



# Measurement data monitoring with testo Saveris PROF

Startup instruction



---

# 1 System requirements

## Operating system

The software can be run on the following 32-bit and 64-bit operating systems:

- Windows® XP SP3 or higher
- Windows® Vista SP2 or higher
- Windows® Server 2003 SP2
- Windows Server 2008 SP2
- Windows Server 2008 R2
- Windows 7

## Computer

The computer must meet the requirements of the corresponding operating system. The following requirements must additionally be fulfilled:

- 4.5 GB unused hard drive capacity with maximum size of the database
- USB 2.0 interface



The computer's processor, hard disk and interfaces must be configured for continuous operation in order to ensure smooth automatic operation. If necessary, check your computer's energy-saving options.

---

- Microsoft® Internet Explorer 6.0 SP1 or higher
  - Microsoft® Windows Installer 4.5 or higher
  - MDAC 2.8 SP1 or higher
  - .NET Framework 2.0 SP2 or higher
- 



If Windows® Installer 4.5, MDAC 2.8 SP1 and .NET Framework 2.0 SP2 are not present on the computer, they will be installed with the Saveris software. Restart after installation.

---

- Microsoft® Outlook (only with MAPI installation)
- 



Date and time settings will be automatically accepted by the PC. The administrator must make sure that the system time is regularly compared with a reliable time source and adjusted if necessary, to ensure authenticity of the measurement data.

---

### Database

- SQL Server 2008 R2 Express is delivered.
- The versions Microsoft Server 2005 and 2008 and Terminal Server are supported.

---

**i** In client-server operation, we recommend a network with AD and DNS (Domain Name System) to enable online updating using MSMQ (Microsoft Message Queuing).

---

**i** Testo Saveris works with an SQL database (Microsoft SQL Server 2008 R2 Express Edition version). If a SQL database is already on the installation PC, a second instance can be created for Testo Saveris.

---

**i** When access to the Saveris instance of the Microsoft SQL database is to be performed via a firewall, a port must be released in the firewall for this. Note the safety instructions from Microsoft.

---

**i** The use of virus scanners can noticeably reduce system performance, depending on the configuration.

---

**i** When installing the software on virtual operating systems, the available system resources must be checked and, if necessary, improved. In combination with virtual systems, a USB connection works unreliably, which is why we recommend connecting the base via Ethernet.

---

## 1.1. Network environment

The testo Saveris software is installed as a client-server installation. In the process, the database and the Saveris Professional Client are installed on a server computer, and furthermore the Client and Viewer program components can be installed on additional client computers.

## 2 First steps

---

**i** These instructions are used only for the startup of the testo Saveris measuring system.

Information on the intended use as well as safety instructions and further information and descriptions of work with the Saveris software can be found in the comprehensive instruction manual that you will find as a PDF file on the separate CD-ROM.

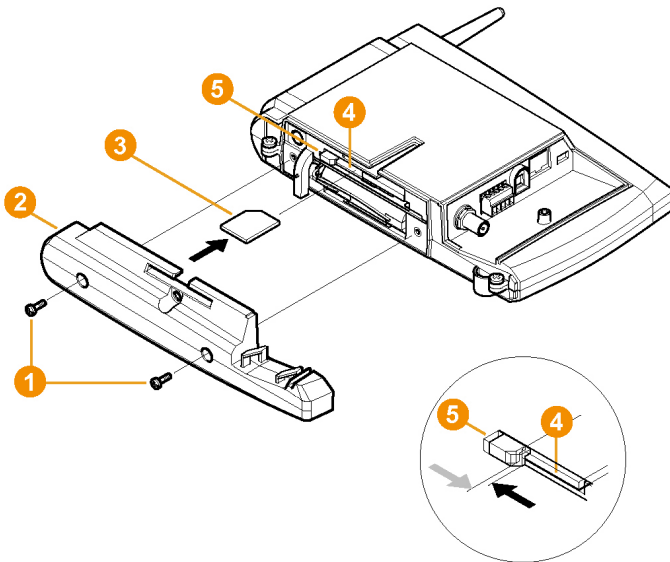
---

## 2.1. Inserting SIM card (optional)

With a Saveris base with integrated GSM module, you must insert the SIM card.

**i** The SIM card for sending SMS messages is not included in the delivery and must be purchased separately from a mobile phone provider.

It is recommended that you use a contract card instead of a so-called prepaid card, as no alarm messages can be sent if you use up your credit.

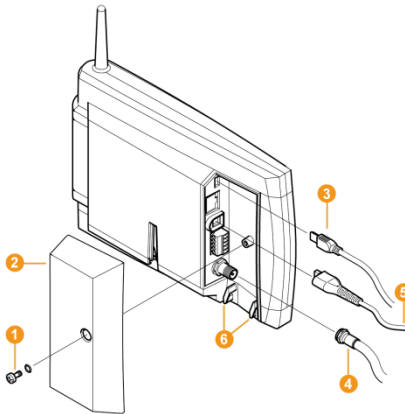


1. Switch off Saveris base (with **Info Base** view selected, briefly press **[ESC]** twice).
2. Loosen screw connection **1** and remove base plate **2** from the Saveris base.
3. Insert SIM card **3** in the card slot **4** as shown.

**i** When inserting, the SIM card **3** pushes the catch **5** to the side. If the card is inserted, a spring pushes the catch back and the SIM card is thus secured in the card slot.

