

EXTECH®

USER MANUAL

Model 45118 Mini Thermo-Anemometer

Introduction

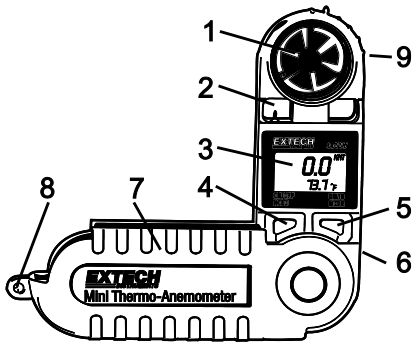
Congratulations on your purchase of the Extech 45118 Mini Thermo-Anemometer. This meter is shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

Operation

- Select units** for air velocity and temperature by short pressing the UNITS/MODE key with the meter switched OFF. The LCD will show temperature units (°C or °F) and Air Velocity units. Use the UNITS/MODE key to select the desired units. When finished, short press the ON/OFF/HOLD key to restart the meter.
- Power the meter** by short pressing the ON/OFF/HOLD key. The dual display will switch ON. The top (larger) display indicates air speed and the lower display indicates temperature.
- Position the meter** so that the measured airflow enters the meter vane from the *rear* of the meter.
- Data Hold** (freezes the display). Long press the ON/OFF/HOLD key. To return to normal operation, release the key.
- MAX mode:** Long press the UNITS / MODE key until the MAX icon appears on the lower left-hand area of the LCD. The air velocity and temperature displays will represent the highest readings recorded since the meter was switched ON.
- Average mode:** The meter averages readings every 2 seconds (default). To change the time to 5, 10, or 13 seconds, first long press the UNITS/MODE key until the MAX icon appears, and then short press the UNITS/MODE key. The AVG icon will appear, and the 13-second average mode will be selected. Press the key again and the number 5 will appear. Leave it there if an average of 5 seconds is desired. Press the key again to select a 10-second average. To return to normal operation press the UNITS/MODE key repeatedly until all lower left-hand icons disappear.
- Wind chill indicator:** Long press the UNITS/MODE key until the MAX icon appears. Press the key repeatedly until the WCI icon appears. The temperature display will now factor in the wind chill. To return to normal operation, press the UNITS/MODE key again (the WCI icon will disappear).
- Auto Power OFF:** The meter automatically switches OFF after approx. 15 minutes of inactivity.

Meter Description

- Vane impeller
- Precision thermistor
- LCD
- POWER and HOLD key
- UNITS and MODE key
- Battery compartment (on rear)
- Swivel handle and storage case
- Lanyard holder
- Impeller set screw (on rear of meter)



Specifications

Display	Dual display with multifunction indicators
Measurements	Knots, km/h, MPH, ft/min, m/sec, Beaufort force, windchill, and temperature
Wind-speed	Rolling 2-second average with 2-second gust detect
Sensor	Sapphire bearing, non-corrosive vane for air velocity and precision thermistor for temperature
Average mode	Choice of 5, 10, or 13-second reading averaging
Max display	Recall highest readings captured
Data Hold	Freeze most recent display
Sample rate	1 reading per second
Water-resistant	To 3 feet (1 meter)
Air velocity range	1.1 to 62.5 MPH
Operating temp.	5 to 122°F (-15 to 50°C)
Operating humidity	< 80% RH
Power supply	CR2032 lithium battery or equivalent
Battery life	400 hours, approx.
Weight	3 oz. (95 g)
Dimensions	5.25 x 2.75 x 0.75 in. (133 x 70 x 19 mm); Vane: 1 in. (24 mm) diameter

Measurement	Range	Resolution	Accuracy
MPH (Miles per hour)	2.5 to 44.7 MPH	0.2 MPH	± (3%rdg +0.4MPH)
km/hr (kilometers per hour)	4.0 to 72.0 km/h	0.7 km/h	± (3%rdg +1.4km/h)
Knots (nautical miles per hour)	2.1 to 38.9 knots	0.3 knots	± (3%rdg +0.6knots)
m/sec (meters per second)	1.1 to 20.0 m/s	0.1 m/s	± (3%rdg +0.2m/s)
ft/min (feet per minute)	216 to 3936 ft/min	20ft/min	± (3%rdg +40ft/min)
Beaufort force	1 to 8 BF	1 BF	± 1
Temperature	0 to 122°F (-18 to 50°C)	0.1°F/C	±1.8°F (±1°C)

Maintenance

Battery Replacement

Rotate the battery compartment cover CLOCKWISE to remove it. Note the position of the old battery and place the new battery in the same orientation. Secure the battery compartment cover by rotating it COUNTER-CLOCKWISE. Dispose of the battery in accordance with all local, state, and national codes.

