



S!M PATI®

Technical appendices
to the installation and operating manual

S!MPATI® Software

Imprint

Technical appendices to the installation and operating manual for the SIMPATI® Software

Original instructions

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1 NOTES ON THE DOCUMENT

1.1 Scope of application

This document is an additional manual with technical appendices to the installation and operating manual for the Simpati software. This document applies together with the current installation and operating manual for the Simpati software.

1.2 Document target group

The tasks described in this document may only be carried out by specialists with the following qualifications:

- Training for the installation and configuration of IT systems

1.3 Warning notice levels



DANGER

Failure to comply with the directions results in death or severe injury.



WARNING

Failure to comply with the directions can result in death or severe injury.



CAUTION

Failure to comply with the instructions can result in minor injury.

NOTICE

Failure to comply with the instructions results in property damage.



This is used to indicate additional helpful information.

1.4 Highlights in the document

Text highlight	Explanation	Example
▶	instruction	▶ Select Settings .
→	Cross reference	▶ Adjust light → Chapter 6.7.4.
bold	Text on user interface	▶ Select Settings . ▶ Pick Green from the Colour list.
[]	Button	▶ Select [End] .
>	Several entries to be selected one after the other.	▶ In the menu, select Settings > Tone > Volume .

Table 1-1 Explanation of text highlights

1.5 More detailed information

Control units:

→ Operating manual for the control unit (touch panel)

→ Operating manual for the web panel with Webseason operating software

1.6 Terms used

Term used	Explanation
Tool tip	When the mouse pointer is placed on an element, information about the element is displayed in a small window. This window is termed tool tip.
Simpati-ID	Each test system is assigned its own number in Simpati, the so-called Simpati-ID. The Simpati-ID is a number between 1 and 99. Each number can only be assigned once.

Table 1-2 Terms used

2 SAFETY INSTRUCTIONS



DANGER

Failure to observe the operating manual of the test system

Failure to comply with the instructions in the operating manual for the test system and its controller may result in death or serious injury.

- ▶ Follow the instructions.

NOTICE

Malfunctions as a result of impermissible accessories

- ▶ To minimise fault liability use the connection cables supplied exclusively.
- ▶ Take into account that special applications may have different requirements. Follow the specifications for these applications in the Appendix.

NOTICE

Possible data loss as a result of inadequate on-site IT infrastructure

Data cannot be saved completely or not at all as a result of inadequate on-site IT infrastructure. The quality of the IT infrastructure depends on the quality of the cables and any sources of interference.

- ▶ Save the data physically close to the test system if possible.
- ▶ Heed the quality of the on-site transmission paths and transmission media.

NOTICE

Manual editing of the configuration data

Faulty functions can occur if you manually edit the configuration data.

- ▶ Only allow configuration data to be changed by trained service personnel or in consultation with our service hotline.
-

3 SETTING THE TEST SYSTEM CONTROLLER

3.1 Setting up the test system with Ascott control

Prerequisite:

- The test system must be of the type "salt spray chamber" and be equipped with IP-control system and controller "Schneider Electric Harmony" (installed in the following models: S...IP, CC...IP, AT...IP).
- The test system controller must correspond to at least the following version: 10.X.X.1.X

Procedure:

- ▶ Proceed in the following order and as described in the sections:
 - Check the version of the test system
 - Set test system controller at the control panel
 - Integrate the test system in the network
 - Save the customer application in Simpati as a shortcut
 - Set the operating mode of the test system and start the test

Check the version of the test system:

- ▶ On the start page of the test system control panel, select **Ascott** at the top left.
 - ✓ Page **About Us** is displayed.
- ▶ Check whether in the **Chamber Information** area at least a version **10.X.X.1.X** is displayed in the **Controller Revision** field:
 - If a version lower than 10 is displayed, the test system is not compatible with Simpati.
 - If a version of 10 or above is displayed, the test system is compatible with Simpati.

Set test system controller at the control panel:

- ▶ Select [**ESC**] until the start page appears.
- ▶ Select [**Setup**].
- ▶ Select [**Login**].
- ▶ Enter the service password in the input field and select [**Enter**].
- ▶ Select [**Service Engineer**].
- ▶ Select [**UDP String**].
- ▶ Select the entry **SIMPATI** from the dropdown list.
- ▶ Select [**ESC**] until the start page appears. The setting is thus saved.

Integrate the test system in the network:

- ▶ Integrate the test system in the network, set up the network connection and test as described in the installation and operating manual for Simpati (chapter "Communication", "Preparing the test system and assigning IP address").
- ▶ To read off the test system's IP address, proceed as follows:

- ▶ On the start page of the test system control panel, select **Ascott** at the top left.
- ✓ Page **About Us** is displayed.
- ▶ Read off the IP address in the **Chamber Information** area in the **IP Address** field and note this down.

