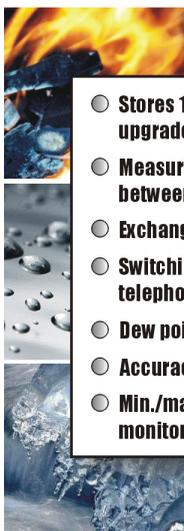


# Hygrofox Mini

Datalogger for air temperature  
and atmospheric humidity



- Stores 16000 readings, optionally upgradeable to up to 64000 readings
- Measuring interval: freely selectable between 1 second and 24 hours
- Exchangeable sensor unit
- Switching output for alarm device, telephone alarm and many more
- Dew point curve available
- Accuracy:  $< 0,4^{\circ}\text{C}$  and  $< 3,0\%r\text{H}$
- Min./max. detection for complete monitoring of extremums



## Operating Instructions

# Introduction to the Hygrofox Mini

Dear customer,

Thank you for purchasing a *Hygrofox Mini* data logger by Scantronik Mugrauer GmbH. This measuring system has been specifically developed for the recording of air temperature and atmospheric humidity and is one of the first data logger systems world-wide to use the revolutionary digital *CMOSens® technology*. The new sensor technology is in particular characterised by its optimised long-term stability, its high degree of precision, reliability and extremely fast reaction time of less than 3 seconds. Thanks to the possibility of exchanging the sensor directly on-site, time-consuming and expensive recalibration can be dispensed with. In addition, it is also possible to speedily replace the standard 3V lithium battery that is integrated in the data logger so that any pending measuring task can commence without delay.

Within the scope of these operating instructions, we would like to convey to you a basic understanding of how to use the Hygrofox Mini.

The core components for the use of the measuring system are the PC software and the data logger hardware. In addition to these, there are further components that can be used in conjunction with the data logger. These are amongst others a portable mini printer or a telephone alarm system. However, these components will not be dealt with in detail in the context of these instructions.

To be able to set up the data logger for the next measuring task as required, it is necessary to install the PC software on your computer. Among other things, this software grants you access to all the collected measuring data in the data logger's memory.

For this reason, one of the chapters below will deal with how to install the PC software.

# Scope of Supply of “Complete System”

If you have decided to purchase the complete Hygrofox Mini system, the package will contain the following components:

1. *Hygrofox Mini* data logger hardware
2. Standard lithium battery (3V)
3. Data carrier (CD ROM) with PC software
4. PC interface cable
5. Operating instructions for the *Hygrofox Mini*

## Installing the PC Software

Start your computer and wait until the operating system has been completely loaded. This may take a couple of minutes. If your computer is already switched on, please close all other applications to avoid possible conflicts during installation. You now see your operating system’s desktop in front of you.



Figure 1: Desktop

This may be one of the following operating systems: Microsoft Windows® 98, NT, Me, 2000 or XP. More recent systems are also supported. Now insert the CD with the data logger software in your CD drive. Normally, the installation assistant that will accompany you through the following installation will start automatically. If it does not, your CD drive's automatic start function has probably been disabled. If that is the case, double-click on the desktop symbol to open the desktop. Now double-click the symbol of the CD drive that holds the data logger software. The installation assistant is started.



Figure 2: Installation assistant for the PC software

Follow the instructions on the screen. You first have to specify a directory into which the software is to be installed. After that, you can specify the name of the file that is to be created in your start menu during the installation process. During the last installation step you are given the opportunity to have a direct link created on the desktop and in the start bar. Before installation starts, you are provided with an overview of the installation options you have selected.

Once installation has been completed, you can access the software via the new entry in the start menu (program “SoftFOX”). After that, the program’s welcome screen opens. Press the “O.K.” button to start working with the software.

These operating instructions are to provide you with a good overview of the most important software functions. To obtain more detailed information about all of the software’s properties and features, open the program’s online help either by means of the “F1” button on your keyboard or by means of the menu item “Software - Help” under the “Help” menu.

