

## WEATHER STATION

Instruction manual

Cat. No. 35.1084.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.**

**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 Radio controlled time function or manual time setting options
- DCF time reception ON/OFF setting
- 12/24 hour display
- Calendar display
- Time zone option  $\pm 12$  hours
- Display indoor humidity (% RH)
- Weather forecasting with 15 easy-to-read weather forecast signs featured by "Weather boy"
- Indoor comfort level indicator
- Temperature displayed in degrees Celsius ( $^{\circ}\text{C}$ ) or Fahrenheit ( $^{\circ}\text{F}$ ) selectable
- Indoor and outdoor temperature display with MIN/MAX recording
- All MIN/MAX recordings can be reset
- Low battery indicator
- Signal reception intervals at 4-second
- Table standing/ 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.

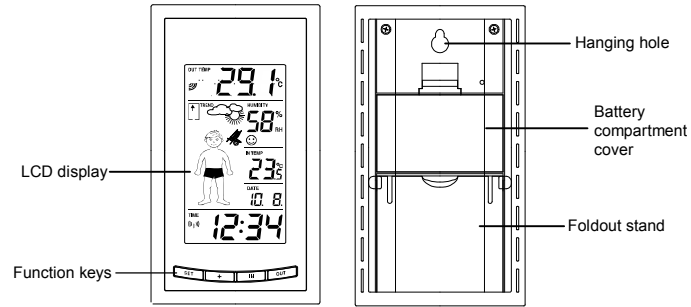
**! Important information on product safety!**

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

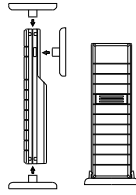
- The outdoor transmitter is protected against splash water, but is not watertight. Choose a shady and dry position for the transmitter.

### ELEMENTS

#### The weather station



### The Outdoor Temperature Transmitter

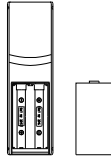


- Remote transmission of outdoor temperature to weather station by 868 MHz
- Shower proof casing
- Wall mounting case (Mounting at a sheltered place. Avoid direct rain and sunshine)

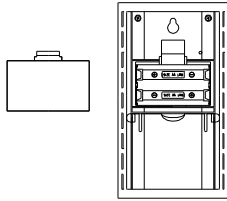
### INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE TRANSMITTER

The temperature transmitter uses 2 x AA, IEC LR6, 1.5V battery. 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. Remove the cover at the back of the weather station.
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 humidity display.
- When the batteries of the transmitter are used up, the low battery icon appears on the upper display, near 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 due to a random security code assigned by the transmitter at start-

up. This code must be received and stored by the weather station in the first 3 minutes of power being supplied to the transmitter.

**SETTING UP:**

**Note: This weather station receives only one outdoor transmitter.**

1. First, insert the batteries into the Temperature transmitter. (see "**Install and replace batteries in the temperature transmitter**").
2. Immediately after and within 30 seconds, insert the batteries into 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. Following the time as 0:00 and the "Weather boy" icon will be displayed. If these are not displayed after 60 seconds, remove the batteries and wait for at least 10 seconds before reinserting them.
3. After inserting the batteries, the weather station will start receiving data from the 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 sufficient 868 MHz transmission however, 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 remote 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.

#### **DCF RADIO CONTROLLED TIME**

The time base for the radio controlled time is a Cesium Atomic Clock operated by the Physikalisch Technische Bundesanstalt Braunschweig which 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 weather station receives this signal and converts it to show the precise time in summer or wintertime.

The quality of the reception depends greatly on the geographic location. In normal cases, there should be no reception problems within a 1,500 km radius of 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:

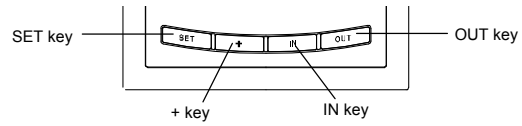


- Recommended distance to any interfering sources like computer monitors or TV sets is a minimum of 1.5 - 2 meters.
- Within ferro-concrete rooms (basements, superstructures), the received signal is naturally weakened. In extreme cases, please place the unit close to a window and/ or point its front 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 KEYS:**

**Weather station:**

The weather station has four easy to use function keys.