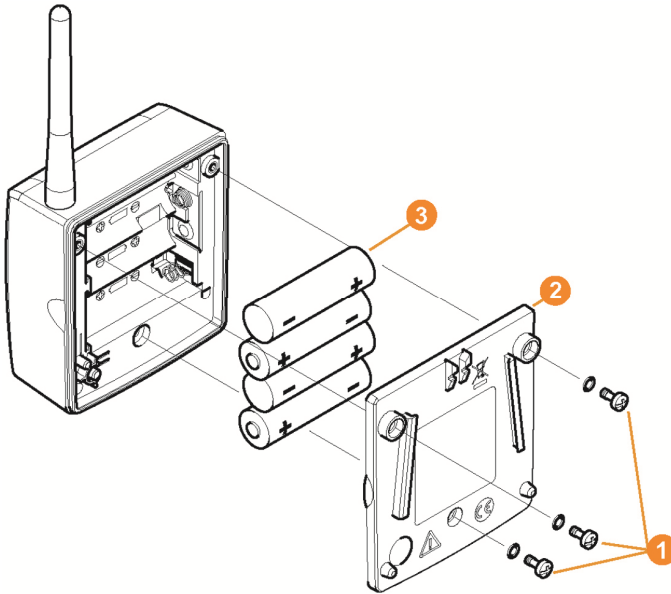
4. Place the base plate on the base and screw it down.

## 2.2. Cabling Saveris base



1. Loosen screw connection 1 and remove cover 2 from the Saveris base.
2. Connect the USB or Ethernet cable 3 to the Saveris base.
  - > Attach and screw on antenna cable 4 if the Saveris base has a GSM module.
3. Connect mains cable 5 to the Saveris base.
4. Ensure that cabling cannot be pulled out using a cable tie at the eyelets for strain relief 6.
5. Place the cover on the Saveris base and screw it down.
6. Connect mains plug to the power supply.
  - The Saveris base automatically switches on after selecting the language and is ready for operation. In the display of the Saveris base a brief description is shown for connecting radio probes and routers.

## 2.3. Inserting batteries in the probes



1. Loosen screws ❶ on the rear of the probe.
2. Remove housing cover of probe ❷.
3. Insert batteries ❸.

---

**i** The correct polarity is illustrated in the respective battery compartment.

---

4. Place housing cover on probe housing.
5. Screw cover down close to the housing.

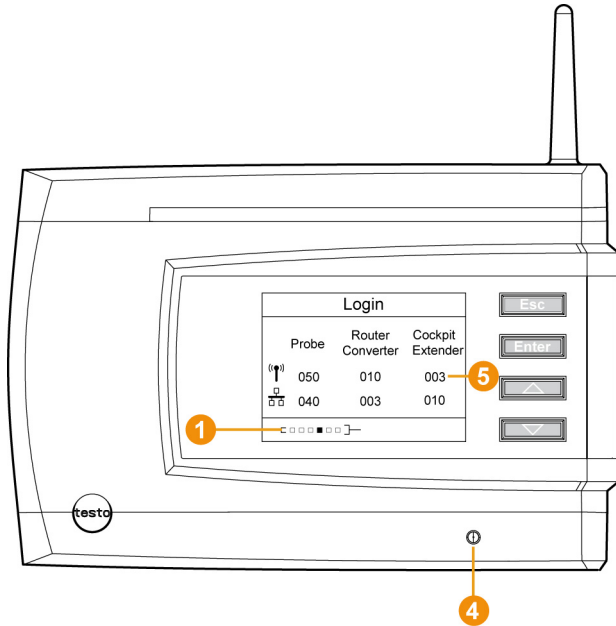
**i** A control switch is located in the housing that is actuated through the cover. To do so, the cover must be screwed to the probe housing without a gap. If the cover is not screwed on without a gap, the probe cannot be operated.

---

## 2.4. Connecting radio probe

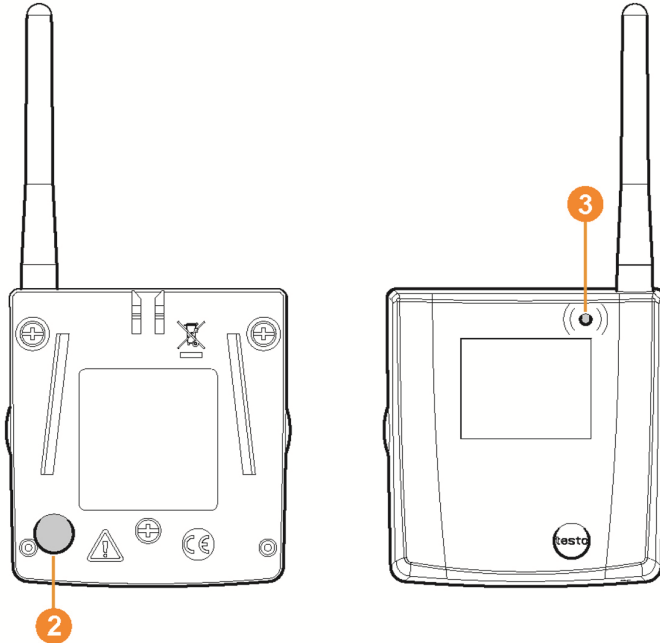
**i** Please note the comprehensive instruction manual on the separate CD-ROM when registering more than 15 radio probes via a router or converter.

---



1. Press **[Enter]** to call up the **Login** function.
  - The status bar **1** in the display shows that the Saveris base is ready for probe detection.





2. Hold down the connect key **2** on the rear of the probe until the LED **3** at the probe begins to flash orange.
  - The LED **3** at the probe briefly turns green if this was detected by the Saveris base.

The LED at the Saveris base **4** briefly flashes green and a prompt appears in the display of the base for the connection of more probes or routers.

---

**i** Multiple probes cannot be connected at the Saveris base simultaneously. Multiple probes can only be connected one after the other.

---

3. At the Saveris base, press the
  - **[Esc]** key if no more components are to be connected.
  - A note on the required performance of the startup assistant is shown on the display for about ten seconds. Then the Saveris base changes to the **Info System** menu in which the number of connected components **5** is now shown.
  - Press **[Enter]** if further components are to be connected; see previous step.
4. Position the probe at the measurement points to check the radio link.

5. Briefly press the connect key **2** on the rear of the probe.  
If the LED **3** at the probe flashes
  - green, a radio link exists.
  - red, no radio link exists.