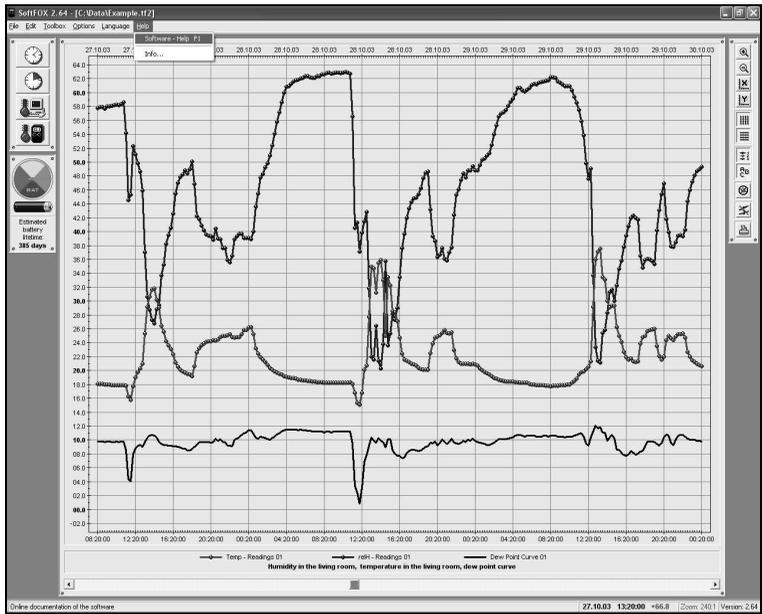


Figure 3: Accessing the online help function

To be able to use all the functions offered by software and data logger, it makes sense to briefly deal with the online help. In this manner, you will learn how to purposefully use the software’s and data logger’s features.

# PC Software Configuration

Before the PC software can work in conjunction with the data logger, you need to connect the latter to your computer. This is done by means of the PC interface cable that is included in the software's scope of supply. Plug the interface cable into one of your PC's free COM ports (serial interface or RS-232 port) and connect the other side of the cable with your data logger. Now you need to tell the PC software at which connection the data logger is linked with the PC. This is done via the menu item "Program Settings..." under the "Options" menu. Enter the relevant port in the field "Communication Port".

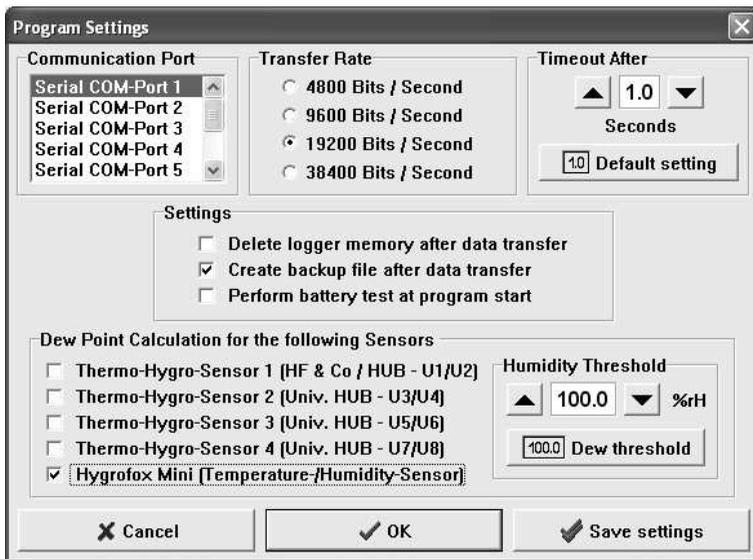


Figure 4: Configuring the interface

Once this is done, save the setting with the "Save settings" button. That way you only need to specify the communication port once. The PC software is now ready to configure and/or read out the data logger.

