

WIRELESS 868 MHz WEATHER STATION

Instruction manual

Cat. No. 35.1121.IT

Thank you for choosing this instrument from TFA.

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.

Likewise, we take no responsibility for any incorrect readings and for any consequences which may result from them.

Please take particular note of the safety advice!

Please look after this manual for future reference.

SCOPE OF SUPPLY:

- Weather station (basic unit)
- Outdoor transmitter
- Instruction manual

FIELD OF OPERATION AND ALL OF THE BENEFITS OF YOUR NEW WEATHER STATION AT A GLANCE:

- 24 hour time display (seconds displayed by pressing the **SUN** button)
- Calendar Display: weekday, day and month (year only in setting mode)
- Daylight saving time (DST) function selectable
- Daily alarm function
- Weather forecast with weather tendency indicator
- Temperature display in degree Celsius (°C)
- Indoor temperature display with MIN/MAX recordings
- Outdoor temperature display with MIN/MAX recordings, time and date
- All MIN/MAX temperature recordings can be reset
- Indoor and outdoor relative humidity display in RH%
- Display of relative or absolute air pressure in hPa
- Relative air pressure with adjustable reference value
- Relative air pressure history bar graph for the past 12 hours
- Display of sunrise time, sunset time and sun duration in 150 European cities
- Display of 8 symbols to represent the current moon phase
- LCD contrast setting
- Low battery indicators
- Table standing or wall mounting

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.



Caution!
Risk of injury:

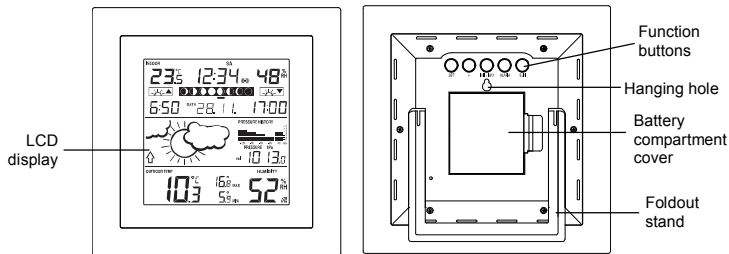
- Keep this instrument and the batteries out of reach of children.
- Batteries must not be thrown into the fire, short-circuited, taken apart or recharged. Risk of explosion!
- Batteries contain harmful acids. Low batteries should be changed as soon as possible to prevent damage caused by a leaking battery. 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!

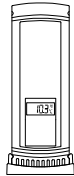
- Do not expose the instrument to extreme temperatures, vibration or shock.
- The outdoor transmitter is protected against splash water, but is not watertight. Choose a shady and dry position for the transmitter.

ELEMENTS

The weather station

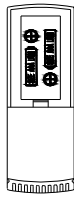


Thermo-hygro Transmitter



- Remote transmission of outdoor temperature and humidity to weather station by 868MHz
- Alternately display the outdoor temperature and humidity readings on LCD
- Wall mounting case
- Mounting at a sheltered place. Avoid direct rain and sunshine.

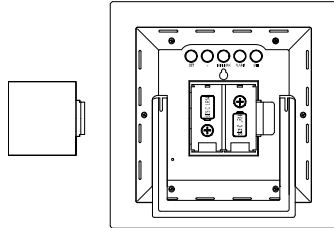
TO INSTALL AND REPLACE BATTERIES IN THE THERMO-HYGRO TRANSMITTER



The outdoor thermo-hygro transmitter uses 2 x AAA, IEC LR3, 1.5V batteries. When the batteries need to be replaced, the low battery symbol will appear on the LCD of the outdoor transmitter. To install and replace the batteries, please follow the steps below:

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

TO INSTALL AND REPLACE BATTERIES IN THE WEATHER STATION



The weather station uses 2 x C, IEC LR14, 1.5V batteries. To install and replace the batteries, please follow the steps below:

1. Remove the cover at the back of the weather station.
2. Insert batteries, observing the correct polarity (see marking).
3. Replace the compartment cover.

