

WIRELESS THERMO-HYGROMETER

Instructions manual

Cat. No. WS9070IT+

Thank you for choosing this wireless thermo-hygrometer from La Crosse Tehcnology.

BEFORE YOU USE IT

Please be sure to read the instruction manual carefully.

This information will help you to familiarise yourself with your new device, learn all of its functions and parts, find out important details about its first use and how to operate it, and get advice in the event of faults.

Following the instruction manual for use will prevent damage to the device and loss of your statutory rights arising from defects due to incorrect use.

We shall not be liable for any damage occurring as a result of not following these instructions.

Please take particular note of the safety advice!

Please look after this manual for future reference.

SCOPE OF SUPPLY:

- Wireless thermo-hygrometer (basic unit)
- Outdoor transmitter
- Instruction manual

FIELD OF OPERATION

The wireless thermo-hygrometer checks room ambient conditions and outdoor conditions at the same time and gives a ventilation tip, if opening or closing the windows will currently improve the indoor climate.

Excessive room-air humidity can damage your health and promotes the formation of damp patches and mould.

But excessively dry room air can also affect our well-being and health in various respects. Skin, mucous membranes and airways are adversely affected and pets, house-plants, wooden flooring and antique furniture may also suffer.

Checking indoor temperature and humidity and active ventilation can help achieve a comfortable and healthy living environment.

If the room air is too humid, ventilation would at first appear nonsensical in the winter, when the outside air is also cold, damp and just as humid.

Cold air however, can absorb little or no moisture. When this air enters the living areas it becomes warmer. And then the air can absorb much more water vapor. This interdependency of temperature and relative humidity is considered and calculated by your wireless thermo-hygrometer.

ALL OF THE BENEFITS OF YOUR INSTRUMENT AT A GLANCE

- Indoor comfort level indicator (DRY, COMFORT or WET)
- Ambient change icons (MORE WET, NO CHANGE, MORE DRY) if opening a window will influence indoor humidity.
- Open or close window icons for the recommended window position
- Indoor and outdoor temperature display in °C/°F with MIN/MAX records
- Indoor and outdoor humidity display in RH% with MIN/MAX records
- All MIN/MAX recordings can be reset
- Low battery indicator
- Wall mounting or table standing

FOR YOUR SAFETY:

- The product is exclusively intended for the field of application described above. The product should only be used as described within these instructions.
- Unauthorised repairs, modifications or changes to the product are prohibited.
- The product is not to be used for medical purpose or for public information, but is intended solely for home use.
- Please respect safety aspects when opening a window. Make sure that no water can penetrate.



Caution! Risk of injury:

- Keep this instrument and the batteries out of reach of children.
- Batteries must not be thrown into the fire, short-circuited, taken apart or recharged. Risk of explosion!
- Batteries contain harmful acids. Low batteries should be changed as soon as possible to prevent damage caused by a leaking battery. Never use a combination of old and new batteries together or batteries of different types.

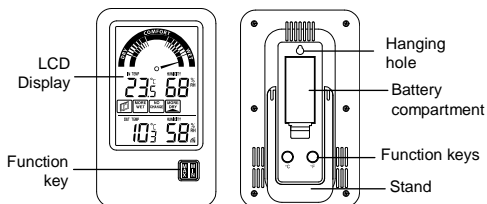
Wear chemical-resistant protective gloves and glasses when handling leaked batteries.

! Important information on product safety!

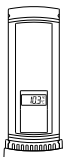
- Do not expose the instrument to extreme temperatures, vibration or shock.
- Protect from moisture
- The outdoor transmitter is protected against splash water, but is not watertight. Choose a shady and dry position for the transmitter.

ELEMENTS

The Wireless thermo-hygrometer

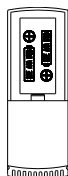


The thermo-hygro transmitter



- Remote transmission of outdoor temperature and humidity to Wireless thermo-hygrometer by 868MHz
- Alternately display the outdoor temperature and humidity readings on LCD
- Wall mounting case

TO INSTALL AND REPLACE BATTERIES IN THE THERMO-HYGRO TRANSMITTER



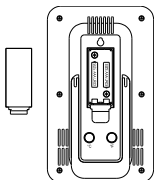
The outdoor thermo-hygro transmitter uses 2 x AAA, IEC LR3, 1.5V batteries. To install and replace the batteries, please follow the steps below:

1. Remove the battery cover by pushing the battery cover upwards with your thumb.

2. Insert the batteries, observing the correct polarity (see battery compartment marking).
3. Replace the battery cover on the unit.