---

**i** If no radio link exists between a probe and the Saveris base, connect a router to the Saveris base; see Integrating Saveris router (optional), page 10  
The probe is assigned to the router during the startup; see Starting up hardware, page 19.

---

### 2.4.1. Integrating Saveris router (optional)

You can use a Saveris router to optimize the radio communication with poor structural conditions or to extend the radio path. The router receives the signals of the radio probes and forwards them to the Saveris base. Maximum extension of the radio path can be achieved by connecting three routers in series.

---

**i** The measurement data of up to five radio probes can be transmitted per router or router cascade to the Saveris base.  
Up to 30 routers can be incorporated into the measurement system. The Saveris base can communicate directly with a maximum of 15 routers.

---

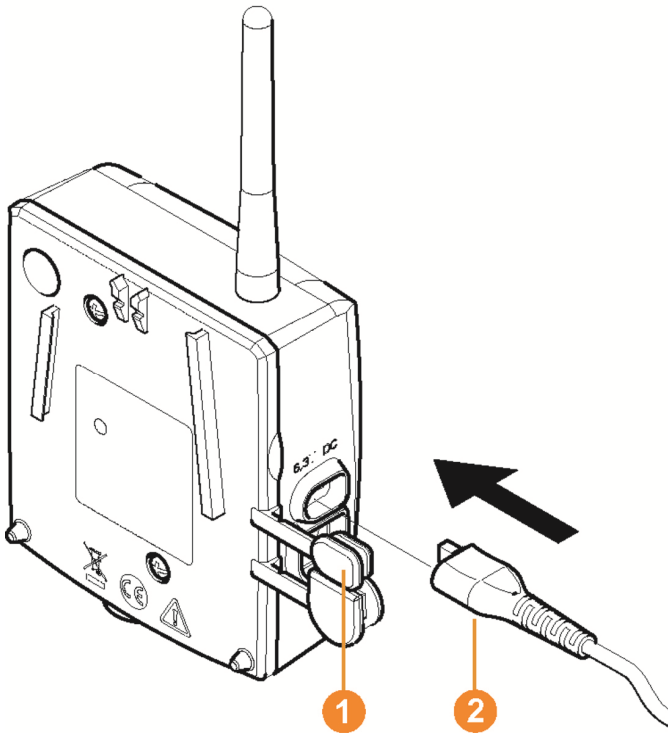
---

**i** When positioning a router please note the following points:

- When integrating several probes via a router, the probe with the weakest radio link determines the position of the router.  
Mount the router in such a way that this probe has an ideal radio link.
- Probes and router should be mounted so that the antennas are aligned upwards.
- The radio link between probes and the router as well as the router and the Saveris base should not be strongly influenced by structural conditions (walls, shelves etc.).  
Mount the router and probe so that "visual contact" exists with as many radio links as possible.

---

### 2.4.1.1. Connecting router with power supply



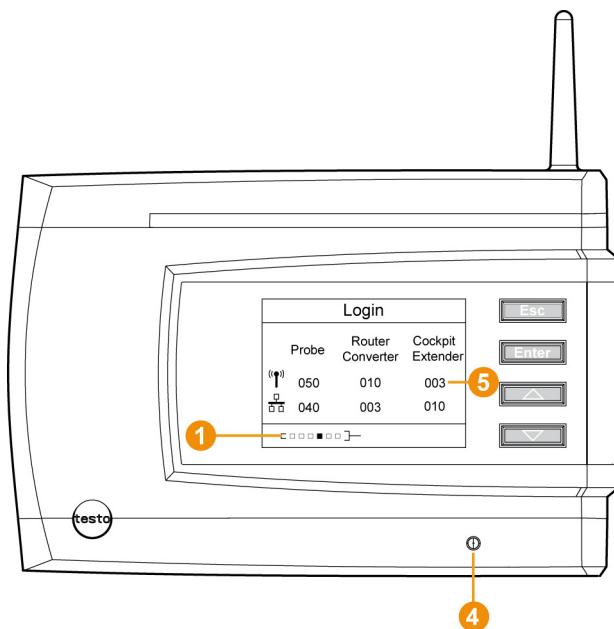
1. Open cover ①.
2. Insert mains cable ②.
3. Insert mains plug into a socket.

### 2.4.1.2. Connecting router

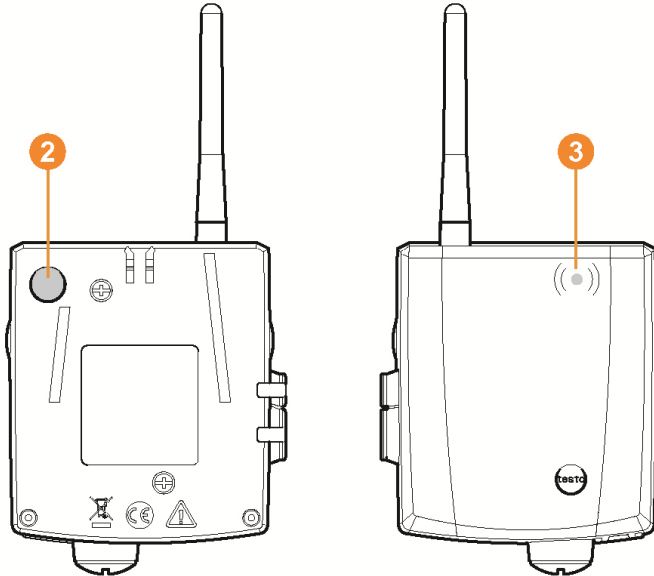
---

**i** You can connect a maximum of 30 routers to the Saveris base.  
The Saveris base can communicate directly with a maximum of 15 routers.

---



1. Change to the **Info System** menu at the Saveris base with the **[▼]** button.
2. Press **[Enter]** to call up the **Login** function.
  - The status bar **1** in the display shows that the Saveris base is ready for router detection.