Battery replacement

- Replace the batteries when the battery symbol of the weather station appears near the air pressure display.
- When the batteries of the transmitter are used up, the low battery icon appears above the outdoor humidity display of the weather station.

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 because a security code is assigned by the transmitter at start-up and this code must be received and stored by the weather station in the first 3 minutes of power being supplied to it.

SETTING UP

Note: This weather station receives only one outdoor transmitter.

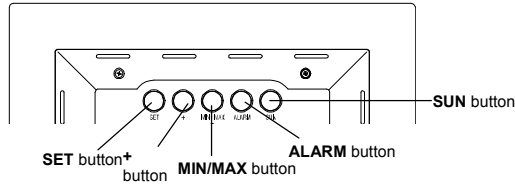
1. First, insert the batteries in the transmitter (see "To install and replace batteries in the thermo-hygro transmitter" above).
2. Within 30 seconds of powering up the transmitter, insert batteries in the weather station (see "To install and replace batteries in the weather station" above). Once the batteries are in place, all segments of the LCD will light up briefly and a short signal tone will sound. Then the indoor temperature, humidity and the time as 0:00 will be displayed. If this information is not displayed on the LCD after 1 minute, remove the batteries and wait for at least 1 minute before reinserting them. Once the indoor data is displayed user may proceed to the next step.

3. After the batteries are inserted, the weather station will start receiving data signal from the transmitter. The outdoor temperature and humidity data should then be displayed on the weather station. 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 successful 868 MHz transmission, the distance between the weather station and the transmitter should be within 100 meters (see notes on "**Positioning**" and "**868 MHz Reception**").

FUNCTION BUTTONS

Weather station:

The weather station has five easy to use function buttons:



SET button

- Press and hold for 3 seconds to enter manual setting modes: LCD contrast, Daylight Saving Time ON/OFF, manual time, calendar and relative air pressure reference value
- To stop the alarm sound
- To exit alarm setting mode and country/city setting mode
- To toggle between relative and absolute air pressure display

+ button

- To increase/change values in setting modes
- To stop the alarm sound

MIN/MAX button

- Press the button to switch among the display of MIN/MAX indoor temperature and MIN/MAX outdoor temperature records
- To decrease/change values in setting modes
- Press and hold the button for 3 seconds to reset **ALL** indoor/outdoor MAX/MIN temperature recordings to current readings
- To stop the alarm sound

ALARM button

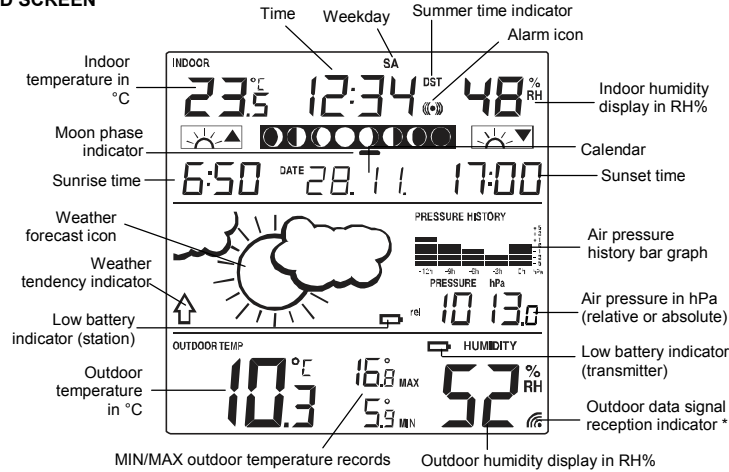
- To activate/deactivate the alarm and display alarm time
- Press and hold for 3 seconds to enter the alarm setting mode
- To stop the alarm sound
- To exit manual setting mode and country/city setting mode

SUN button

- To switch among the display of date (normal mode), seconds, sun duration and city

- Press and hold for 3 seconds to enter country/city setting mode
- To stop the alarm sound
- To exit manual setting mode and alarm setting mode

LCD SCREEN



* When the signal is successfully received by the weather station, the outdoor reception icon will be switched on. (If not successful, the icon will not be shown in LCD). So the user can easily see whether the last reception was successful (icon on) or not (icon off).

