

WIRELESS 868 MHz WEATHER STATION

Instruction Manual

Cat. No. 35.1117.IT

Thank you for choosing this wireless weather station 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

- DCF-77 radio controlled time function with manual time setting options
- DCF time reception ON/OFF
- 24 hour display
- Calendar display
- Time zone +/- 12 hours
- Temperature display in degree Celsius (°C)
- Indoor and outdoor temperature with MIN/MAX records
- Manual reset of MIN/MAX records
- 3 weather forecast icons with weather tendency indicator
- Wireless transmission at 868 MHz
- Signal reception interval at 4 seconds
- Low battery indicators
- Wall mounting or table standing (detachable stand)

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.



Caution! Risk of injury:

- Keep the instruments 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.

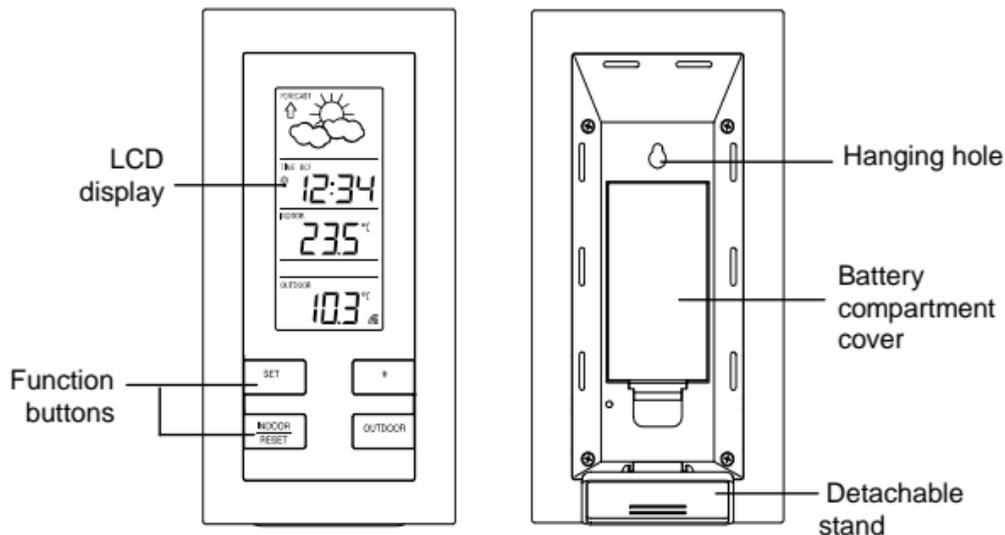
! Important information on product safety!

- Do not expose the instrument to extreme temperatures, vibration or shock.

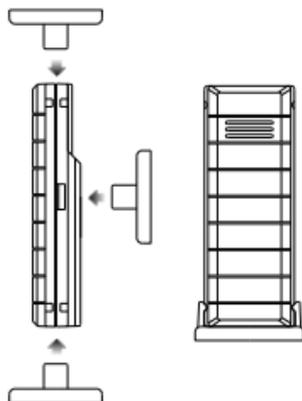
- The outdoor transmitter is protected against splash water, but is not watertight. Choose a shady and dry position for the transmitter.

ELEMENTS

The weather station



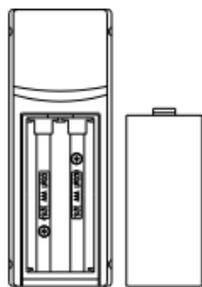
The outdoor temperature transmitter



- Remote transmission of outdoor temperature to weather station by 868 MHz signals
- Splash water proof casing
- Wall mounting and table-standing
- Mounting at a sheltered place. Avoid direct rain and sunshine

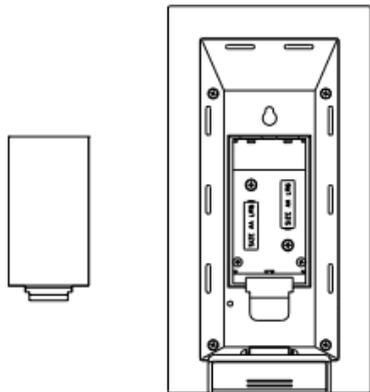
INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE TRANSMITTER

The temperature 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 compartment cover at the back of the transmitter.
2. Insert the batteries, observing the correct polarity (see marking).
3. Replace the battery compartment cover on the unit.

