CEM Instruments DT-90 Bluetooth Thermo-Anemometer User Manual

Thermo-Anemometer
User Manual

Contents

Introduction

The Thermo-Anemometer measures Air velocity and temperature. Careful use of this meter will provide years of reliable service.

Meter Description

1. -LCD Display
2. -Body of meter
3. -Fan
4. -HOLD/ button
5. -MAX/MIN button
6. -Power on/off button
7. -UNITS button

8. -Bluetooth button

Button Description

Power on/off, Auto-power off:

Power on: Short press button "⏻" to power on, system default auto power off. Long press to power on and disable the auto power-off function. Long press the button again to enable the auto power-off function

Power off: Short press the button "⏻" to power off.

Auto-power off: Auto-power off signal "⏲" displays in the left corner of the LCD and the instrument will auto-power off in 10minutes of no button operations.

If I press the power on/off button for over 1 minute, it will be recognized as faulty operation and the instrument will auto power off.

UNITS button: Short press to switch air velocity unit; Long press to switch temperature unit.

button: Long press to active or deactivate Bluetooth.

HOLD/ r button: Short press to hold the current data; Long press to activate or deactivate the backlight.

MAX/MIN button: Short press to record Maximum, Minimum, and Average readings of temperature and air velocity.

Note: MAX/MIN button is deactivated when hold the current readings.

Display Layout

: Bluetooth symbol
: Low battery indicator
: Timing power-off symbol
MAX: Maximum reading of temperature/air velocity
MIN: Minimum reading of temperature/air velocity
AVG: Average reading of temperature/air velocity
HOLD: Hold the displayed temperature/air velocity readings.
°C/°F: Temperature measurement unit
m/s, ft/min, km/h, MPH, knots: Air velocity measurement unit. Larger LCD digits at bottom of the display are Air Velocity readings Smaller LCD digits at the top, and right of the display is Temperature readings

- **Data Hold**

Short press the hold button to freeze the temperature and velocity readings, meanwhile, the hold symbol is displayed on the LCD when measured. Press the hold button again to return to normal measurement.

- **Temperature and Air velocity measurement**

1. -Turn on the instrument by pressing the power on/off button.
2. -Press the UNITS button to select a unit of measurement. Note: After power is on, the meter will display the preset unit before the last power off.
3. -Put the instrument environment that is to be measured.
4. -Observe readings on the LCD display, The larger digits displayed on the main LCD is Air Velocity reading. The smaller digits displayed on the upper right LCD are the temperature reading.

- **MAX/MIN/AVG reading**

1. -Press MAX/MIN button for the first time, the instrument will enter Max tracking mode, and the tracked max reading will display on the LCD.
2. -Press MAX/MIN button for the second time, the instrument will enter Min tracking mode, and the tracked min reading will display on the LCD.
3. -Press MAX/MIN button for the third time, and the instrument will enter Avg tracking mode, the tracked average reading will display on the LCD.
4. -Press MAX/MIN button for the fourth time, and the current reading will display on the LCD.

Note: Avg mode will automatically stop in 2hours and the instrument will auto power off

- **Bluetooth communication**

Long press the Bluetooth button to activate the Bluetooth function, it communicates after connecting with the software. The instrument can transmit measured data and instrument status to software and the software can control the instrument.

The instrument will automatically turn off in order to lengthen the battery working life. When the symbol appears on the LCD, please replace the old battery with a new one.

1. -Open the battery compartment with a suitable screwdriver.
2. -Replace the 9V battery.
3. -Mount the battery compartment again.

Specifications

Air velocity	**Range**	**Resolution**	**Accuracy**
m/s	1.10~25.00m/s	0.01m/s	± (3%+0.30m/s)
km/h	4.0~90.0km/h	0.1km/h	± (3%+ 1.0km/h)
ft/min	220~4920ft/min	1ft/min	± (3%+40ft/m)
MPH	2.5~56.0MPH	0.1MPH	±(3%+0.4MPH)
knots	2.2~48.0knots	0.1 knots	± (3%+0.4knots)
Air temperature	-10~60°C(14-140°F)	0.1°C/°F	2.0°C(4.0°F)

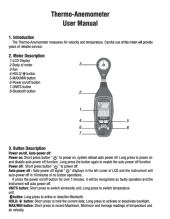
Display	Dual-line, 4-digit LCD
Display Update	2 times/sec
Sensors	Air velocity sensor; NTC-type precision thermistor
Automatic Power-off	Auto shut off in 10 minutes without operation to preserve battery life
Operating Temperature	0 to 50°C(32 to 122°F)
Storage Temperature	-10 to 60°C(14 to 140°F)
Operating Humidity	<80%RH
Storage Humidity	<80%RH
Operating Altitude	2000 meters(7000ft)maximum
Battery	One 9 volt battery
Low battery indication	The low battery signal “  flashes when battery voltage drops bel ow 7.2V; The backlight and low battery signal “  ” flash twice whe n battery voltage drops below 6.5V, then auto power off.
Weight	172g
Dimensions	213*54*36mm

Unit of Measure Conversion Table

	m/s	ft/min	knots	km/h	MPH
1 m/s	1	196.87	1.944	3.6	2.24
1ft/min	0.00508	1	0.00987	0.01829	0.01138
1knot	0.5144	101.27	1	1.8519	1.1523
1km/h	0.2778	54.69	0.54	1	0.6222
1MPH	0.4464	87.89	0.8679	1.6071	1
°F=°C*9/5 +32					

Rev. 160908

Documents / Resources


Thermo-Anemometer
User Manual

CEM Instruments DT-90 Bluetooth Thermo-Anemometer [pdf] User Manual
DT-90, Bluetooth Thermo-Anemometer, DT-90 Bluetooth Thermo-Anemometer