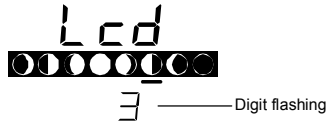
MANUAL SETTINGS

The following settings can be changed when pressing the **SET** button:

- LCD contrast
- Daylight saving time (DST) ON/OFF
- Manual time
- Calendar
- Relative air pressure reference value

Press and hold the **SET** button for about 3 seconds to advance to the setting mode:

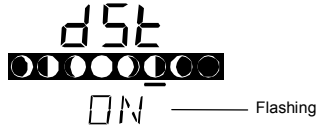
LCD CONTRAST SETTING



The LCD contrast can be set within 8 levels, from LCD 0 to LCD 7 (Default is LCD 3):

1. The digit starts flashing
2. Press the **+** button or **MIN/MAX** button to set the level of contrast desired.
3. Press the **SET** button to enter the "Daylight saving time On/Off setting," or exit the setting mode by pressing the **ALARM** button or **SUN** button.

DAYLIGHT SAVING TIME ON/OFF SETTING



The daylight saving time (DST) function can be set ON/OFF. Default setting is "ON":

1. "ON" will flash on the LCD with "dSt" displayed.
2. Use the **+** button to turn the daylight saving time function ON or OFF.
3. Press the **SET** button to enter the "Manual time setting" or exit the setting mode by pressing the **ALARM** button or **SUN** button.

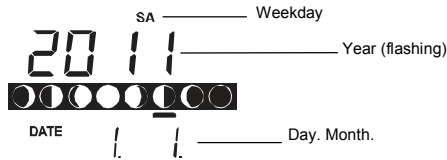
MANUAL TIME SETTING



To set the clock:

1. The hour digit in the time section will start flashing.
2. Use the **+** button to increase or **MIN/MAX** button to decrease the value. Keep holding the button allows the value to advance faster.
3. Press the **SET** button to enter minute setting.
4. The minute will be flashing. Use the **+** button to increase or **MIN/MAX** button to decrease the value.
5. Press the **SET** button to enter the "Calendar Setting" or exit the setting mode by pressing the **ALARM** button or **SUN** button.

CALENDAR SETTING



1. The year digits will start flashing.
2. Use the **+** button to increase or **MIN/MAX** button to decrease the value. The range runs from 2011 to 2025.
3. Press the **SET** button to enter the month setting mode.

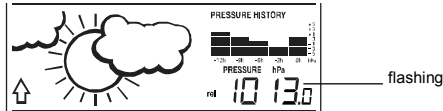
4. The month digit will be flashing. Use the **+** button to increase or **MIN/MAX** button to decrease the value.
5. Press the **SET** button to enter day setting.
6. The day digit will be flashing. Use the **+** button to increase or **MIN/MAX** button to decrease the value. Keep holding the button allows the value to advance faster.
7. Press the **SET** button to enter the "**Relative air pressure reference value setting**", or exit the setting mode by pressing the **ALARM** button or **SUN** button.

Note:

The corresponding weekday is displayed above the time in short form (from Monday to Sunday): **MO / TU / WE / TH / FR / SA / SU**.

RELATIVE AIR PRESSURE REFERENCE VALUE SETTING

Relative air pressure is referred as sea level's pressure and has to be adjusted first to your local altitude. Ask for the present atmospheric pressure of your home area (local weather service, www, optician, calibrated instruments in public buildings, airport). The default relative pressure value is 1013 hPa (29.92 inHg). This can be manually set to another value within the range of 960 – 1040 hPa (28.35 – 30.72 inHg) for a better reference.

