# Thermo-Anemometer
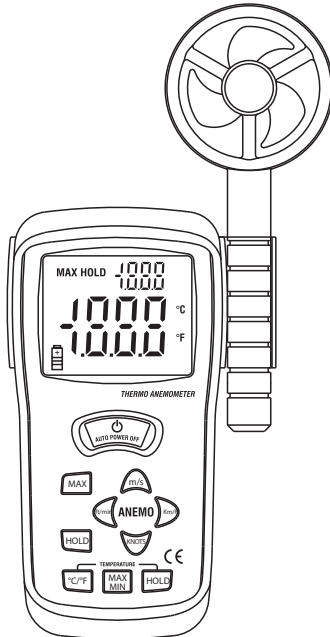
# ATE-1019

# User's Manual

# Operating Instruction
# Digital Thermo-anemometer



## Table Of Contents

## I.Features

- Sensitive and Accurate (ultra low friction jewel bearing)
- Ergonomic and easy-to-use design
- Read while measuring (detached vane)
- Large digits LCD (Liquid Crystal Display)
- 2 meters coiled cable and mounting nut for long extension
- Low power consumption
- Data/Max/Min hold function
- Building-in low battery indicator

## II.Front Panel Description

1.vane and Type-K sensor
2.LCD display
3.ON/OFF button
4.max hold button
5.Data hold button
6.m/s button
7.ft/min button
8.km/h button
9.knots button
10.°C/°F button
11.max/min hold button (Temp.)
12.Data hold button (Temp)
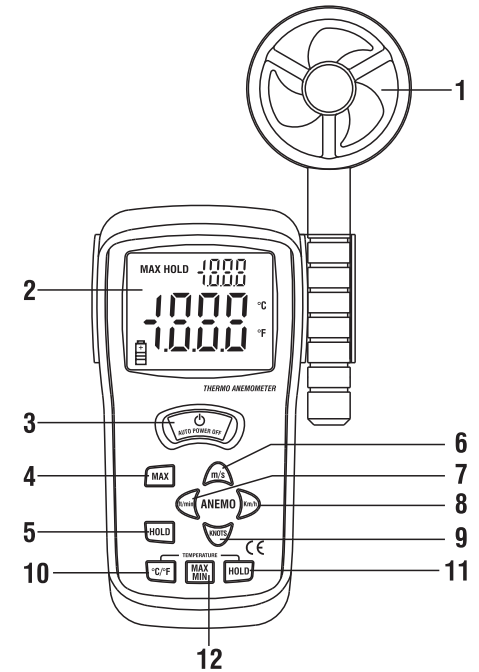


## III.Operation Instruction

### A.Measurement of Wind Velocity
1.Press the on/off button to turn on the anemometer.
2.Select the desired units by moving the unit selection button
3.Determine the approximate wind direction.
4.Hold the anemometer so that the air flow will pass through the vane from the back to the front.
5.Wait for 4 seconds for a stabilized reading.
6.For more accurate results, try to keep the axis of the vane within 20° of the wind direction.

### B.Measurement Temperature
1.Press the on/off button to turn on the anemometer.
2.Select the desired units by moving the unit °C/°Fselection button.
3.Let the wind pass through the vane (A thermocouple is built into the center of the vane).
4.Read the temperature in the display.

### C.Holding the Reading
Press the hold button to hold the reading of wind velocity or temperature.

### D.Finding the Max./Min.
Press the max/min button, the max wind velocity or Max./Min. temperature measured during the measurement shall be displayed and updated on LCD.

## IV.Specifications

Range of Wind Velocity:

| Units | Range | Resolution | Threshold | Accuracy |
|---|---|---|---|---|
| m/s | 0.0 - 45.0 | 0.1 | 0.3 | ±3% ±0.1 |
| knots | 0.0 - 88.0 | 0.1 | 0.6 | ±3% ±0.1 |
| Km/hr | 0.0 - 140.0 | 0.1 | 1.0 | ±3% ±0.1 |
| Ft/min | 0-8800 | 10 | 60 | ±3% ±0.1 |

m/s: meter per second
knots: nautical miles per hour
Km/hr: kilometers per hour

Unit Conversion table:

| | m/s | ft/min | knots | Km/hr |
|---|---|---|---|---|
| 1 m/s | 1 | | 1.944 | 3.60 |
| 1 ft/min | 0.00508 | 1 | 0.00987 | 0.01829 |
| 1 knot | 0.5144 | | 1 | 1.8519 |
| 1 Km/hr | 0.2778 | | 0.54 | 1 |

Range of Temperature:

| | Range | Resolution | Accuracy |
|---|---|---|---|
| °C | 0 to 60.0 | 0.1 | ±2°C |
| °F | 32.0 to 140.0 | 0.1 | ±4°F |

Bearing:                      Sapphire jewel bearing
Temperature sensor:          K-type thermocouple
Operating Temperature:       0 ~ 50°C (32 ~ 122°F)
Operating Humidity:          Less than 80% RH
Storage Temperature:         -40°C ~ 60°C (-40°F ~ 140°F)
Battery Type:                9V
Battery Life:                50 hours (for 300mA-hrs battery)
Averaging Period for Wind
Speed Measurement:    m/s      0.6sec. (Approx.)
                      Ft/min   1.2sec. (Approx.)
                      Knots    1.2sec. (Approx.)
                      Km/hr    2.2sec. (Approx.)

Dimension:
Meter:                150x 72 x 35mm
Vane:                 66x 132 x 29.2mm
Weight:               350g (battery included)
Accessories:          Users manual x 1; 9V Battery x 1

## V.Battery Replacement

The battery symbol " 🔋 " appears on the lower right of the LCD when the 9V battery needs to be replaced. Replace the 9V battery as follows:

1.Turn the meter off and disconnect the air temperature probe.
2.Remove the large flat-head screw on the rear of the meter to remove the probe holder.
3.Remove the rubber holster that surrounds the entire meter by pulling it over the top of the meter.
4.Remove the small Phillips head screw on the rear of the meter.
5.Open the battery compartment and replace the 9V battery.
6.Re-assemble the meter before operating

*Rev. 090318*