**SET key**

- Press and hold the key to enter manual setting modes: time zone, manual time, calendar, time reception ON/OFF, 12/24 hour display and temperature unit °C/°F setting

**+ key**

- To make adjustment for various settings

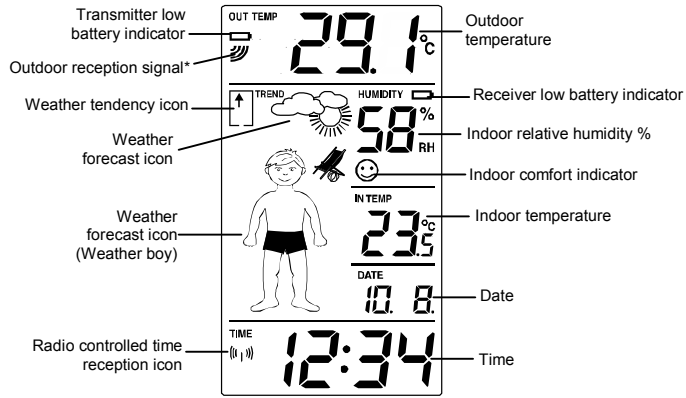
**IN key**

- Press to display the MIN and MAX indoor temperature records
- Press and hold to reset the indoor MIN/MAX temperature records

**OUT key**

- Press to display the MIN and MAX outdoor temperature records
- Press and hold to reset the outdoor MIN/MAX temperature records

**LCD SCREEN AND SETTINGS:**



\* When the outdoor signal is successfully received by the weather station, this icon will be switched on. (If 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
- Time reception ON/OFF (DCF)
- 12/24 hour display
- Temperature unit °C/°F setting

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

**TIME ZONE SETTING:**



Time zone (flashing)

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

1. The current time zone value starts flashing.

2. Use the + key 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 key 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 (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 + key to adjust the hours and then press SET key to go to the minute setting.
3. The minute will be flashing. Press the + key to just the minutes.
4. Confirm with the SET key and enter the **Calendar Setting**.

## CALENDAR SETTING

20 10 — Year

## DATE

1 1

"Day. Month." (for 24h time display)  
"Month. Day." (for 12h time display)

The date default of the Weather station is 1. 1. of the year 2010 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. To do this:

1. Using the + key, set the year required. The range runs from 2010 to 2039 (default is 2010).
2. Press the SET key to enter the month setting mode.
3. The month digit will be flashing. Press the + key to set the month and then press the SET key to go to the date setting.
4. The date digit will be flashing. Press the + key to set the date.
5. Confirm with the SET key and enter the **Time reception ON/OFF setting**.

#### TIME RECEPTION ON/OFF SETTING



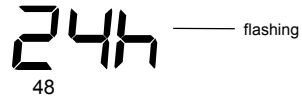
In areas where reception of the radio-controlled time (DCF time) is not possible, the time reception function can be turned OFF. The clock will then work as a normal Quartz clock. (Default setting is ON).

1. The digit "ON" and the "dCF" digits will start flashing on the LCD.
2. Use the + key to turn OFF the time reception function if necessary.
3. Confirm with the SET key and enter the **12/24-hour display setting**.

**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 OFF function is activated. The time reception icon will not be displayed on the LCD.

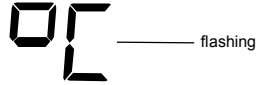
#### 12/24 HOUR TIME DISPLAY SETTING



1. After setting time reception ON/OFF, press the SET key, "12h" or "24h" flashes in the LCD. (default 24 h)
2. Press the + key to select the "12h" or "24h" display mode.
3. Press the SET again to confirm and to enter the **°C/°F Temperature unit setting**.

**Note:** When 24h mode display is selected, the calendar format will be "Day. Month." display.  
When 12h mode display is selected, the calendar format will be "Month. Day." display.

#### °C/°F TEMPERATURE UNIT SETTING



The default temperature reading is set to °C (degree Celsius). To select °F (degree Fahrenheit):

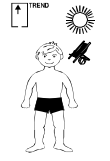




1. The "°C or °F" will be flashing, use the + key to toggle between "°C" and "°F".
2. Once the desired temperature unit has been chosen, confirm with the SET key and exit the setting mode.