3. Hold down the connect key **2** on the rear of the router until the LED **3** at the router begins to flash orange.
  - The LED **3** at the router briefly turns green if this was detected by the Saveris base.
 

The LED at the Saveris base **4** briefly flashes green and a prompt appears in the display of the base for the connection of more probes or routers.

---

**i** Multiple routers cannot be connected at the Saveris base simultaneously. Multiple routers can only be connected one after the other.

---

4. At the Saveris base, press the
  - **[Esc]** key if no more components are to be connected.
  - A note on the required performance of the startup assistant is shown on the display for about ten seconds. Then the Saveris base changes to the **Info System** menu in which the number of connected components **5** is now shown.
  - Press **[Enter]** if further components are to be connected; see previous step.

## 2.5. Installing Saveris software

- > Before the installation: End all running programs.

---

**i** Administrator rights are required for installation. Log in directly as an administrator, not via **Perform as...**

---

**i** If you are installing Saveris Professional Server on a computer with Windows® Vista, you must allow **Incoming connections** in the settings of Windows® Firewall.

---

**i** If you are installing multiple clients in a network, make sure that no simultaneous changes are made to the system configuration by the clients during simultaneous operation of the clients.

---

1. Insert CD with Saveris software in the CD-ROM drive. If the installation program does not start automatically, open Windows® Explorer and start the **index.html** file on the CD.
2. Select the desired installation options.
3. Follow the directions of the installation wizard.

When installing the components that are preconditions for the Saveris Professional Server, note that:

---

**i** During the installation the licence-free database system Microsoft SQL Server 2008 R2 Express is installed – if this is not already present. The database is protected by the so-called "sa password", the password for the database administrator, to prevent unintended changes to the database.

---

When installing the Saveris Client and Saveris Viewer, note that:

The Saveris Professional Viewer has only a limited functionality. You can thus analyze and process data sequences, for example, but cannot configure alarms or create reports.

---

**i** During the installation, you require the name or IP address of the computer on which the Saveris Professional Server is installed.

---

**i** With the Saveris Professional Client, the USB driver for the connection of the base is installed for the commissioning. If the Saveris base is not recognized as new hardware when connected to the computer, the driver must be manually installed.

---

- > After completing the installation, restart the computer and log in with the same user name as before.

## 2.5.1. Installing MAPI mail

---



The installation of MAPI mail should only be carried out by a system administrator.

---

The following preconditions must be fulfilled for the installation of MAPI mail:

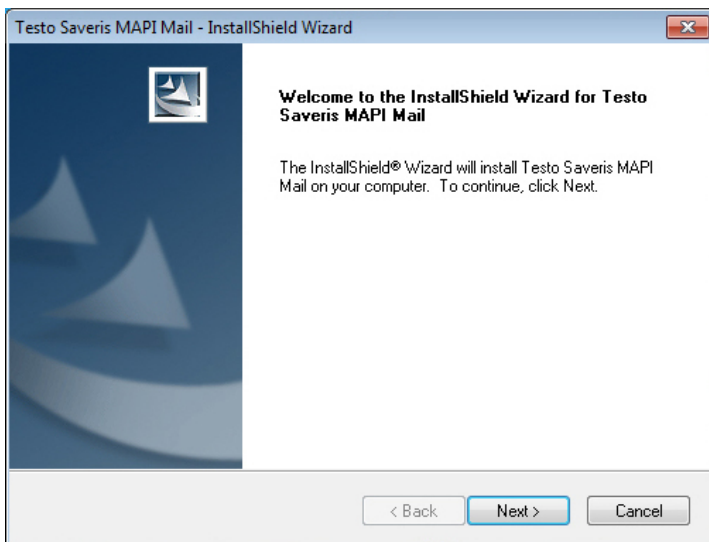
- MS Outlook must be available or installed on the PC for Saveris MAPI mail.
  - A Microsoft Exchange Server must be available or installed.
  - An e-mail account must be set up on the Microsoft Exchange Server for the user account used for MAPI mail.
  - The name of the Microsoft Exchange Server must be known for the installation.
  - MAPI mail must be installed on the Saveris server. The following conditions apply to this PC:
    - A Microsoft Exchange Server must be accessible.
    - The Microsoft Exchange Server must be located in the same domain as the Saveris server.
    - The connection data for the Exchange account must be set up on the PC. This is generally achieved by running MS Outlook once on this computer.
- 



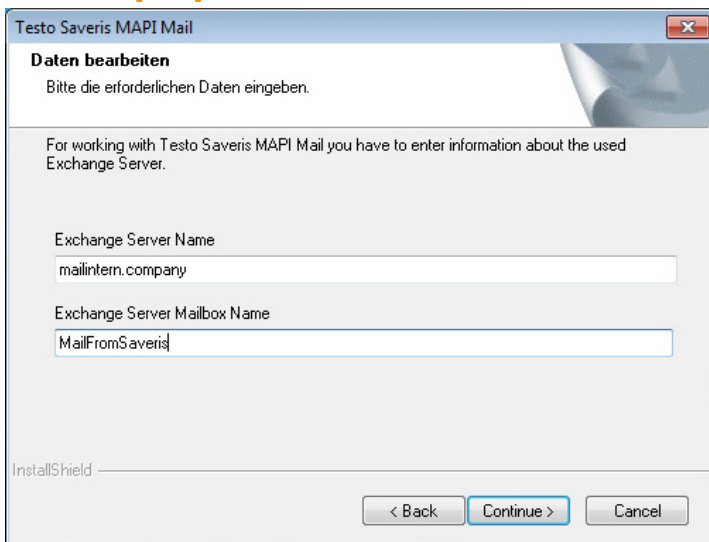
Lotus Notes can be used with an adapter that can be purchased. The setup and configuration should be performed by the customer's respective IT manager.