# Initial Operation and Replacing the Battery of the Hygrofox Mini

If you would like to put the data logger into operation for the first time or if the data logger's battery is empty, it is very easy to insert and/or replace the battery yourself. To do so, you need a 3V standard lithium battery type "CR2450N" and a small crosstip screwdriver.

Putting the data logger into operation and replacing the battery is monitored and controlled by the PC software. Access the menu item "Replace Datalogger Battery" under the "Options" menu for this purpose and you will be given step by step instructions that accurately explain the start-up sequence and the battery replacement. If the data logger is put into operation for the first time, the Hygrofox Mini does of course not yet contain a battery.

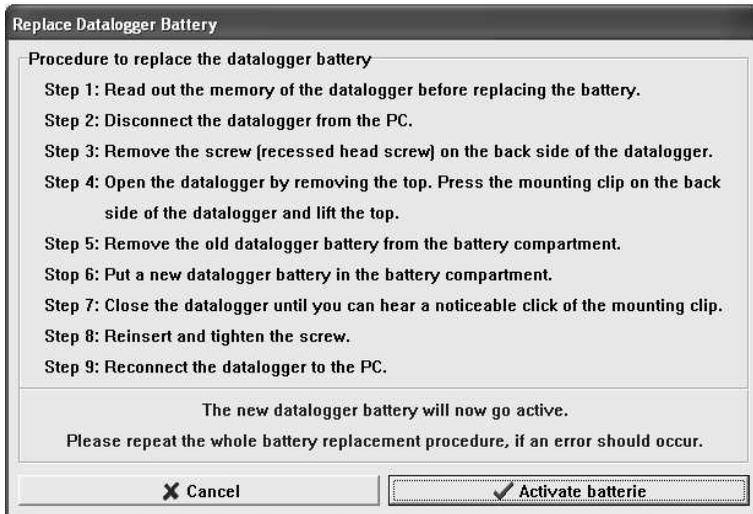


Figure 5: Putting the Hygrofox Mini into operation

Do not use force to open the housing, as this may damage the housing or the lid. After you have inserted a new battery into the Hygrofox Mini, it is

activated by the PC software during the last work step. You can subsequently carry out a battery test (see below) to query the new battery's state of charge.

## Tutorial for the Hygrofox Mini

Now that you have successfully installed the PC software and inserted a battery into the data logger, the typical procedure to be followed when using the Hygrofox Mini will be explained below.

Every measuring task starts with configuring and testing the measuring system, i.e. the data logger. The data logger battery's state of charge should be checked first in this connection. This is of particular importance if the data logger is to record measuring data over a longer period of time.

There are two possibilities to check the battery's state of charge. Either select the menu item "Battery Test" under the "Options" menu or use the left mouse key to click on the battery symbol to the left of the diagram window. This updates the battery indicator and provides you with a guide value for the battery's state of charge.



Figure 6: The Hygrofox Mini's battery indicator

We recommend replacing the battery anyway approximately every one to one and a half years.

During the next step, you set up the data logger's internal clock and internal calendar. These two components provide the data logger with the sense of time that enables it to record measuring data at regular intervals and to store these in the memory with a time stamp. The data logger's clock is set via the menu item "Configure Time..." under the "Toolbox" menu or via the clock symbol in the toolbox to the left of the diagram window (1. symbol).

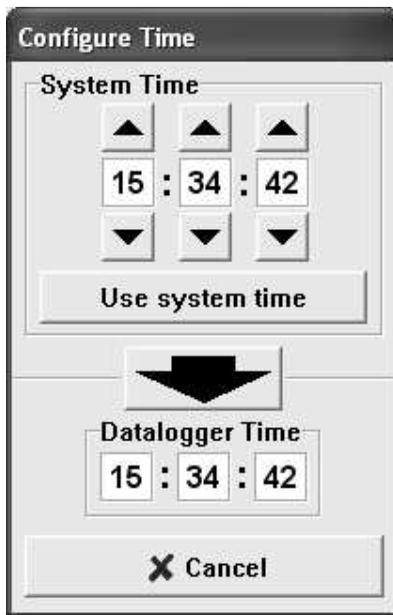


Figure 7: Setting the data logger's internal clock

To transfer the current time to the data logger it is sufficient to click on the large black arrow in the centre of the screen. This causes the computer's current system time to be transferred to the data logger. Please ensure that your computer's system time is correct.