**WEATHER FORECAST AND TENDENCY:**

**The weather forecast icons (weather boy):**

One of the 15 different weather icons, featured by the weather boy with different clothing and a weather symbol (sunny, sunny + cloudy or cloudy + rainy) indicates the different forecast weather conditions due to change in air pressure level and the current outdoor temperature (measured by the outdoor transmitter):

	$\geq 26^{\circ}\text{C}$	$19 - 25.9^{\circ}\text{C}$	$10 - 18.9^{\circ}\text{C}$	$0 - 9.9^{\circ}\text{C}$	$< 0^{\circ}\text{C}$
<b>Sunny</b>					

	$\geq 26^{\circ}\text{C}$	19 – 25.9 $^{\circ}\text{C}$	10 – 18.9 $^{\circ}\text{C}$	0 – 9.9 $^{\circ}\text{C}$	$< 0^{\circ}\text{C}$
<b>Sunny + Cloudy</b>					
<b>Cloudy + Rainy</b>					

For every sudden or significant change in the air pressure, the weather icons will update accordingly to represent the change in weather. If the icons do not change, then it means either the air 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 air pressure has dropped and the weather is expected to get worse but not necessarily rainy.

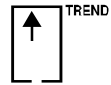
**Note:**

After setting up, readings for weather forecasts should be disregarded for the next 12-24 hours. This will allow sufficient time for the weather station to collect air 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. 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), remove the batteries and re-insert them after about 30 seconds. By doing this, the weather station will not mistake the new location as being a possible change in air-pressure when really it is due to the slight change of altitude. Again, disregard weather forecasts for the next 12 to 24 hours as this will allow time for operation at a constant altitude.

#### THE WEATHER TENDENCY INDICATOR



Working together with the weather icons are the weather tendency indicators (located near the Weather boy). When the indicator points upwards, it means that the air-pressure is increasing and the weather is expected to improve, but when indicator points downwards, the air-pressure is dropping and the weather is expected to become worse.

Therefore, user may see how the weather has changed and is expected to change. For example, if the indicator is pointing downwards together with cloudy icons, it means that the last noticeable change in the weather was when it was sunny (the sunny icon only). Therefore, the next change in the weather will be the cloudy 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.
- When the tendency indicator is pointing to the right, it means that no pressure change has been detected by the weather station from the beginning. Therefore, the coming weather condition is expected to be more or less the same as the current condition.



TREND

*The coming weather condition is expected to be more or less the same as the current condition*

**THE COMFORT LEVEL INDICATOR:**

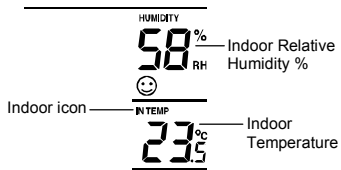
The comfort level indicator is located at the right of the weather boy icon:

**Comfortable** : A happy face icon "☺" indicating a temperature level between 20°C and 25.9°C and relative humidity reading between 45% and 65%.

**Uncomfortable** : A sad face icon "☹" indicating any value outside the comfortable range.

**DISPLAY OF INDOOR TEMPERATURE AND HUMIDITY READING:**

The indoor temperature and humidity are measured and displayed on the second section of the LCD.



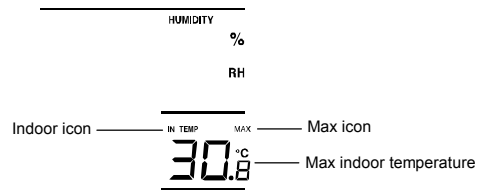
**DISPLAY OF OUTDOOR TEMPERATURE READING:**

The outdoor temperature is measured and displayed on the first section of the LCD.



