °F, °C.

Humidity Accuracy: ± 2%RH (at 25°C, 20% ~80% RH).
± 2.5%RH (at other ranges)

Note: The measuring range is from 0% to 100%, but above 80% and below 20% the accuracy is not specified.

Air Temperature Accuracy: ± 0.5°C/± 0.9°F (at 25°C)
± 0.8°C/± 1.5°F (all other ranges)

4. METER DESCRIPTION



- 1 **Humidity/Temperature Probe:** Humidity and Temperature Sensor inside.
- 2 **LCD Display:** 4 ½ digit, LCD, dual display. Displays °F, °C, %RH, dew point, wet bulb, low battery (BAT), MAX/MIN and HOLD.
- 3 **MAX/MIN Button:** Press MAX/MIN button to enter MAX/MIN recording mode. Select desired range before entering MAX/MIN mode to ensure that the reading will not exceed the testing range. Press once to select MIN. Press again to select MAX. Press and hold the Button for 3 seconds to turn off MAX, MIN recording.
- 4 **°F, °C, Dew Point, Wbt Select Button:** Press button to toggle between measurement displays: °F, °C, Dew Point and Wet Bulb measurements.
- 5 **Power ON/OFF Button:** Turn the meter power ON/OFF.
- 6 **HOLD /Backlight Button:** Press Hold/Backlight button to enter Hold function. The displayed reading will be held when Data Hold button is pressed.
Press **Hold/Backlight** button for 3 seconds to turn on or off backlight.
- 7 **Battery Compartment:** Battery location.


5. HUMIDITY AND AIR TEMPERATURE MEASUREMENTS

1. Hold the probe in the area to be tested & allow adequate time for readings to stabilize (< 1 minute).
2. Press °F, °C, dew point, WBT select Button to select °F, °C, dew point Wet Bulb Measurement.
3. Read the Relative Humidity and Air Temperature, dew point temperature wet bulb temperature.

NOTE:

Do not immerse the probe in liquid; it is intended for use in air only.

6. BATTERY REPLACEMENT

If the “” symbol appears on the LCD display, it indicates that the battery should be replaced. Open the battery case and replace the exhausted battery with new battery. (1 x 9V battery NEDA 1604, 6F22 or equivalent).

Warning:

Do not leave sensor exposed to direct sunlight. Direct, prolonged exposure to solar radiation can damage sensor

and will shorten sensor lifespan.

Keep sensor covered with included sensor guard whenever not in use.

Do not touch or manipulate the sensor.

Warranty

This PDI product is warranted to be free from defects in materials and workmanship for a period of two (2) years from the verified date of purchase. During this warranty period, PDI will either repair or replace the defective unit, at PDI's discretion. A purchase receipt or other acceptable form of proof of original purchase date will be required before any warranty processes begin. PDI warrants all authorized repairs with a six (6) month limited warranty. View full warranty details and register your PDI product at www.PDIimeters.com.

NOTE: Online product registration is required for all warranty claims. All warranty claims must have a Return Goods Authorization assigned from PDI, in order to begin processing. Contact PDI for more details.



Precision Diagnostic Instruments

7581 W. 103rd Ave.

Westminster, CO 80021

Tel: 1-800-453-7892

Fax: 303-650-1238