---

1. Insert CD with Saveris software into the CD-ROM drive. If the installation program does not start automatically, open Windows® Explorer and start the [index.html](#) file on the CD.
2. **Select installation of a connector for the Microsoft Exchange mail server.**
  - The installation wizard is started.



3. Click on **[Next]**.



4. Enter the name of the Microsoft Exchange Server.

5. Enter the name of the e-mail mail box on the Microsoft Exchange Server.



The name of the e-mail mail box is normally identical to the user name.

---



6. Click on **[Continue]**.

## 7. Enter the user name of the e-mail mail box on the Microsoft Exchange Server.



The user name is normally identical to the name of the e-mail mail box.

## 8. Enter the password.

## 9. Re-enter the password.

10. Click on **[Continue]**.

- MAPI mail is installed.

## 2.5.2. Installing SMTP mail

The following preconditions must be fulfilled for the installation of SMTP mail:

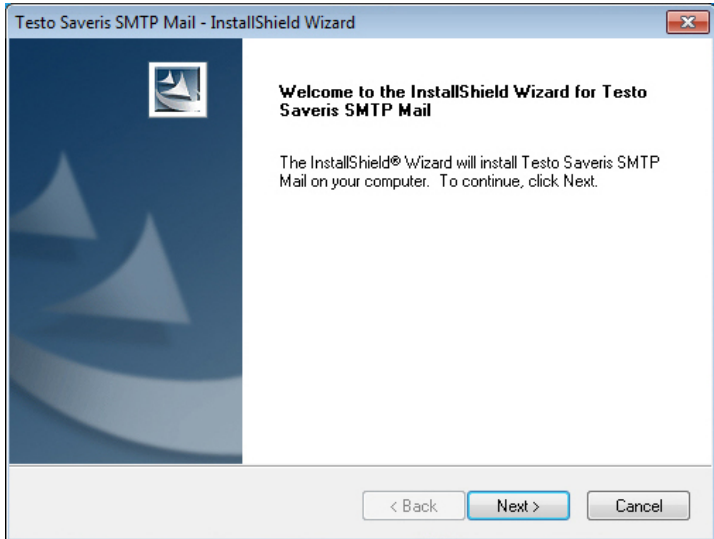
- The name of the SMTP server must be known.
- An e-mail account must be available or set up with an Internet provider.
- The provider data (e-mail address and mail box) must be known.

## 1. Insert CD with Saveris software into the CD-ROM drive.

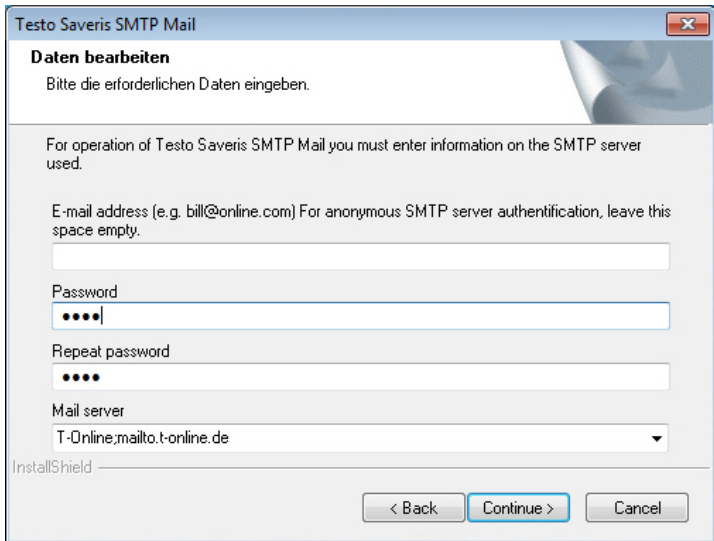
If the installation program does not start automatically, open Windows® Explorer and start the **index.html** file on the CD.

2. **Select installation of a connector for an SMTP mail server.**

- The installation wizard is started.



3. Click on **[Next]**.



Only enter your address and password if authentication is required for your application.

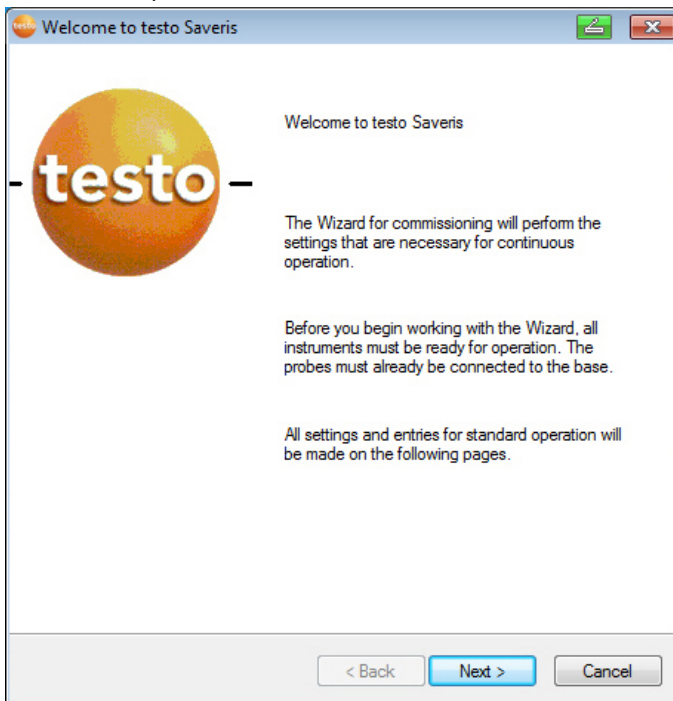
4. Select the mail server or enter the mail server.
5. Click on **[Continue]**.
- SMTP mail is installed.