INSTALL AND REPLACE BATTERIES IN THE WEATHER STATION



The weather station uses 2 x AA, IEC LR6, 1.5V batteries. To install and replace the batteries, please follow the steps below:

1. Lift up the battery compartment 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 weather station appears above the indoor temperature.
- When the batteries of the transmitter are used up, the low battery icon appears above the outdoor temperature 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 because a security code is assigned by the temperature 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 into the outdoor transmitter. (see “**Install and replace batteries in the temperature transmitter**”).
2. Within 30 seconds, insert the batteries into the weather station (see “**Install and replace batteries in the weather station**”). Once the batteries are in place, all segments of the LCD will light up briefly. Then the time (default 0:00), the weather icon

and the indoor temperature will be displayed. If these are not displayed after 1 minute, remove the batteries and wait for at least 1 minute before reinserting them.

3. After inserting the batteries, the weather station will start receiving data from the outdoor transmitter. The outdoor temperature and the signal reception icon should then be displayed on the weather station. If this does not happen after 3 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, this should under good conditions be a distance no more than 100 meters between the final position of the weather station and the transmitter (see notes on **“Mounting”** and **“868 MHz Reception”**).
5. Once the outdoor temperature has been received and displayed on the weather station, the DCF time (radio controlled time) code reception is automatically started. This takes typically between 3-5 minutes in good conditions.

NOTE FOR RADIO-CONTROLLED TIME DCF:

The time base for the radio-controlled time is a caesium atomic clock operated by the Physikalisch Technische Bundesanstalt Braunschweig. It has a time deviation of less than one second in one million years. The time is coded and transmitted from Mainflingen near Frankfurt via frequency signal DCF-77 (77.5 kHz) and has a transmitting range of approximately 1,500 km. Your radio-controlled clock receives this signal and converts it to show the precise time. Changeover from summer time or winter time is automatic. The

quality of the reception depends mainly on the geographic location. Normally there should be no reception problems within a 1,500 km radius around Frankfurt.

DCF reception is done twice daily at 02:00 and 03:00 am. If the reception is not successful at 03:00 am, then the next reception takes place the next hour and so on until 06:00am, or until the reception is successful. If the reception is not successful at 06:00 am, then the next attempt will take place the next day at 02:00 am.

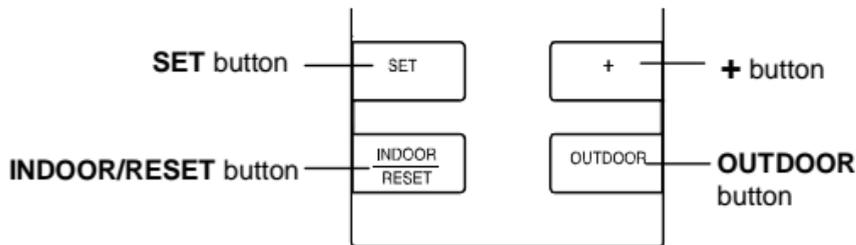
If the tower icon flashes, but does not set the time or the DCF tower does not appear at all, then please take note of the following:

- Recommended distance to any interfering sources like computer monitors or TV sets is a minimum of 1.5 - 2 meters.
- Within ferro-concrete rooms (basements, superstructures), the received signal is naturally weakened. In extreme cases, please place the unit close to a window and/ or point its front or back towards the Frankfurt transmitter.
- During nighttime, the atmospheric disturbances are usually less severe and reception is possible in most cases. A single daily reception is adequate to keep the accuracy deviation below 1 second.

FUNCTION BUTTONS:

Weather station:

The weather station has four easy to use function buttons.