Next, the data logger's calendar is set. This is done via the menu item "Configure Date" under the "Options" menu.

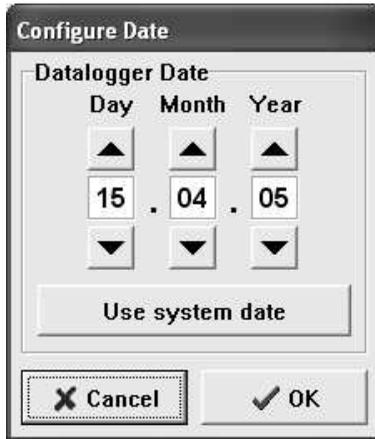


Figure 8: Setting the data logger's internal calendar

The button "Use system date" provides you with the opportunity to directly transfer the current system date into the three date fields. The new date is only transferred to the Hygrofox Mini once you press the "OK" button.

After you have configured the data logger's two time-defining components, you must now select the sensors that are of interest during the following measuring task. The sensors are selected via the menu item "Configure Sensors" under the "Options" menu.

The configuration window is subdivided into two sectors. In the left sector you select those sensors that are to be recorded during the following measuring task while the right sector defines for which sensors the min/max detection is to be active.

Without min/max detection, only one measurement is recorded per sensor for every measuring time. If large measuring intervals of several hours are used, this may lead to very brief extremums being overlooked. However,

if the min/max detection is active, the Hygrofox Mini regularly analyses the sensors' status at short intervals. If the data logger detects an extremum, it stores it additionally in the memory.

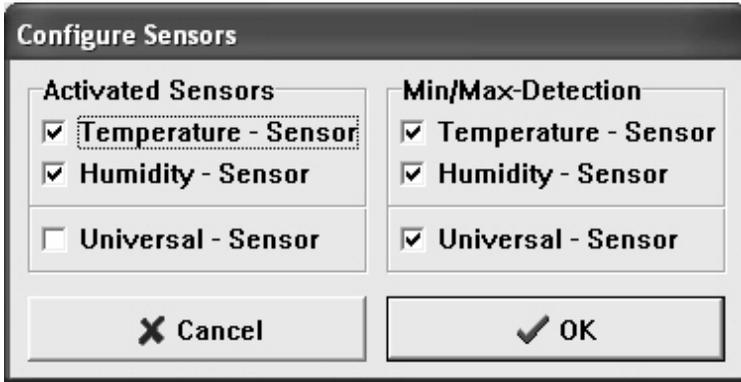


Figure 9: Selecting the active sensors

It has to be born in mind in this connection that the data logger does not imperatively record an additional extremum for every measuring time. If the climate surrounding the data logger is relatively constant, it is by all means possible that even with the extremum recording activated, no minimums or maximums occur and/or are recorded.

As a last step, the rhythm (logging interval / measuring interval) at which the data logger is to record measurements has to be specified. This is either done via the menu item "Configure Logging Interval" under the "Toolbox" menu or via the second clock symbol (the one with the green section) in the toolbox to the left of the diagram window.

In the "Logging Interval" sector you can specify at which intervals the Hygrofox Mini is to regularly store measurements of the selected sensors in the memory. In the sector "Restart of the Datalogger" you can choose between two modes. Once you have made all the required settings, start the measuring operation by pressing the "Start Logger" button. You will be warned that all values that are currently in the data logger's memory will be deleted. Confirm this message.

