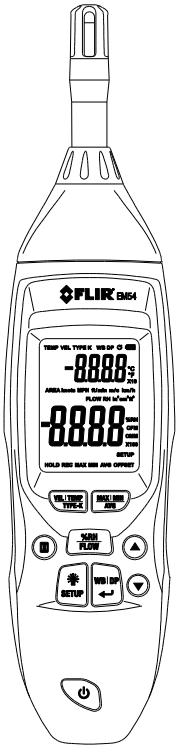
Quick Start

FLIR EM54

Environmental Meter



Air Temperature, RH, Wet Bulb, Dew Point Modes

1. Long press ⏻ to switch the meter ON/OFF
2. Short press **VEL|TEMP|TYPE-K** to step to Air Temperature mode (TEMP). The upper digits show the reading, short press ▲ to toggle °C/°F
3. Short press **%RH|FLOW** to select RH for display on the lower digits
4. Short press **WB|DP** to toggle Wet Bulb (WB) and Dew Point (DP) temperature modes. The upper digits show the reading
5. The temperature and RH sensors are located at the tip of the meter
6. For out of range measurements the display shows '**OL'**

Type-K Contact Temperature Measurements

1. Connect a thermocouple to the jack in the right-side compartment
2. Short press **VEL|TEMP|TYPE-K** to step to the TYPE-K mode
3. Touch the temperature probe to the surface under test, the upper display digits show the reading. Short press ▲ to select °C/°F units
4. With no thermocouple connected the display shows dashes
5. See the Setup Mode section for setting a temperature display offset

Air Velocity Measurements

1. Connect the supplied vane anemometer probe to the USB jack in the right-side compartment
2. Short press **VEL|TEMP|TYPE-K** to step to the Air Velocity mode (VEL)
3. Place the vane in the flow of air and view the air velocity readings on the upper display digits
4. Short press ▲ to select the units m/s, ft/min, km/hr, MPH, or knots

Airflow (CFM, CMM) Measurements

1. Measure the area of the air duct under test. See *Area Equations* section
2. Connect the vane anemometer to the USB jack in the side compartment
3. Short press **%RH|FLOW** to select FLOW. Press ▼ to select CFM (cubic feet per minute) or CMM (cubic meters per minute) for the volume (airflow) measurement units

4. Long press the **SETUP** button to access the Setup Mode and then press ▲ 4 times to step to the AREA screen
5. Press Return (↵) and use the arrows (▼▲) to select the area units: in^2, cm^2, or ft^2
6. Press Return to access the SIZE screen. Press Return again and use the arrows to select the decimal placement for the area value (note the x10 and x100 multipliers on the display)
7. Press Return and use the arrows to adjust the flashing digit for the area value. Use the **H** button to select a new digit to edit. Continue in this way until the area of the duct is accurately entered
8. Press Return to confirm the area value and then long press **SETUP** to exit
9. Insert the vane sensor in the air duct and read the airflow (volume of air) value on the lower display digits

Setup Mode

1. Long press the **SETUP** button*
2. The first screen is the default **TEMP UNIT** for air temperature. Press Return to see the setting. Use the arrows to set ^oC or ^oF
3. Press Return to see **TYPE K OFFSET**. Press Return again and use the arrows to select a temperature offset, if desired
4. Press Return to see **VEL UNITS**. Press Return again to see the default units. Use the arrows to select m/s, ft/min, km/hr, MPH, or knots
5. Press Return to see **FLOW UNITS**. Press Return again to see the default Airflow units; use the arrows to select CFM or CMM
6. Press Return to see **AREA UNIT**. Press Return again to see the default area units and use the arrows to change to in^2, cm^2, or ft^2
7. Press Return to see **AREA SIZE**, press Return again and use the arrows to select the decimal position for the area value. Press Return and use the arrows to adjust the flashing digit. Use the **H** button to select a new digit to edit. Continue in this way until the area of the duct is accurately entered
8. Press Return to see **SLP** (sleep). Press Return to see the default APO time. Use the arrows to set timer to 5, 10, 15, 20, 25, 30, 40, 60 minutes or OFF
9. Long press the **SETUP** button to exit the Setup Mode

**Note that you can use the arrow buttons immediately after you access the Setup Mode to step through the Setup parameters quickly.*

Area Equations

$A = W * H$ $A = \pi * R^2$

CFM (ft^3/min) = Air Velocity (ft/min) x Area (ft^2)
CMM (m^3/min) = Air Velocity (m/sec) x Area (m^2) x 60

Battery Replacement

Switch the meter OFF and remove the screw that secures the rear battery compartment. Open the compartment and replace the 9V battery, observing correct polarity. Re-assemble the meter before use.

LCD Backlight

Short press the backlight button to switch the backlight ON/OFF.

Data Hold

Short press **H** to access/exit the Data Hold mode. Data Hold freezes the displayed reading. The **HOLD** icon will appear while in the Data Hold mode.

MAX-MIN-AVG Recording

Short press **MAX|MIN|AVG** to start recording (REC) and to step through maximum, minimum, and average readings. Long press **MAX|MIN|AVG** to exit.

3-Year Limited Warranty

This product is protected by FLIR's 3-Year Limited Warranty. Visit www.flir.com/testwarranty to read the 3-Year Limited Warranty document. Register your product at the website to receive a free 1-year warranty extension.

User Manual

Visit https://support.flir.com (*download* tab) to download the User Manual and Quick Start with translations. The User Manual includes detailed specifications and instructions.

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Publication Identification No.:	EM54-QS
Release version:	AA
Release Date:	March 2019
Language:	en-US