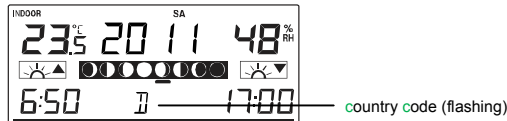


1. The current relative pressure value will start flashing
2. Use the **+** button or **MIN/MAX** button to increase or decrease the value. Keep holding the button will allow the value to change faster.
3. Press the **SET** button to exit the setting mode.

LOCATION SETTING FOR SUNRISE/SUNSET TIME

The weather station will automatically update the sunrise, sunset and sun duration time at 00:00, based on the city location, the date, time and DST settings.

1. Press and hold the **SUN** button for 3 seconds to enter the **Location setting mode**.
2. The short form of country name will start flashing. Use the **+** button or **MIN/MAX** button to select the country.

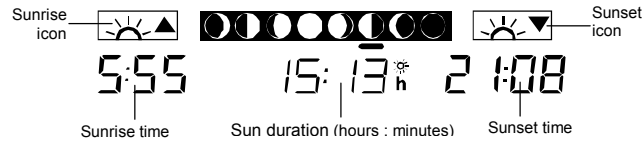


Note: It can be chosen from among 26 European countries and 150 cities. Every country/city is displayed in short code. See the list at the beginning of this handbook for all the country/ city codes.

3. With the desired country selected, press the **SUN** button to enter City setting mode.
4. The City code will start flashing. Use the **+** button or **MIN/MAX** button to select the City. Keep holding the button allows the value to advance faster.



5. Confirm with the **SUN** button, or exit the setting mode by pressing the **SET** button or **ALARM** button **without saving the changes**.
6. The city's sunrise, sun duration and sunset time will be displayed in a few seconds.



7. Press the **SUN** button twice to go back to normal date display.

DISPLAY OF SUN DURATION TIME

1. In normal date mode, press the **SUN** button twice to display the sun duration time (total number of hours of sunlight on the day).
2. Press the **SUN** button again will display the City selected. (See "LOCATION SETTING FOR SUNRISE/SUNSET TIME")
3. Press the **SUN** button again to go back to normal date display.

ALARM SETTING



To set the daily alarm:

1. Press the **ALARM** button. ALM and the alarm time appear in the display.
2. Press and hold **ALARM** button. The hour digits are flashing. Set the hour with the + or MAX/MIN button.
3. Press the **ALARM** button again. The minute digits are flashing. Set the minutes with the + or MAX/MIN button.
4. Confirm the setting with the **ALARM** button. The actual time appears in the display.
5. To activate/deactivate the alarm function, press the **ALARM** button shortly. The display of the ((••)) icon represents that the alarm is "ON".

Note: The duration of alarm sounding is 2 minutes. Press any button will stop the alarm sound.

TO EXIT SETTING MODES

To exit the setting modes anytime, user can wait for automatic timeout to return to normal display.

WEATHER FORECASTING ICONS

Weather icons can be displayed in any of the following combinations:



For every sudden or significant change in the atmospheric pressure, the weather icons will update accordingly to represent the change in weather. If the icons do not change, then it means either the atmospheric pressure has not changed or the change has been too slow for the weather station to register. However, if the icon displayed is a sun or raining cloud, there will be no change of icon if the weather gets any better (with sunny icon) or worse (with rainy icon) since the icons are already at their extremes. The icons displayed forecasts the weather in terms of getting better or worse and not necessarily sunny or rainy as each icon indicates. For example, if the current weather is cloudy and the rainy icon is displayed, it does not mean that the product is faulty because it is not raining. It simply means that the atmospheric pressure has dropped and the weather is expected to get worse but not necessarily rainy.

Note:

After setting up the weather station the readings for weather forecasts should be disregarded for the next 12-24 hours. This will allow sufficient time for the weather station to collect atmospheric pressure data at a constant altitude and therefore result in a more accurate forecast.

Common to weather forecasting, absolute accuracy cannot be guaranteed. The weather forecasting feature is estimated to have an accuracy level of about 75% due to the varying areas the weather station has been designed for use. In areas that experience sudden changes in weather (for example from sunny to rain), the weather station will be more accurate compared to use in areas where the weather is stagnant most of the time (for example mostly sunny).