## 2.6. Starting up hardware

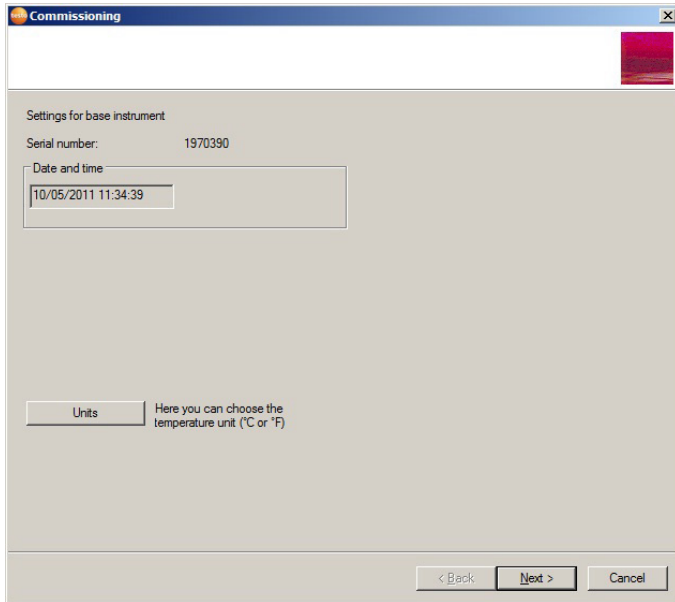
The following preconditions must be fulfilled for the startup of the hardware:

- the Saveris base is ready for operation (see Cabling Saveris base, page 6)
- all probes are logged into the Saveris base (see Connecting radio probe, page 7) and
- the Saveris software is installed on the computer (see Installing Saveris software, page 13)

1. Connect the Saveris base to the computer via the USB cable.
  - The startup wizard is launched.



2. Click on **[Next >]**.



- The general system settings for Saveris base are displayed.

---

**i** Date and time settings will be automatically accepted by the PC. The administrator must make sure that the system time is regularly compared with a reliable time source and adjusted if necessary, to ensure authenticity of the measurement data.

---

3. Click on **[Units]** to select the temperature unit for the system (Celsius °C or Fahrenheit °F).
  4. Click on **[OK]**.
- The list of the probes registered on the Saveris base is shown.

Probe names and assignment

List of the probes registered in the system Overview

Serial number:	Probe name	Zone	Disposition	Chan...	Unit	Channel name
1730073	1730073	Stationäre Zo...	Stationary	2	mA	1730073_1

Stationary zone

- Stationäre Zone1
- Stationäre Zone2
- Stationäre Zone3
- Stationäre Zone4

Add stationary zone

Delete stationary zone

Rename

Mobile zone

- Mobile Zone1

Add mobile zone

Delete mobile zone

Rename

< Back    Next >    Cancel

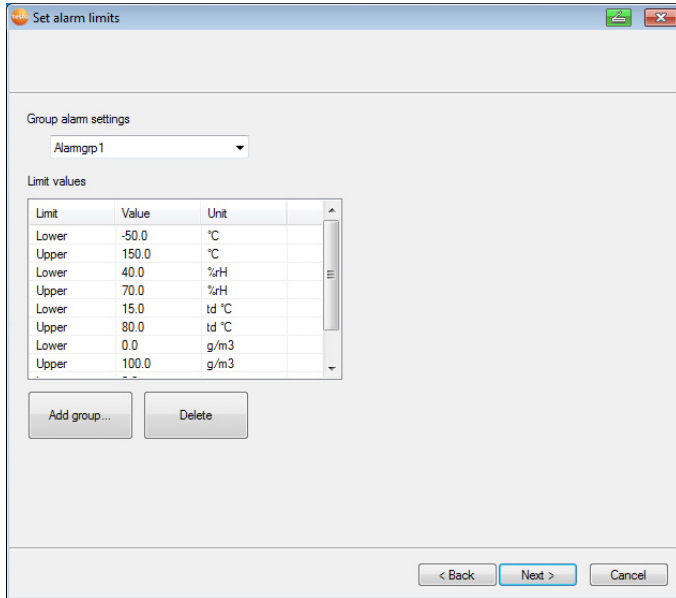
5. To distribute the probes already registered on the system between stationary or mobile zones depending on the purpose (for Saveris mobile): Click on **[New stationary zone]** or **[New mobile zone]**.
6. Open the selection list via button and select the zone to which the probe should be assigned.
7. Click in the **TE type** field and enter the thermocouple element type (**K**, **J**, **T** or **S**) if this information is necessary for the device.
8. If required, change the default values in fields **Probe name** and **Channel name**.



Assign channel names that are not longer than 15 characters.

---

9. Click on **[Next >]**.



10. Create separate alarm groups for all required alarm limits. For this, overwrite default values or click on **[New group...]**.

**i** The limit values determine the measured value as of which the Saveris base triggers an alarm.  
A separate alarm group must be set up for each analogue coupler.

11. Click on **[Next >]**.

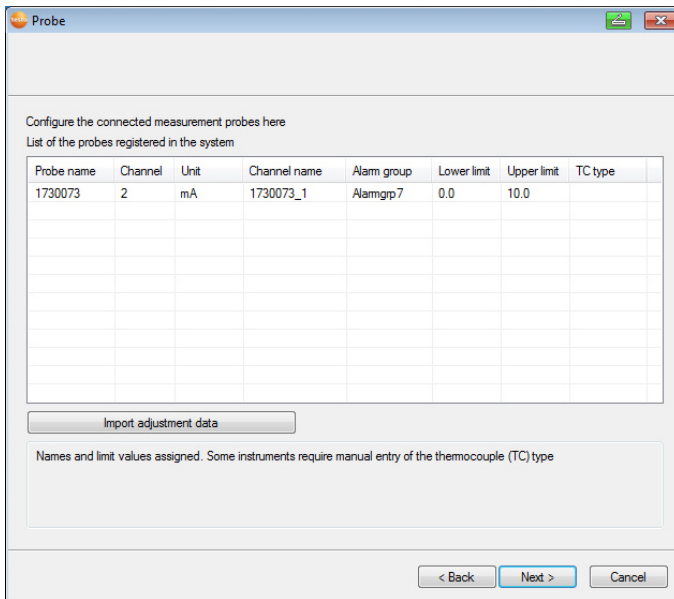
- If the Saveris base is equipped with a GSM module, the dialogue box for entering the basic settings for the SMS service is shown.