SET button

- Press and hold to enter manual setting modes: time zone, manual time, calendar and DCF time reception ON/OFF

+ button

- To change any values in manual set modes

INDOOR/RESET button

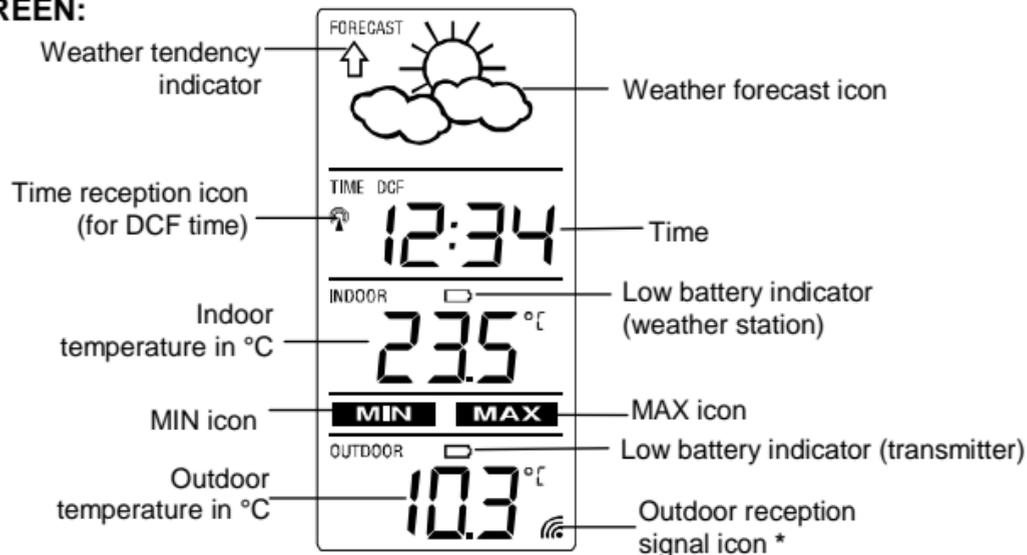
- To display the MIN/MAX indoor temperature records

- Press and hold to reset **all** indoor and outdoor MIN/MAX temperature records at the same time

OUTDOOR button

- To display the MIN/MAX outdoor temperature records

LCD SCREEN:



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

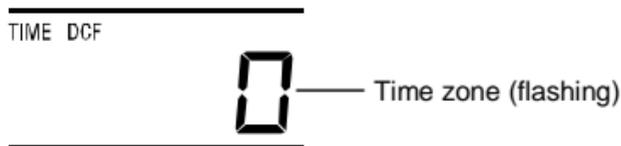
MANUAL SETTINGS:

The following manual settings can be done in the setting mode:

- Time zone
- Manual time
- Calendar (year, month and day)
- Time reception DCF ON/OFF

Press and hold the **SET** button for about 5 seconds to advance to the setting mode:

TIME ZONE SETTING:



The time zone default is "0" hour. To set a different time zone:

1. The current time zone value starts flashing.
2. Use the **+** button to set the time zone. The range runs from 0, -1, -2...-12, 12, 11, 10... 2, 1, 0, in consecutive 1-hour intervals.

3. Confirm with the **SET** button and enter the **Manual time setting**

MANUAL TIME SETTING

In case the weather station is not able to detect the radio-controlled time (DCF time) signal (due to disturbances, transmitting distance, etc.), the time can be manually set. The clock will then work as a normal quartz clock.



To set the clock:

1. The hour digits start flashing in the time display section.
2. Use the **+** button to adjust the hours and then press **SET** button to go to the minute setting.
3. The minute will be flashing. Press the **+** button to adjust the minutes.
4. Confirm with the **SET** button and enter the **Calendar setting**

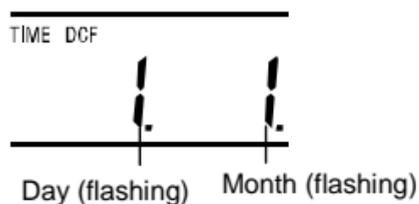
Note:

The unit will still try to receive the signal despite a manual setting. When the signal is received, the manually set time will automatically be replaced by the received time. During

reception attempts, the DCF tower icon will flash. If reception has been unsuccessful, the DCF tower icon will not appear but reception will still be attempted.

