

## WIRELESS 868 MHz TEMPERATURE STATION

Instruction Manual  
Cat. No. 30.3050.IT

Thank you for choosing this wireless temperature 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 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 DELIVERY:

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

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

- DCF Radio controlled time with manual setting option
- Time reception ON/OFF
- Daylight saving time (DST) function selectable (ON/OFF)
- Time zone option -2h to +5h
- Calendar display (month, date; year only in manual setting)
- Temperature display in degrees Celsius (°C)
- MIN/MAX indoor and outdoor temperature display with time and date of recordings
- Manual reset of the MIN/MAX temperature records
- Low battery indicator
- 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:**

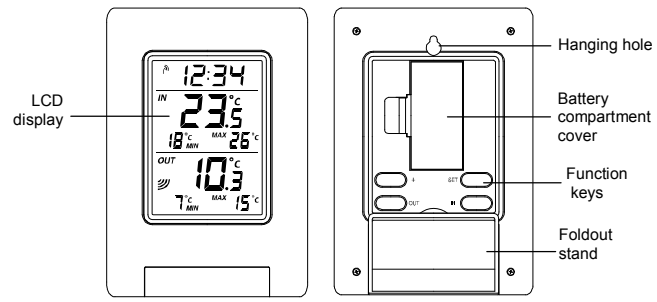
- Keep this instrument and the batteries out of reach of children.
- Batteries must not be thrown into the fire, short-circuited, taken apart or recharged. Risk of explosion!
- Batteries contain harmful acids. Low batteries should be changed as soon as possible to prevent damage caused by a leaking battery.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

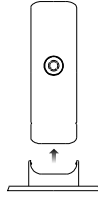
- Do not expose the instrument to extreme temperatures, vibration or shock.
- The outdoor transmitter is protected against splash water, but is not watertight. Choose a shady and dry position for the transmitter.

**ELEMENTS:**

**The temperature station**



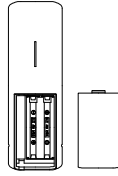
### The temperature transmitter



- Remote transmission of outdoor temperature to temperature station by 868 MHz signals
- Casing protected against splash water
- Wall mounting and table stand
- Suitable for connection with sensor cable for pool, freezer etc. (optional)

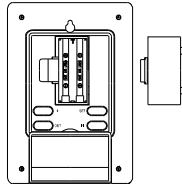
### INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE TRANSMITTER

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



1. Slide the battery cover downwards and remove.
2. Insert the batteries, observing the correct polarity (see marking).
3. Replace the battery cover.

### INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE STATION



The temperature station uses 2 x AAA, IEC LR3, 1.5V batteries. To install and replace the batteries, please follow the steps below:

1. Remove the cover at the back of the temperature 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 temperature station appears near the indoor temperature display.
- When the batteries of the transmitter are used up, the low battery icon appears 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 because a random security code is assigned by the transmitter at start-up and this code must be received and stored by the temperature station in the first 3 minutes of power being supplied to it.

**SETTING UP:**

1. First, insert the batteries into the transmitter (see "**Install and replace batteries in the temperature transmitter**" below).
2. Within 30 seconds of powering up the transmitter, insert the batteries to the temperature station (see "**Install and replace batteries in the temperature station**" below). Once the batteries are in place, all segments of the LCD will light up briefly. Then the indoor temperature and the time as 0:00 will be displayed. If they are not shown on 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 temperature station will start receiving data signal from the transmitter.
4. In order to ensure sufficient 868 MHz transmission, the position between the temperature station and the transmitter should not be more than 100 meters (see notes on "**Positioning**" and "**868 MHz Reception**").
5. Once the remote temperature has been received and displayed on the temperature station, the DCF time code reception is automatically started. This takes typically between 3-5 minutes in good conditions.

**DCF-77 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 temperature 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 1500km radius of Frankfurt.

Once the outdoor temperature is displayed on the temperature station, the DCF tower icon in the clock display will start flashing in the upper left corner. This indicates that the clock has detected that there is a radio signal present and is trying to receive it. When the time code is received, the DCF tower becomes permanently lit and the time will be displayed.

DCF reception is done twice daily at 02:00 and 03:00 am. If the reception is not successful at 02:00 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:

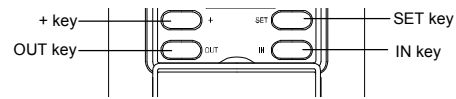
- Recommended distance to any interfering sources like computer monitors or TV sets is a minimum of 1.5 - 2 meters.
- Within ferro-concrete rooms (basements, superstructures), the received signal is naturally weakened. In extreme cases, please place the unit close to a window and/ or point its front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

### Temperature station:

The temperature station has four easy to use function keys.