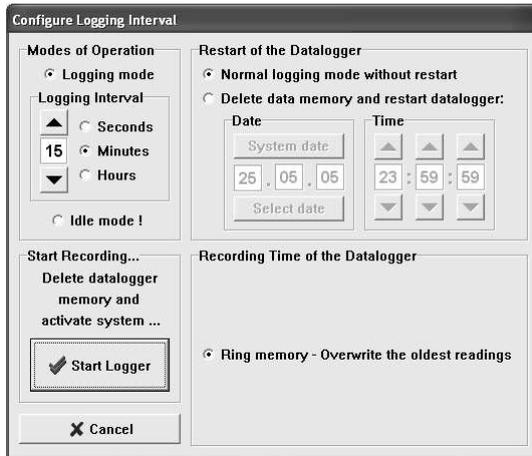


Figure 10: Setting the Hygrofox Mini’s measuring interval

The data logger is now measuring continuously and stores the measurements in its internal memory. You may place the data logger in an arbitrary position to use it for your measuring task. At the end of the measuring task, reconnect the data logger to the computer and read out the collected measurements. Data may be read out via the menu item “Transfer Data...” under the “Toolbox” menu.

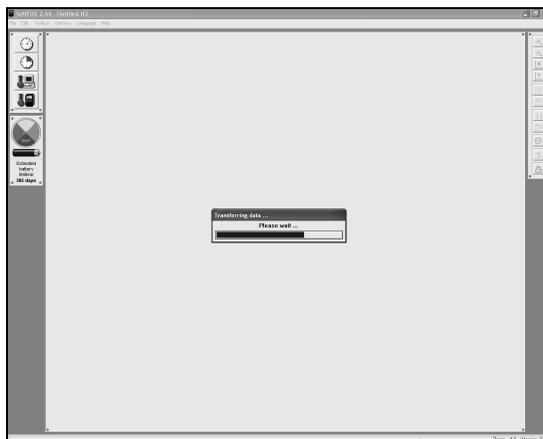


Figure 11: Reading out measuring data

Once the measurements have been transferred to the computer, they are directly depicted in the form of a clearly laid out diagram. With the aid of the diagram tool to the right of the diagram window, you can change the diagram's appearance. To save the data, use the menu item "Save Project As..." under the "File" menu.

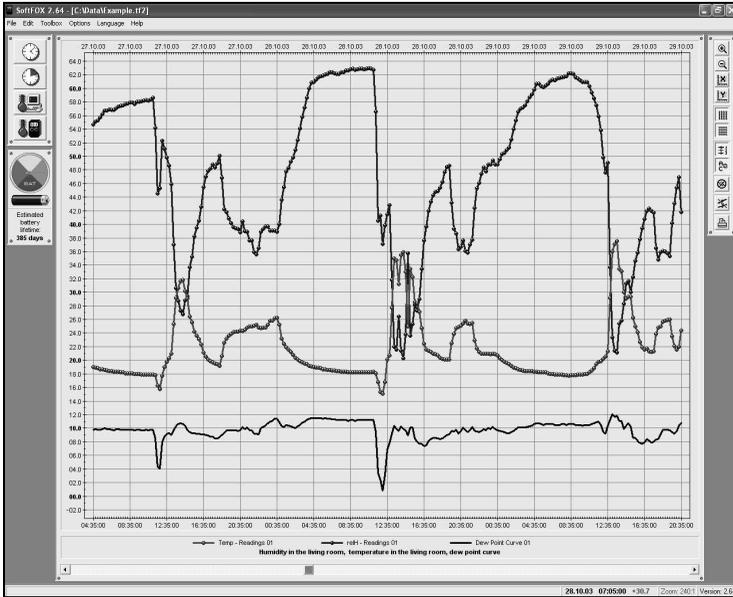


Figure 12: Read out measuring data

More detailed information on how to operate the software and configure your data logger may be found under the online help function.

## Guarantee Information and Liability

Scantronik Mugrauer GmbH grants a 24 months guarantee on all its data loggers. Recalibration and battery replacement do not form part of the scope of guarantee. We will not assume liability for damages caused by the improper use or application of our devices.