

# MLT 5-DLH

## Microwave Leakage Tester



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## Instructions for Use

The MLT 5-DLH is activated by pressing and holding the ON/OFF pushbutton. After the MLT 5-D was switched on, the software version is shown for a moment (e.g. V15.1111) and then the self test is carried out.

In the display appears: Selftest

A short acoustic signal will sound and the sensor is tested. For this test it is very important, that the MLT 5-DLH is not within microwave radiation.

Message in the display: HF-Error

If an error occurs a message is displayed.

In the display appears: Sensor → Error ↔ (Alternating display)

After successful self test the measurement mode is activated.

In the display appears e.g.: 0,0 mW

The MLT 5-DLH is ready. Now you can move the sensor along the areas to be tested (e.g. the door gaps of the microwave oven) and read the measured value on the LCD display. The selected measurement frequency (915 MHz or 2450 MHz) is shown by the two LED's near the ON/OFF pushbutton. To change the measured frequency the ON/OFF pushbutton must be released and pressed again 3 times. After that the pushbutton must be held again.

To switch off the MLT 5-DLH the ON/OFF pushbutton must be let off. The MLT 5-DLH will be switched off automatically after approx. 3 seconds. In this time the last measured value is shown in the display.

If a value of  $5 \text{ mW/cm}^2$  is reached or exceeded an acoustic signal will sound.

The maximum value is  $15 \text{ mW/cm}^2$ . If this value is exceeded the display will show a message:

In the display appears: > 15 mW

If this appears in the display, then the distance must be increased between the test head and the leakage location to prevent damage the MLT 5-DLH.

If the battery symbol appears in the left side of the display, the battery should be replaced.

In the display appears e.g.: 0 0,0 mW

**Attention: Never expose the MLT 5-DLH to direct microwave radiation! Never put the MLT 5-DLH into the microwave oven!**

## Measuring Radiation Leakage from Microwave ovens

Radiation Leakage should be measured while the microwave oven operates at its rated voltage and maximum microwave power.

A load of  $275 \text{ cm}^3 \pm 15 \text{ cm}^3$  of fresh water having an initial temperature of  $20 \text{ °C} \pm 2 \text{ °C}$  and 1 % salinity should be provided at the center of the foot placement area indicated by the manufacturer.

The water container should be a thin-walled glass vessel having an internal diameter of about 85 mm.

The water should be replaced as needed to avoid boiling and evaporation.

The Microwave Leakage Tester will detect the place of maximum microwave leakage on the external surfaces of the microwave oven; Particular attention should be given to the door areas.

The power density should not exceed a level of  $5 \text{ mW/cm}^2$  at a distance of 50 mm from the oven surface (see VDE 0700 sect. 25).



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- Handheld-instrument
- LC display, 8 chars, backlight
- For 915 MHz and 2450 MHz (selectable by toggle function)
- Supplied with calibration certificate
- Digitally scanning of the E-field
- Determination of the effective value of the power density
- Improved rotation symmetry and directional characteristics
- Self-test after each power-on
- Acoustic signal at over-ranging
- Battery low indicator LED
- Working with 2 standard LR6 AA batteries



The model MLT 5-DLH is a modern testing instrument to find microwave fields. The easy handling gives security in dealing with microwave sources. As the consistent further development of the MLT 4-D it combines the proven easy handling with the opportunities offered by modern technology. As special feature the version DLH can be used for 915 MHz and for 2450 MHz. The selected frequency range is shown by two LED's.

The core is a microcontroller. It scans the measurement signal digitally and calculates the effective value of the power density. The internal step-up converter allows the usages of two standard mignon batteries to supply the MLT 5-DLH. The usage of rechargeable batteries is also possible.

The MLT 5-DLH is an indispensable instrument to control the security on microwave ovens.

It is supplied in a practical transport case. So the device is always well protected.



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## Technical Data:

### Range:

0..15mW/cm<sup>2</sup>

### Precision - Devices for 2450 MHz:

+/-1 db

### Precision - Devices for 915 MHz:

+/-1 db

Deviation at 896..922 MHz: < 1 %

### Power density:

Max. 1,0W/cm<sup>2</sup>

### Rotation symmetry:

Difference max. +/- 3 %

### Operating temperature:

10 °C to 40 °C

### Power:

Batteries 2x 1,5 V LR6 AA

approx. 1000 measurements with a battery set

### Dimension (mm):

Case: 120x65x40

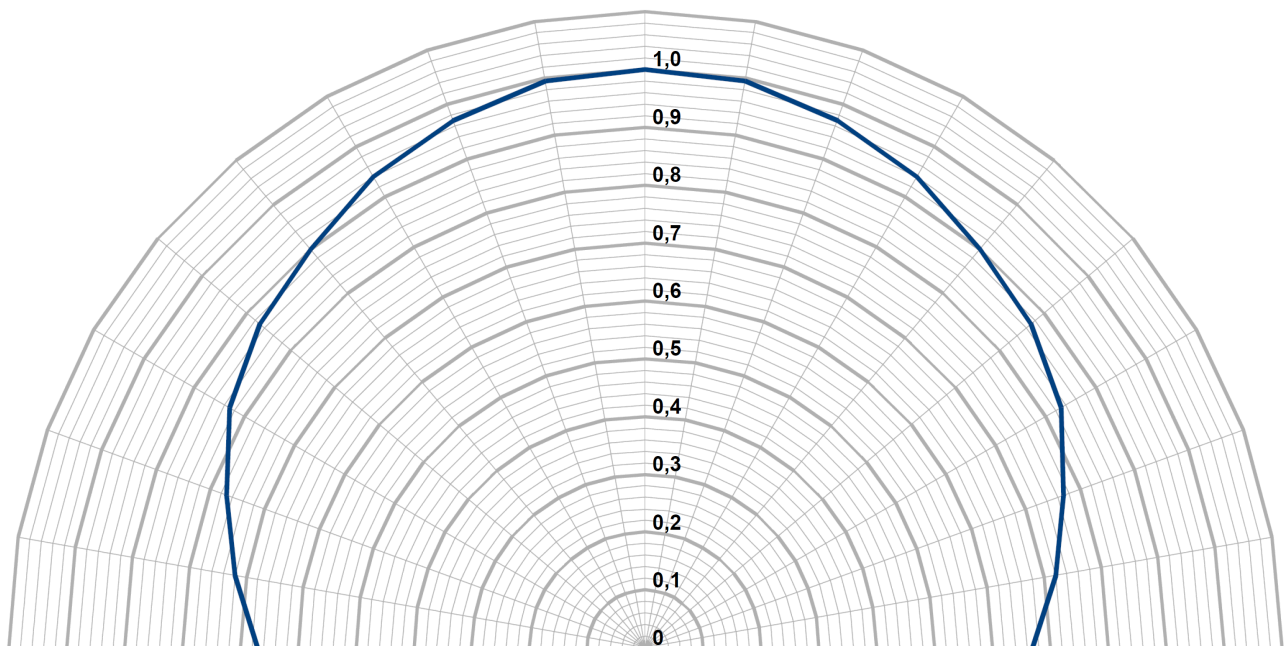
Total: 240x65x50

### Weight:

155 g without batteries

200 g with batteries

### Directional characteristics:



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