### SET key (Setting):

- Press and hold to enter the setting mode for the following settings: time zone, time reception (RCC ON/OFF), daylight saving time (DST ON/OFF), manual time and calendar settings.

### + key

- To make adjustment for various settings
- To display the calendar (display returns to time display automatically after 5 seconds)

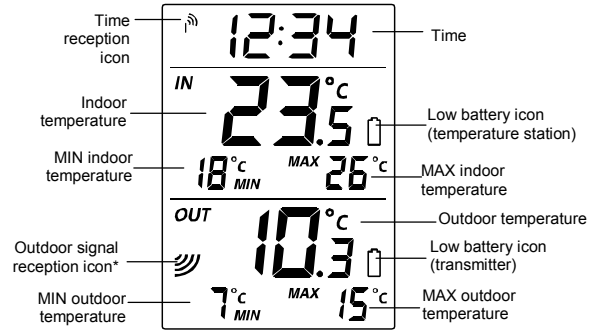
### IN key

- To toggle between the MIN/MAX and current indoor temperature
- Press and hold to reset the MIN/MAX indoor temperature records
- Press to exit the manual setting mode

**OUT key**

- To toggle between the MIN/MAX and current outdoor temperature
- Press and hold to reset the MIN/MAX outdoor temperature records
- Press to exit the manual setting mode

**LCD SCREEN:**



\* When the signal is successfully received by the temperature station, 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). On the other hand, the short blinking of the icon shows that a reception is currently taking place.

**MANUAL SETTINGS:**

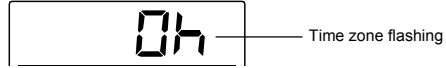
The following manual settings can be done in the setting mode:

- Time zone setting
- Time reception ON/OFF setting (RCC)
- Daylight saving time (DST) ON/OFF
- Manual time setting
- Calendar setting (Year, Month, Date)

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

**TIME ZONE SETTING:**

The time zone default of the temperature station is 0h. To change to another time zone:

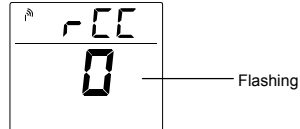


1. The time zone "0" start flashing. Use the + key set the time zone. The range runs from -2h to +5h and then runs from +5h to -2h back in 1hour interval.

2. Press the SET key to confirm and enter the **"Time reception On/Off setting"**.

#### **TIME RECEPTION ON/OFF SETTING**

In areas where reception of the atomic 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 "1" (ON)).



1. The digit "1" (ON) and the time reception icon will start flashing on the LCD. Use the + key to turn "0" (OFF) or "1" (ON) the time reception function.
2. Confirm with the SET key and enter the **"Daylight saving time (DST) ON/OFF"**.

#### **Note:**

If the time reception function is turned OFF manually, the clock will not attempt any reception of the DCF time as long as the time reception OFF function is activated. The time reception icon will not be displayed on the LCD.

#### **DAYLIGHT SAVING TIME ON/OFF SETTING (DST)**

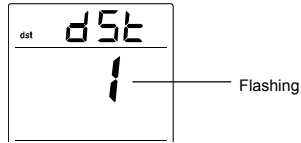
The daylight saving time (DST) function can be set ON "1" or OFF "0". Default setting is "1" (ON):

**Important:**

**This function is only significant if the time reception setting is turned OFF "0".**

- **Daylight saving time setting "1" (ON):** the clock calculates DST automatically in normal quartz mode. DST begins on the last Sunday of March and ends on the last Sunday of October.
- **Daylight saving time setting "0" (OFF):** DST feature is OFF and the clock will not change time automatically.

**If the time reception setting is turned ON "1", please set the daylight saving time "1" (ON):** the time change will be updated by the DCF-77 signal (as long as a proper reception is possible). In case of daylight saving time setting "0" (OFF): the time will be transmitted by the DCF-77 signal, but the clock calculates automatically a "no-DST time".



1. "1" (ON) will flash on the LCD with "dSt" displayed. Use the + key to turn the daylight saving time function ON or OFF.
2. Confirm with the SET key and enter the **"Manual time setting"**.

### MANUAL SETTING OF THE CLOCK

In case the temperature station is not able to detect the atomic time (DCF) 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:

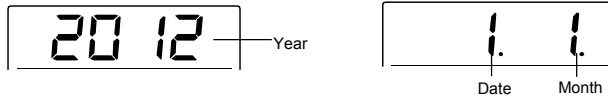
1. The hour digits start flashing in the time display section.
2. Use the + key to adjust the hours and then press SET key to go to the minute setting.
3. The minute will be flashing. Press the + key to adjust the minutes.
4. Confirm with the SET key and enter the "Calendar setting".