If there is no GSM module, continue with step 14.

12. Enter the **PIN** and the number of the **SMS centre** into the relevant fields.

**i** You can find the PIN and the number of the SMS centre in the documents for your SIM card, for example. An additional overview can be found on the internet under "Short Message Service Center".

**i** If the PIN entered is incorrect, the base must be shut down and started up again with a different SIM card. Only then can the original SIM card be used and reconfigured.

13. Click on **[Next >]**.

14. Open the selection list via button  and select the alarm group to which the channel should be assigned.
15. If required, import adjustment data for the individual probes:  
Click on **[Import adjustment data]**.
16. Click on **[Next >]**.
  - The settings for measuring cycle, the alarm delay and the alarm output are shown.

Measuring rate

Measuring rate: 15.0 min

Alarm delay: 0 (Measuremen

Alarm is triggered if the limit value is breached as many times as is entered under alarm delay

Measurement rate and alarm delay can be adapted individually with the Saveris user interface

Output of system alarms

- Low battery

Output of limit value alarms

- SMS
- e-mail
- Relay
- Audible signal
- Light signal

< Back   Next >   Cancel

---

### 17. Enter **Measuring cycle** and define its **Unit**.

**i** The measuring cycle determines the intervals at which a new measured value is saved in the Saveris base. Later the settings can be changed for every probe separately in the software.

---

### 18. Set **Alarm delay**.

**i** If you enter the value "5" for example, an alarm is not triggered by the Saveris base until the sixth measurement indicating that the limit value is still being exceeded. The settings can be changed for every channel of a probe separately in the software.

---

19. Determine when a **System alarm** should be triggered.

20. Determine the output options for the alarms.



**i** The system alarms are above all used for pointing out irregularities in the measurement system. If no reaction follows the system alarms, uninterrupted data recording is not guaranteed.

When system alarms are output via **SMS** or **Email**, time delays may occur.

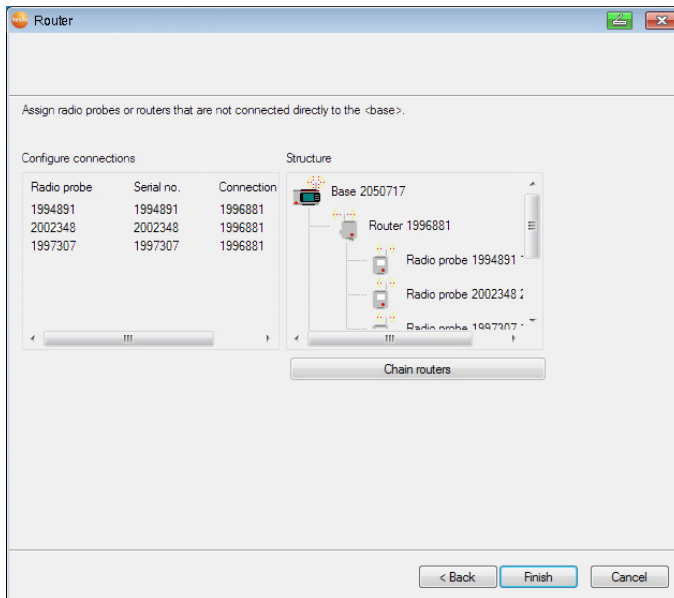
The notification function via **SMS** is only available if the Saveris base is equipped with a GSM module.

The settings can be changed for every channel of a probe separately in the software.

21. Click on **[Next >]**.


- If a router is registered on the Saveris base, the configuration of the connection type for the probes is shown.

If you have not registered a router, continue with step 25.



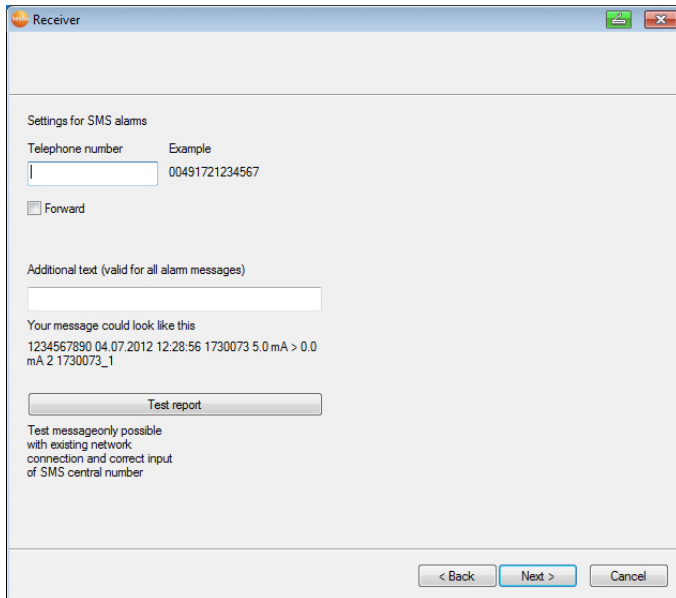
22. Click in the **Connection type** cell of the probe to be assigned to a router.

- The cell is shown as a selection list.

23. Use button  to open the selection list and select the router to which the probe should be assigned.

**i** Probes in a mobile zone cannot be assigned to a router.

24. Perform steps 22 and 23 for any other probes with measurement data to be transmitted to the Saveris base via a router.
25. Click on **[Next >]**.
  - If the Saveris base is equipped with a GSM module, the settings for the SMS alarms are shown.If there is no GSM module, continue with step 31.