TO INSTALL AND REPLACE BATTERIES IN THE WIRELESS THERMO-HYGROMETER

The Wireless thermo-hygrometer uses 2 x AAA, IEC LR3, 1.5V batteries. To install and replace the batteries, please follow the steps below:



1. Insert finger or other solid object in the space at the bottom center of the battery compartment and lift up to remove the cover.
2. Insert batteries observing the correct polarity (see marking).
3. Replace compartment cover.

Battery replacement

- Replace the batteries when the battery symbol of the Wireless thermo-hygrometer appears above the indoor humidity display.
- When the batteries of the transmitter are used up, the low battery icon appears above the outdoor humidity display.

Note:

In the event of changing batteries in any of the units, all units need to be reset by following the setting up procedures. This is due to a random security code assigned by the transmitter at start-up. This code must be received and stored by the Wireless thermo-hygrometer in the first 3 minutes of power being supplied to the transmitter.

SETTING UP

1. First, insert the batteries in the transmitter (see **“To install and replace batteries in the thermo-hygro transmitter”** above).
2. Within 2 minutes of powering up the transmitter, insert the batteries in the wireless thermo-hygrometer (see **“To install and replace batteries in the wireless thermo-hygrometer”** above). Once the batteries are in place, all segments of the LCD will light up briefly. Following the indoor temperature/humidity will be displayed. If this information is not displayed on the LCD after 60 seconds,

- remove the batteries and wait for at least 60 seconds before reinserting them. Once the indoor data is displayed user may proceed to the next step.
3. After the batteries are inserted, the wireless thermo-hygrometer will start receiving data signal from the transmitter. The outdoor temperature and humidity data should then be displayed on the wireless thermo-hygrometer. If this does not happen after 2 minutes, the batteries will need to be removed from both units and reset from step 1.
 4. In order to ensure sufficient 868 MHz transmission however, the distance between the Wireless thermo-hygrometer and the transmitter should not be more than 100 meters (see notes on **"Positioning"** and **"868 MHz Reception"**).

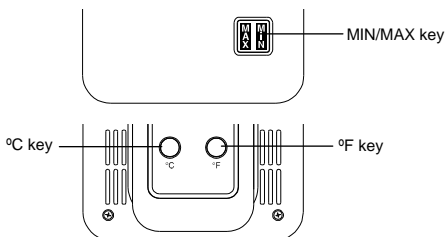
Note:

In the event of changing batteries of the units, ensure the batteries do not spring free from the contacts. Always wait at least 1 minute after removing the batteries before reinserting, otherwise start up and transmission problems may occur.

FUNCTION KEYS:

Wireless thermo-hygrometer:

The wireless thermo-hygrometer has 3 easy to use function keys: 1 key on the front, and 2 keys on the back.

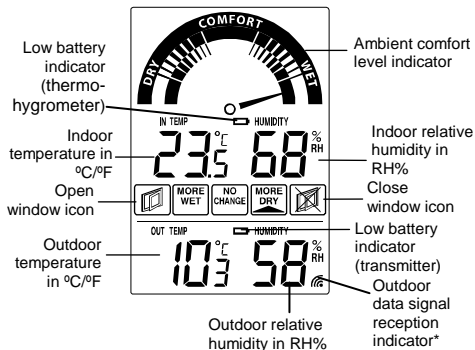


MIN/MAX key: Press to view the MIN/MAX indoor and outdoor temperature and humidity records. Press and hold for 3 seconds to reset the all MIN/MAX temperature and humidity records.

- °C key:** Display temperature unit in degree Celsius (°C).
- °F key:** Display temperature unit in degree Fahrenheit (°F).

LCD SCREEN

The LCD screen is split into 4 sections displaying the information for ambient comfort level indicator, indoor data, humidity and 'open/close window' icons, and outdoor data.



* When the signal is successfully received by the wireless thermo-hygrometer, the outdoor transmission icon will be switched on. (If not successful, the icon will not be shown on LCD). The user can then easily see whether the last reception was successful (icon on) or not (icon off).