Vane Impeller Replacement

- NOTE:** The anemometer is accurate at low and mid-range air speeds. Sustained use at extremely high speeds may damage the impeller bearing and affect accuracy.
- To replace the impeller, remove the rear set screw (next to the impeller assembly). Twist the impeller assembly counter-clockwise to the "O" (open) position and remove it.
  - Install the new impeller by inserting and twisting the new impeller assembly clockwise. Tighten the set screw before use.

CFM Air Volume Measurements

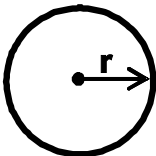
First measure the area (A) of the duct, using the diagrams below, for rectangular and circular ducts. If the duct measurements are made in inches, divide by 144 (to convert to square feet). Air Volume is calculated by multiplying the duct area by the air velocity measurement, per the equations below.



A = w \* h

CFM (ft³/min) = Air Velocity (ft/min) x Area (ft²)

CMM (m³/min) = Air Velocity (m/sec) x Area (m²) x 60



A = πr²

Battery Safety

- Remove and immediately recycle or dispose of used batteries according to local regulations, keeping the batteries away from children. Do NOT dispose of batteries in household trash or incinerate.
- Even used batteries can cause severe injury or death.
- Call a local poison control center for treatment information.
- This unit contains a CR2032, 3.0 V, lithium battery.
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above 122°F (50°C), or incinerate. Doing so may result in injury due to venting, leakage, or explosion resulting in chemical burns.
- Ensure that the batteries are installed correctly according to correct polarity (+ and -).
- Do not mix old and new batteries, different brands or types of batteries, such as Alkaline, carbon-zinc, or rechargeable batteries.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, keeping the batteries away from children.
- Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time, according to local regulations.

**WARNING**

- INGESTION HAZARD** : This product contains a button cell or coin battery.
- DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns in as little as 2 hours.**
- KEEP** new and used batteries **OUT OF REACH** of **CHILDREN**.
- Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.

Two-year Warranty

**Teledyne FLIR warrants this Extech brand instrument to be free of defects in parts and workmanship for two years from date of shipment. To view the full warranty text please visit: <https://www.flir.com/support-center/warranty/instruments/extech-product-warranty/>**

Calibration and Repair Services

**Teledyne FLIR offers calibration and repair services for the Extech brand products we sell. We offer NIST traceable calibration for most of our products.**

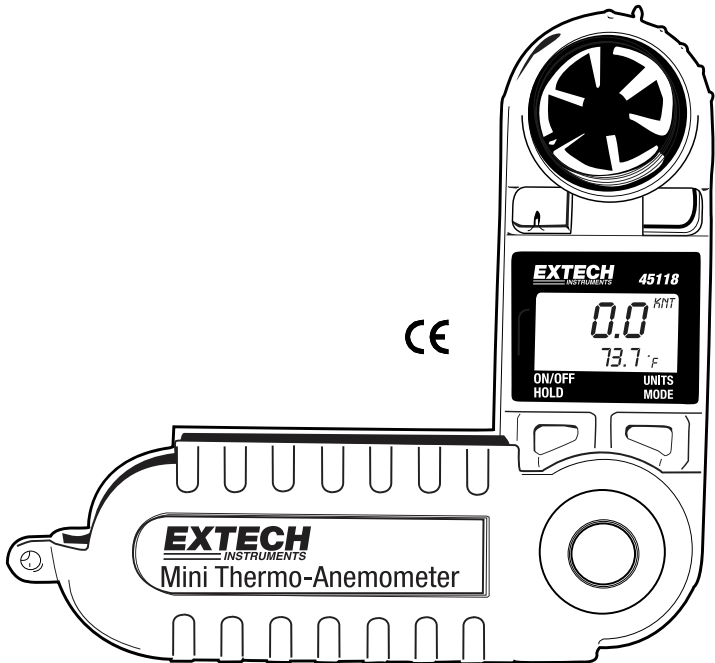
Customer Support

Local Telephone Support List: <https://support.flir.com/contact>

Return Material Authorization (RMA): <https://customer.flir.com/Home>

Customer Service: <https://support.flir.com/ContactService>

Technical Support: <https://support.flir.com>



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