26. Enter the **Telephone number** of the recipient of the alarm message.

Enter with country code, network or area code and local number.
27. Activate the **Forward** checkbox if the alarm message should be sent to a second recipient if recipient 1 does not respond.
  - List field **min** and entry field **2nd telephone number** are displayed.
28. Via the **min** list field, determine the time frame after which the alarm message should be forwarded if recipient 1 does not respond.
29. In the **2nd telephone number** field, enter the telephone number to which the alarm message should be forwarded.

Enter with country code, network or area code and local number.

30. In the **Message** field, enter a text that should be attached to the alarm message.



You can send a test report via the button of the same name to check whether all settings are correct.

31. Click on **[Next >]**.

- The settings for creating a report are displayed.



These specifications are applied as the default setting for the creation of a report. You can change these settings at any time in the software at a later point or create new configurations for the reports.

32. Deactivate the **Create reports automatically** checkbox if this function should not be used.

- In this case, continue with step 40.

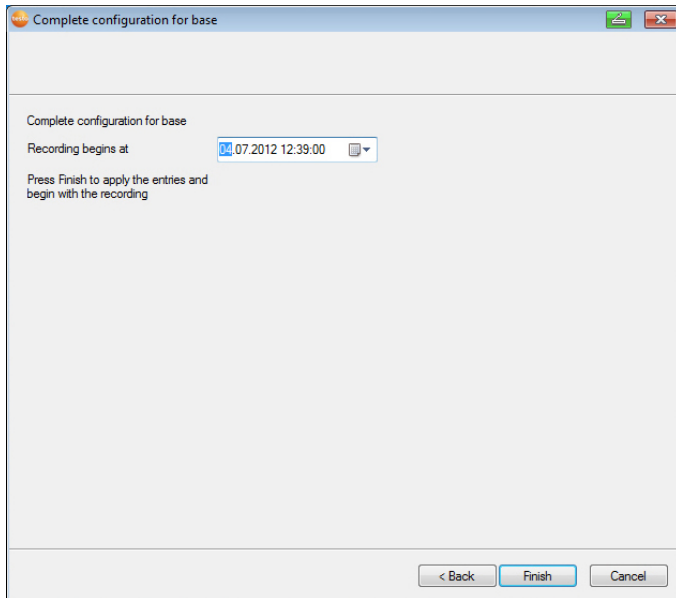
33. Determine the intervals at which reports should be automatically created.

34. Determine what content the reports should include.

35. Activate the **Send to recipient** checkbox if the reports should be sent by email.

- The entry fields for the email address and subject line, as well as button **[Address book]** are displayed.

36. Enter the email address of the recipient into the entry field or select the recipient from the Outlook contacts via **[Address book]**.
37. In the **Subject** field, enter the text for the subject line of the email.
38. Under **Address field cover sheet**, enter the address that should be shown on the report header.
39. Click on **[Next >]**.
  - The information at the start of measurement and the project name are displayed.



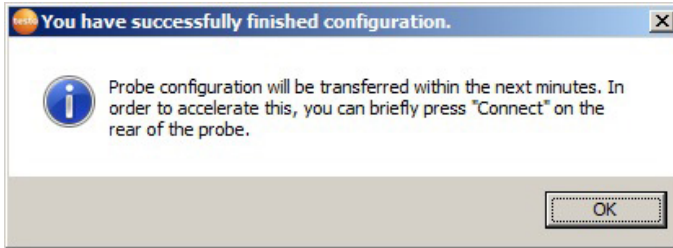
40. Postpone the start of measurement if necessary.
41. In the **Name** field, change the project name.

---

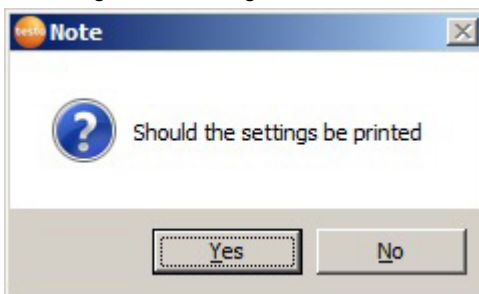
**i** Think of a unique name for the project that you will be able to easily associate with the project later.  
The project name cannot subsequently be changed.

---

42. Click on **[Finish]** to end the hardware startup.
  - The dialogue box for completing startup is shown.



43. Press Connect on all probes and routers one after the other to synchronize the components.
44. Close the dialogue box with **[OK]**.
  - A dialogue box appears for displaying and printing the configuration settings.



45. Click on
  - **[Yes]** if the settings should be shown in the internet browser and printed from there.
  - **[No]** if the settings should not be shown.
  - The hardware is now ready to be used.

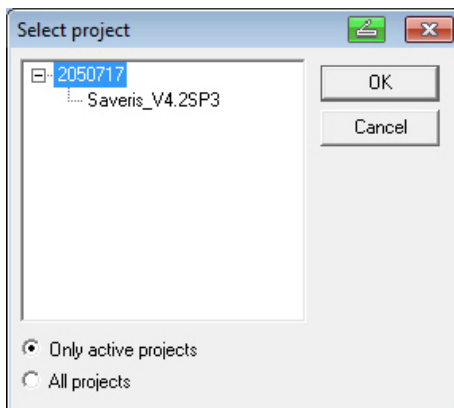
---

**i** Please refer to the instruction manual on the separate CD-ROM for information on how to mount the hardware on the wall, for example.

---

## 2.7. Starting Saveris software

1. Select **[Start] | All Programs | Testo | Saveris**.
  - The **Testo Saveris software** program window is opened with the **Select project** dialogue.



2. Select the
  - **Only active projects** option if the data from a running project should be opened
  - **All projects** option if the data from a completed project should be opened.
3. Select the project that is to be opened in the tree structure.
4. Confirm with **[OK]**.
- The **Testo Saveris software** program window is shown with the selected data record in the foreground.



It can take a few minutes for the first readings to be displayed.

---