THE INDOOR HUMIDITY COMFORT LEVEL INDICATOR:

The indoor humidity comfort indicator shows the indoor temperature comfort level of the surrounding environment based on the humidity data. An arrow marks the current ambient humidity conditions on the display from 'dry' to 'wet':

DRY	< 34%
DRY/COMFORT	35 - 40%
COMFORT	41 - 55%
COMFORT/WET	56 - 64%
WET	> 65%

Note:

The comfort indicator arrow will not be shown if the temperature is overflow ("OF.L")

AMBIENT TEMPERATURE/HUMIDITY DATA




The ambient temperature and humidity data are automatically updated and displayed on the second section of the LCD.

**THE AMBIENT CHANGE AND OPEN/CLOSE ICONS:**

The third section shows the expected humidity changes when airflow from outside occurs in a room.

Ambient change icons:







Condition	Icons
Expected humidity changes is within +/-4%	No Change 
Expected humidity changes is +5% or more	More Wet 
Expected humidity changes is -5% or less	More Dry 

Open / Close window icons:



The thermo-hygrometer also recommends to 'open' or 'close' the window based on the ambient temperature and humidity data:

- 3 options of recommended actions: 'Open window', 'Close window', no action.
- Depending on the indoor comfort level indicator condition and the 'More Wet', 'No Change', 'More Dry' humidity change icon condition, the 'Open window' and 'Close window' icon will be shown accordingly to the table below:

Comfort indicator level 	Icon 	Open window icon 	Close window icon 
Comfort and Dry	Dry / Wet / No Change	Off	Off
Between Comfort and Dry	Dry / Wet / No Change	Off	Off
Between Comfort and Wet	Dry / Wet / No Change	Off	Off
Dry	No Change	Off	Off
Dry	More Wet	ON	Off
Dry	More Dry	Off	ON
Wet	No Change	Off	Off
Wet	More Wet	Off	ON
Wet	More Dry	ON	Off

Note:

Under the following conditions, NO icon will be displayed:

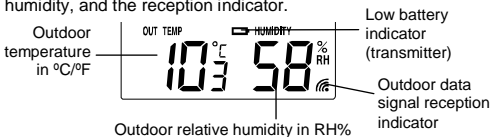
- Indoor and/or outdoor temperature display "OFL".
- Indoor and/or outdoor humidity display "--".
- No outdoor transmitter detected or transmission connection lost.

Tips for active ventilation:

- Ventilate in all weather conditions, when it is recommended by your product.
- Open the windows for a short time (room airing). A partially open window, for instance in the tilted position, does not have the desired effect, wastes heating energy and can even promote the formation of mould.
- A few minutes of airing are mostly sufficient. .

OUTDOOR TEMPERATURE/HUMIDITY DATA

The last LCD section shows the outdoor temperature and humidity, and the reception indicator.



TOGGLING AND RESETTING THE MIN/MAX DATA

TO VIEW THE MIN/MAX DATA

Press the **MIN/MAX** key several times to view the MIN/MAX indoor temperature/humidity and MIN/MAX outdoor temperature/humidity sequentially.

TO RESET THE MIN/MAX DATA

Press and hold **MIN/MAX** key for 3 seconds to reset all the indoor/outdoor temperature and humidity data to current temperature and humidity.

ABOUT THE THERMO-HYGRO TRANSMITTER

The range of the thermo-hygro transmitter may be affected by the temperature. At cold temperatures the transmitting distance may be decreased. Please bear this in mind when positioning the transmitters. Also the batteries may be reduced in power for the thermo-hygro transmitter.

CHECKING FOR 868MHz RECEPTION

If the outdoor temperature and humidity data are not being received within three minutes after setting up (or outdoor display always show "- .-" in the outdoor section of the wireless thermo-hygrometer during normal operation), please check the following points:

1. The distance of the Wireless thermo-hygrometer or transmitters should be at least 2 meters away from any interfering sources such as computer monitors or TV sets.
2. Avoid placing the transmitters onto or in the immediate proximity of metal window frames.
3. Using other electrical products such as headphones or speakers operating on the 868MHz-signal frequency may prevent correct signal transmission or reception. Neighbors using electrical devices operating on the 868MHz-signal frequency can also cause interference.

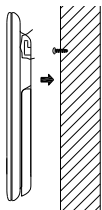
Note:

When the 868MHz signal is received correctly, do not re-open the battery cover of either the transmitter or wireless thermo-hygrometer, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally then reset all units (see **"Setting up"** above) otherwise transmission problems may occur.

The transmission range is around 100 meters from the thermo-hygro transmitter to the wireless thermo-hygrometer (in open space). However, this depends on the surrounding environment and interference levels. If no reception is possible despite the observation of these factors, all system units have to be reset (see “**Setting up**” above).