If the weather station is moved to another location significantly higher or lower than its initial standing point (for example from the ground floor to the upper floors of a house), discard the weather forecast for the next 12-24 hours. By doing this, the weather station will not mistake the new location as being a possible change in atmospheric pressure when really it is due to the slight change of altitude.

WEATHER TENDENCY INDICATOR

Working together with the weather icons is the weather tendency indicator (located on the left of the weather icons). When the arrow points upwards, it means that the air pressure is increasing and the weather is expected to improve, but when arrow points downwards, the air pressure is dropping and the weather is expected to become worse.

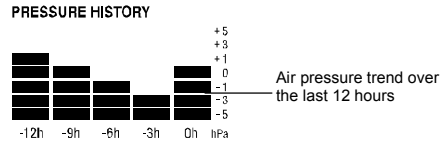
Taking this into account, one can see how the weather has changed and is expected to change. For example, if the indicator is pointing downwards together with cloud and sun icons, then the last noticeable change in the weather was when it was sunny (the sun icon only). Therefore, the next change in the weather will be cloud with rain icons since the indicator is pointing downwards.

Note:

Once the weather tendency indicator has registered a change in air pressure, it will remain permanently visualized on the LCD.

AIR PRESSURE HISTORY (ELECTRONIC BAROMETER WITH BAROMETRIC PRESSURE TREND)

The right side of the second section of the LCD shows the air pressure history bar graph.



The bar graph indicates the air pressure history trend over the last 12 hours in 5 intervals: 0h, -3h, -6h, -9h and -12h. The "0h" represents the current full hour air pressure recording. The columns represent the "hPa" (0, ± 1 , ± 3 , ± 5) at specific time. The "0" in the middle of this scale is equal to the current pressure and each change (± 1 , ± 3 , ± 5) represents how high or low in "hPa" the past pressure was compared to the current pressure.

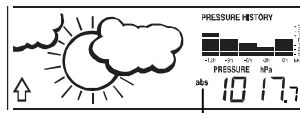
If the bars are rising it means that the weather is getting better due to the increase of air pressure. If the bars go down, it means the air pressure has dropped and the weather is expected to get worse from the present time "0h".

Note:

For accurate barometric pressure trends, the weather station should operate at the same altitude for recordings (i.e. it should not be moved from the ground to the second floor of the house). When the unit is moved to a new location, discard readings for the next 12 hours.

ABSOLUTE/RELATIVE AIR PRESSURE

Press the SET button to toggle between relative ("rel") and absolute ("abs") air pressure displays.



Absolute air pressure display

Note:

Absolute pressure is the actual atmospheric pressure measured by the main unit. Relative pressure is referred as sea level's pressure and has to be adjusted first to your local altitude (see "Relative air pressure reference value setting").

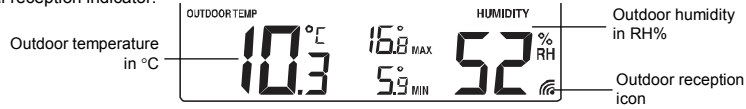
INDOOR TEMPERATURE/HUMIDITY DATA

The indoor temperature and humidity data are automatically updated and displayed on the first section of the LCD.



OUTDOOR TEMPERATURE/HUMIDITY DATA

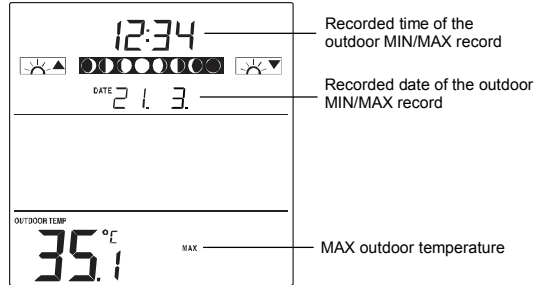
The last LCD section shows the outdoor temperature, MIN/MAX temperature records, humidity and the signal reception indicator.