#### Note:

The unit will still try to receive the signal despite it being manually set. When it does receive the signal, it will change the manually set time into the received time. During reception attempts the DCF tower icon will flash. If reception has been unsuccessful, then the DCF tower icon will not appear but reception will still be attempted the following hour.

### CALENDAR SETTING

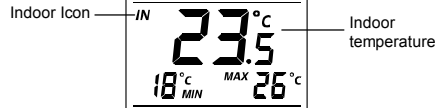
The date default of the temperature station is 1. 1. of the year 2012 after initial set-up. Once the radio-controlled time signals are received, the date is automatically updated. However, if the signals are not received, the date can also be set manually.



1. The year is flashing. Using the + key, set the year required. The range runs from 2012 to 2039 (default is 2012).
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 day setting.
4. The day digit will be flashing. Press the + key to set the day.
5. Confirm with the SET key to exit the setting mode.

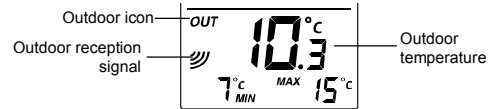
**DISPLAY OF INDOOR TEMPERATURE READING:**

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



#### DISPLAY OF OUTDOOR TEMPERATURE READING:

The bottom LCD section shows the outdoor temperature.



#### DISPLAY OF INDOOR MIN/MAX RECORDS:

1. Continuously press the IN key several times to view:
  - MIN indoor temperature and time of recording
  - MIN indoor temperature and date of recording
  - MAX indoor temperature and time of recording
  - MAX indoor temperature and date of recording
2. Press again the IN key to return to normal display.

**Note:** the measuring indoor MIN/MAX temperature range is: -9°C to +39°C with 1°C resolution

#### DISPLAY OF OUTDOOR MIN/MAX RECORDS:

1. Continuously press the OUT key several times to view:
  - MIN outdoor temperature and time of recording
  - MIN outdoor temperature and date of recording



- MAX outdoor temperature and time of recording
  - MAX outdoor temperature and date of recording
2. Press again the OUT key to return to normal display.

**Note:** the measuring outdoor MIN/MAX temperature range is: -40°C to +60°C with 1°C resolution

#### **RESETTING THE INDOOR AND OUTDOOR MIN/MAX RECORDS**

1. Press and hold the IN or OUT key for about 3 seconds, this will reset the currently shown indoor or outdoor MIN/MAX data to the current time, date and temperature respectively.

#### **868 MHz RECEPTION**

The temperature 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 temperature 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 temperature 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.
5. Neighbors using electrical devices operating on the 868MHz signal frequency can also cause interference.

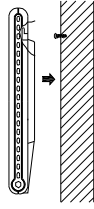
**Note:**

When the 868MHz signal is received correctly, do not re-open the battery cover of either the transmitter or temperature 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 temperature 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 TEMPERATURE STATION:**

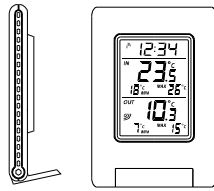
The temperature station is designed to hang onto wall or free standing.



**To wall mount**

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

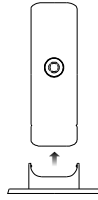
1. Fix a screw (not supplied) into the desired wall, leaving the head extended out the by about 5mm.
2. Hang the station onto the screw. Remember to ensure that it locks into place before releasing.



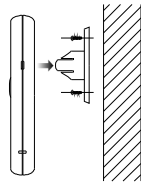
**Free standing**

With the foldout stand, the temperature 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 positioned on a flat surface by mounting the holder at the bottom of the transmitter. Choose a sheltered place. Avoid direct rain and sunshine.



**To wall mount:**

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

**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 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.

**MALFUNCTION**

<b>Problems</b>	<b>Troubleshooting</b>
No indication on the temperature station	<ul style="list-style-type: none"><li>• Ensure batteries polarity is 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 temperature station as per the manual</li> <li>• Choose another place for the transmitter and/or the temperature station</li> <li>• Reduce the distance between the transmitter and the temperature 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 temperature station</li> <li>• Manual time setting</li> <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: +5°C to +40°C

**Temperature measuring range:**

Indoor : -9.9°C to +39.9°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 data reception : every 4 seconds

**Power consumption:**

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

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

Battery life (Alkaline batteries recommended)

Temperature station : Approximately 12 months

Temperature transmitter : Approximately 12 months

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

Temperature station : 95 x 18.8 x 136 mm  
Temperature transmitter : 41 x 19 x 128 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)

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