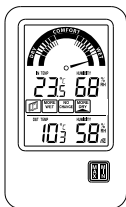
POSITIONING THE WIRELESS THERMO-HYGROMETER

The wireless thermo-hygrometer provides the option of table standing or wall mounting the unit. Before wall mounting, please check that the outdoor data can be received from the desired locations.



To wall mount:

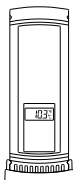
1. Fix a screw (not supplied) into the desired wall, leaving the head extended out by about 5mm.
2. Place the Wireless thermo-hygrometer onto the screw, using the hanging hole on the backside. Gently pull the Wireless thermo-hygrometer down to lock the screw into place.



Foldout table stand:

The foldout table stand leg is located on the backside. Pull the stand out from the bottom center edge of the Wireless thermo-hygrometer, below the battery compartment. Once the foldout table stand is extended, place the Wireless thermo-hygrometer in an appropriate location.

POSITIONING THE THERMO-HYGRO TRANSMITTER



Mounting at a sheltered place. Avoid direct rain and sunshine.

The thermo-hygro transmitter can be placed onto any flat surface or wall mount using the bracket which doubles as a stand or wall mount base.



To wall mount:

1. Secure the bracket onto a desired wall using the screws and plastic anchors.
2. Clip the transmitter onto the bracket.

Note:

Before permanently fixing the thermo-hygro to the wall base, place all units in the desired locations to check that the outdoor temperature and humidity readings are receivable. In event that the signal is not received, relocate the thermo-hygro transmitter or the Wireless thermo-hygrometer slightly as this may help the signal reception.

CARE AND MAINTENANCE

- Clean the instrument and the transmitter with a soft damp cloth. Do not use solvents or scouring agents.
- Remove the batteries if you do not use the product for a lengthy period.

MALFUNCTION

Problems	Troubleshooting
No indication on the base unit	<ul style="list-style-type: none">• Ensure batteries polarity are correct• Change batteries
No transmitter reception Display "----"	<ul style="list-style-type: none">• Check batteries of external transmitter (do not use rechargeable batteries!)• Restart the transmitter and base unit as per the manual• Choose another place for the transmitter and/or the base unit• Reduce the distance between the transmitter and the base unit• Check if there is any source of interference
Incorrect display	<ul style="list-style-type: none">• Change batteries

WASTE DISPOSAL

This product has been manufactured using high-grade materials and components which can be recycled and reused.



Never throw flat batteries and rechargeable batteries in household waste.
As a consumer, you are legally required to take

them to your retail store or to appropriate collection sites according to national or local regulations in order to protect the environment.

The symbols for the heavy metals contained are: Cd=cadmium, Hg=mercury, Pb=lead



This instrument is labelled in accordance with the EU Waste Electrical and Electronic Equipment Directive (WEEE).

Please do not dispose of this product with other household waste. The user is obligated to take end-of-life devices to a designated collection

point for the disposal of electrical and electronic equipment, in order to ensure environmentally-compatible disposal.

SPECIFICATIONS:

Temperature measuring range:

Indoor : -9.9°C to +59.9°C with 0.1°C resolution
14.1°F to +139.8°F with 0.2°F resolution
("OF.L" displayed if outside this range)

Outdoor : -39.9°C to +59.9°C with 0.1°C resolution
-39.8°F to +139.8°F with 0.2°F resolution
("OF.L" displayed if outside this range)

Indoor humidity range: 20% to 95% with 1% resolution
(Display "-" if temperature is OL.F; display "19%" if < 20% and "96%" if > 95%)

Outdoor humidity range : 1% to 99% with 1% resolution
(Display "-" if outside temperature is OF.L; display 1% if < 1% and 99% if > 99%)

Data checking intervals

Indoor temperature and humidity : every 16 seconds

Outdoor temperature and humidity: every 4 seconds

Transmission range : up to 100 meters (open space)

Power consumption (alkaline batteries recommended):

Wireless thermo-hygrometer : 2 x AAA, IEC LR3, 1.5V

Thermo-hygro transmitter : 2 x AAA, IEC LR3, 1.5V

Dimensions (L x W x H):

Wireless thermo-hygrometer : 94.6 x 20mm x 157mm

Thermo-hygro transmitter : 36 x 16 x 102.6mm

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DECLARATION OF CONFORMITY

Herewith we declare, that this wireless transmission device does comply with the essentials requirements of R&TTE Directive 1999/5/EC.