**DISPLAY OF INDOOR MAXIMUM AND MINIMUM TEMPERATURE RECORDS:**

1. In normal display mode, press the IN button once. The min indoor temperature will be shown in the LCD.
2. Then press the IN button one more time, the max indoor temperature will be shown:



3. Press one more time the IN button to go back to the normal display.

#### **RESETTING THE INDOOR MAXIMUM/ MINIMUM RECORDS**

**Note:** The indoor minimum and maximum records will be reset at the same time

1. In normal display mode, press the IN key once. The min indoor temperature will be displayed.
2. Then press and hold the IN key for about 3 seconds, this will reset the indoor minimum and maximum temperatures to the current value.

#### DISPLAY OF OUTDOOR MAXIMUM AND MINIMUM TEMPERATURE RECORDS:

Outdoor icon ——— OUT TEMP      20.8 °C      Min outdoor temperature  
Min icon ——— MIN

1. Press the OUT button once, the min outdoor temperature will be displayed.
2. By pressing OUT button once more, the max outdoor temperature will be shown.
3. Press one more OUT button to advance to normal display.

#### RESETTING THE OUTDOOR MAXIMUM/ MINIMUM TEMPERATURE RECORDS

**Note:** The outdoor minimum and maximum records will be reset at the same time.

1. In normal display mode, press the OUT key once. The min outdoor temperature will be displayed.
2. Then press and hold the OUT key for about 3 seconds, this will reset the outdoor minimum and maximum temperatures to the current value.

#### 868 MHz RECEPTION

The weather station should receive the temperature data within 5 minutes after set-up. If the temperature data is not received 5 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:**

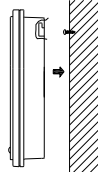
When the 868MHz signal is received correctly, do not re-open the battery cover of either the transmitter or weather station, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally then reset all units (see **Setting up** above) otherwise transmission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

## MOUNTING

### POSITIONING THE WEATHER STATION:

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



#### To wall mount

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

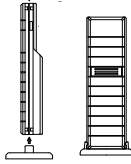
1. Fix a screw (not supplied) into the desired wall, leaving the head extended out the by about 5mm.
2. Remove the stand from the weather station by pulling it away from the base and hang the station onto the screw. Remember to ensure that it locks into place before releasing.



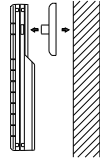
#### Free standing

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

#### POSITIONING THE TEMPERATURE TRANSMITTER:



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



#### To wall mount:

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

#### **Note:**

Before permanently fixing the 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 transmitters or move them 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**

<b>Problems</b>	<b>Solution</b>
No indication on the weather station	<ul style="list-style-type: none"><li>• Ensure batteries polarity are correct</li><li>• Change batteries</li></ul>
No transmitter reception Display "----"	<ul style="list-style-type: none"><li>• Check batteries of external transmitter (do not use rechargeable batteries!)</li><li>• Restart the transmitter and weather station as per the manual</li><li>• Choose another place for the transmitter and/or the weather station</li><li>• Reduce the distance between the transmitter and the weather station</li><li>• Check if there is any source of interference</li></ul>
No DCF reception	<ul style="list-style-type: none"><li>• Time reception setting "ON"</li><li>• Choose another place for the weather station</li><li>• Manual time setting</li></ul>

	<ul style="list-style-type: none"><li>• Wait for attempted reception during the night</li></ul>
Incorrect display	<ul style="list-style-type: none"><li>• Change batteries</li></ul>

#### 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 : 0°C to 50°C

**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

**Relative humidity measuring range:**

Indoor : 20% to 95% with 1% resolution ("-" displayed if the indoor temperature reading is "OF.L"; "19%" displayed if the reading is lower than 20%, "96%" displayed if the reading is higher than 95%)

Indoor temperature checking interval : every 16 seconds

Indoor humidity checking interval : every 64 seconds

Outdoor data reception : every 4 seconds

**Power consumption:**

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

Temperature transmitter : 2 x AA, IEC, LR6, 1.5V

Battery life cycle : Approximately 24 months (Alkaline batteries recommended)

**Dimensions (L x W x H)**

Weather station : 80.8 x 30.9 x 143.2mm  
Temperature transmitter : 38.2 x 21.2 x 128.3 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](mailto:info@tfa-dostmann.de).

[www.tfa-dostmann.de](http://www.tfa-dostmann.de)

09/12