TO VIEW THE MIN/MAX TEMPERATURE DATA

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

Note: the outdoor MIN/MAX temperature records will also display the recorded time and date.



RESETTING THE MAXIMUM/MINIMUM RECORDS

In normal display mode, press and hold the **MIN/MAX** button for 3 seconds. This will reset **ALL** minimum and maximum temperature records to current temperatures.

THE MOON PHASE ICONS

The weather station displays 8 different moon phase icons. The current moon phase is indicated with a bar segment according to the set calendar.



Waxing Crescent First Quarter Waxing Gibbous Full Moon Waning Gibbous Last Quarter Waning Crescent New Moon

A bar segment indicates the current moon phase

THERMO-HYGRO TRANSMITTER

The reception distance 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 placing the transmitter. Also the batteries may be reduced in power for the thermo-hygro transmitter.

868 MHz RECEPTION

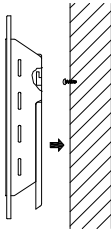
The weather station should receive the outdoor data within 2 minutes after set-up. If the outdoor data is not received 2 minutes after setting up (the outdoor temperature and humidity shows "--.-"), please check the following points:

1. The distance of the weather station or transmitter should be at least 1.5 to 2 meters away from any interfering sources such as computer monitors or TV sets.
2. Avoid positioning the weather station onto or in the immediate proximity of metal window frames.
3. Using other electrical products such as headphones or speakers operating on the same signal frequency (868MHz) may prevent correct signal transmission and reception.
4. Neighbours 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 weather station, 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 about 100 m from the transmitter to the weather station (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**).

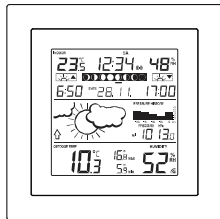
POSITIONING THE WEATHER STATION:



The weather station provides the option of table standing or wall mounting. Before wall mounting, please check that the outdoor data can be received from the desired locations.

To wall mount:

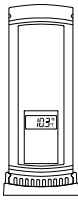
1. Fix a screw (not supplied) into the desired wall, leaving the head extended out by about 5mm.
2. Place the weather station onto the screw, using the hanging hole on the backside. Gently pull the weather station down to lock the screw into place.



Foldout table stand:

The foldout table stand leg is located on the backside. Pull the stand out. Once the foldout table stand is extended, place the weather station 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 mounted 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 weather station 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. Protect from moisture.
- Remove the batteries if you do not use the product for a lengthy period.

TROUBLESHOOTING

Problems	Solutions
No indication on the weather station or transmitter	<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 weather station as per the manual• Choose another place for the transmitter and/or the weather station• Reduce the distance between the transmitter and the weather station• 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

Recommended operating temperature range : +5°C to +40°C / +41°F to +104°F

Temperature measuring range:

Indoor : -9.9°C to +59.9°C with 0.1°C resolution / 14.2°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, "--" displayed if no transmitter signal)

Relative humidity measuring range:

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

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

Data checking interval:

Indoor temperature/humidity checking interval : every 16 seconds

Outdoor temperature/humidity reception : every 4 seconds

Air pressure checking interval : every 1 minute

Power consumption (Alkaline batteries recommended):

Weather station : 2 x C, IEC, LR14, 1.5V

Battery life : Approx. 24 months

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

Battery life : Approx. 12 months

Dimensions (L x W x H)

Weather station : 188 x 33.7 x 188 mm

Thermo-hygro transmitter : 36 x 16 x 102.6 mm

TFA Dostmann GmbH & Co. KG, Zum Ottersberg 12, D - 97877 Wertheim

No part of this manual may be reproduced without written consent of TFA Dostmann. The technical data are correct at the time of going to print and may change without prior notice.

DECLARATION OF CONFORMITY

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

A copy of the signed and dated Declaration of Conformity is available on request via info@tfa-dostmann.de.

www.tfa-dostmann.de

04/12