CALENDAR SETTING

The date default of the weather station is 1. 1. of the year 2011 after initial set-up. Once the radio-controlled time signals are received, the date is automatically updated. However, if the signals are not received, the date can also be set manually.



1. The year is flashing. Use the + button to set the year required. The range runs from 2011 to 2039.
2. Press the **SET** button to confirm and enter month setting.
3. The month a digit will be flashing. Use the + button to change value.
4. Press the **SET** button to confirm and enter day setting
5. The day digit is flashing. Use the + button to change value.
6. Press **SET** button to confirm and enter the **Time reception ON/OFF setting**

TIME RECEPTION ON/OFF SETTING

In area where reception of the radio-controlled time (DCF time) is not possible, the time reception function can be turned OFF. The clock will then work as a normal quartz clock. (Default setting is ON).



1. "On" is flashing on the LCD.
2. Use the **+** button to turn OFF the time reception function if necessary.
3. Confirm with the **SET** button and exit the setting mode.

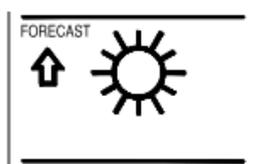
Note:

If the time reception function is turned OFF manually, the clock will not attempt any reception of the radio-controlled time (DCF time) as long as the time reception function is activated again (On). The time reception icon and the DCF icon will not be displayed on the LCD.

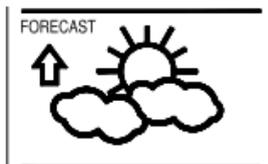
WEATHER FORECAST AND TENDENCY

THE WEATHER FORECASTING ICONS

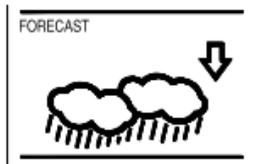
There are 3 weather icons in the top section of LCD which can be displayed in any of the following combinations:



Sunny



Cloudy with sunny intervals



Rainy

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 indicators (located on the right sides of the weather icons). When the indicator points upwards, it means that the atmospheric pressure is increasing and the weather is expected to improve, but when indicator points downwards, the atmospheric 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.

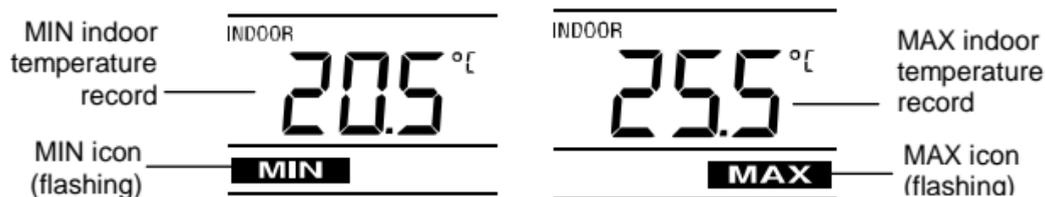
Note:

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

INDOOR TEMPERATURE AND MIN/MAX RECORDS

The current indoor temperature is displayed on the third section of the LCD.

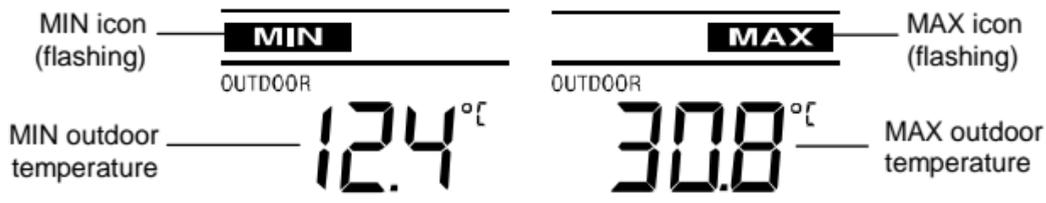
Press and release the **INDOOR/RESET** button repeatedly, the current indoor temperature will alternate between the minimum, maximum temperature recordings and the current value.



OUTDOOR TEMPERATURE AND MIN/MAX RECORDS

The current outdoor temperature is displayed on the last section of the LCD.

Press and release the **OUTDOOR** button repeatedly, the current outdoor temperature will alternate between the minimum, maximum temperature recordings and the current value.



RESETTING INDOOR AND OUTDOOR MIN/MAX TEMPERATURE RECORDS

In normal display mode, press and hold the **INDOOR/RESET** button for 3 seconds to reset in one time **ALL** indoor and outdoor minimum/maximum records to current values.

ABOUT THE OUTDOOR TRANSMITTER

The outdoor temperature is measured and transmitted every 4 seconds.

The range of the temperature transmitter may be affected by the temperature. At cold temperatures the transmitting distance may be decreased. Please keep this in mind when placing the transmitter.

868 MHz RECEPTION CHECK

The weather station should receive the temperature data within 3 minutes after set-up. If the temperature data is not received 3 minutes after setting up (not successfully continuously, the outdoor display 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 temperature 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 temperature 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**).

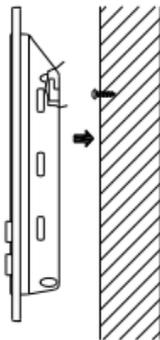
POSITIONING THE WEATHER STATION:

The weather station may be hung onto wall easily or free standing.



Free standing

With the detachable stand, the weather station can be placed onto any flat surface.



To wall mount

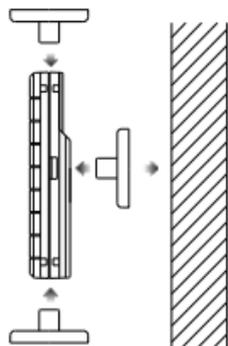
Before wall mounting, please check that the outdoor temperature value can be received from the desired locations.

1. Fix a screw (not supplied) into the desired wall, leaving the head extended out by about 5mm.
2. Remove the stand from the weather station by pulling it away from the base and hang the station onto the screw. Remember to ensure that it locks into place before releasing.

POSITIONING THE TEMPERATURE TRANSMITTER:



The temperature transmitter is supplied with a holder that may be attached to a wall with the two screws supplied. The temperature transmitter can also be position on a flat surface by securing the stand to the bottom of the temperature transmitter.



To wall mount:

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

Note:

Before permanently fixing the temperature transmitter wall base, place all units in the desired locations to check that the outdoor temperature reading is receivable. In event that the signal is not received, relocate the temperature transmitter or move it 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	<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
No DCF reception	<ul style="list-style-type: none">• Time reception setting "ON"• Choose another place for the weather station

	<ul style="list-style-type: none"> • Manual time setting • Wait for attempted reception during the night
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

Temperature measuring range:

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

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

Indoor temperature checking interval : every 16 seconds

Outdoor temperature reception : every 4 seconds

Power consumption (Alkaline batteries recommended):

Weather station : 2 x AA, IEC, LR6, 1.5V

Battery life cycle : Approx. 24 months

Temperature transmitter : 2 x AAA, IEC, LR3, 1.5V

Battery life cycle : Approx. 12 months

Dimensions (L x W x H) :

Weather station : 83 x 25 x 157 mm

Temperature transmitter : 32.4 x 14.1 x 86.5 mm

Transmission frequency: 868 MHz

Maximum radio-
frequency power: < 25mW

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. The latest technical data and information about your product can be found by entering your product number on our homepage.

EU DECLARATION OF CONFORMITY

Hereby, TFA Dostmann declares that the radio equipment type 35.1117.IT is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

www.tfa-dostmann.de

E-Mail: info@tfa-dostmann.de

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

08/16