Capture test system with Ascott controller in Simpati:

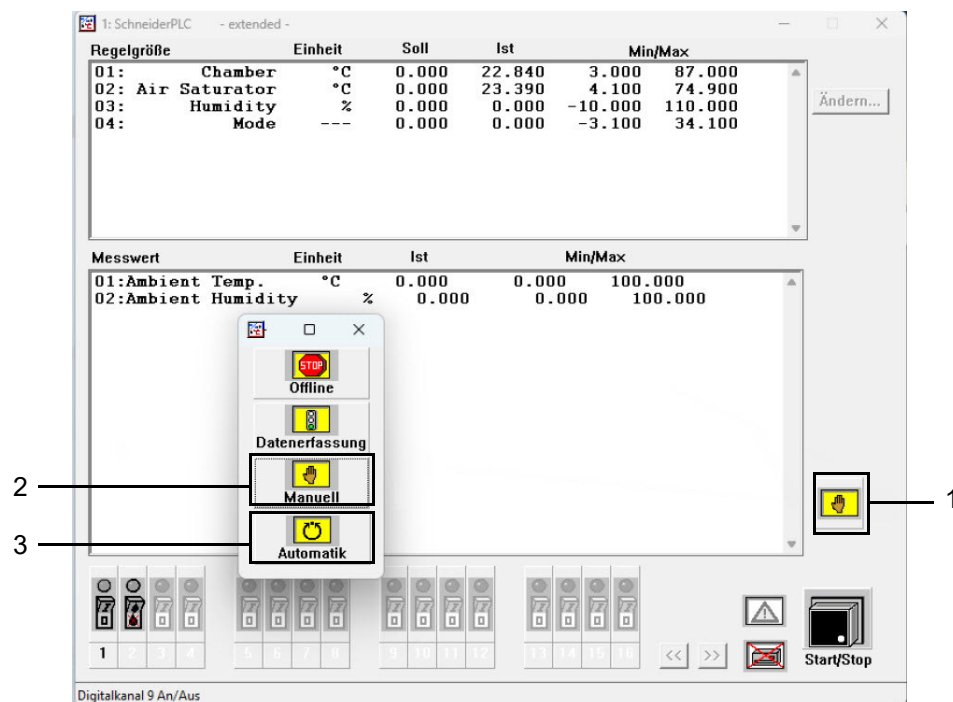
- ▶ Capture the test system with Simpati as described in the installation and operating manual for Simpati (chapter "Configuration", "Capturing test system with Ascott controller").

Save the application "simhand1" as a shortcut in Simpati:

- ▶ In the main menu in Simpati, right-click on the test system icon and select the entry **Configuration** in the context menu.
- ▶ On the **Chamber** tab in the **Easy UserInterface Application** field, enter the characters **simhand1**. "simhand1" is an application that makes operation via Simpati possible.
- ▶ Select **[Set]**.
- ▶ Select **[Close]**.

Set the operating mode of the test system and start the test:

- ▶ In the main menu in Simpati, right-click on the test system icon and select the entry **Customer-Application** in the context menu.
- ✓ Pop-up window **SchneiderPLC** displays the application "simhand1".



- ▶ Select the button (1) for the operating mode and in the pop-up window select test in manual mode **[Manual]** (2) or test in program mode **[Automatic]** (3).

3 Setting the test system controller

3.1 Setting up the test system with Ascott control

- ▶ To start a test in manual mode, see the installation and operating manual for the Simpati software, chapter "Manual mode". If necessary, heed the overview of the digital channels → *»Overview of the digital channels for the salt spray chest«* (page 10).
- ▶ To start a test in program mode, see the installation and operating manual for the Simpati software, chapter "Compiling a testprogram" and the chapter "Starting/stopping test program". If necessary, heed the overview of the digital channels → *»Overview of the digital channels for the salt spray chest«* (page 10).

Overview of the digital channels for the salt spray chest

Simpati gets the digital channels from the salt spray chest controller. The digital channels are displayed as numbers in Simpati; these are explained in the table below.

No. of the digital channel	Explanation
0	Dwell
1	Salt Spray, Moist Air
2	Salt Spray, Dry Air
3	Wetting
4	Drying
5	Ambient Drying
6	Sub Routines
7	Controlled RH
8	SO2 Injection
9	UNUSED
10	Wall Wash
11	Oscillating Spray Bar
12	Vertical Spray Down
13	UNUSED (Reserved for Horizontal Spray)
14	Water Fog, Moist Air
15	Water Fog, Dry Air
16	UNUSED
17	UNUSED
18	Active Cooling (Sub Zero)
19	Assisted Ambient
20	SO2 And Salt Spray, Moist Air
21	SO2 And Salt Spray, Dry Air

Table 3-1 Overview of the digital channels for the salt spray chest

No. of the digital channel	Explanation
22	Multi Solution (ACC86), Pump 1 Moist Air
23	Multi Solution (ACC86), Pump 1 Dry Air
24	Multi Solution (ACC86), Pump 2 Moist Air
25	Multi Solution (ACC86), Pump 2 Dry Air
26	Liquid Immersion (ACC34)
27	SO2 Wetting, 0.2L Dose
28	SO2 Wetting, 1L Dose
29	SO2 Wetting, 2L Dose
30	Reserved (For Autotune function)
31	Wall Wash Cooled Salt Spray, Moist Air

Table 3-1 Overview of the digital channels for the salt spray chest

3.2 Setting test system with Mincon/Simcon controller

Simpati supports the JBus protocol of this controller with a transfer rate of 19200 baud. Valid addresses are 1 to 32. The settings made are active after the test system has been restarted. Configuration is automatic by reading out the controller data in Simsetup. By default, test systems with a Mincon/Simcon controller feature a serial RS 232 interface.



To check the settings of the interface parameters, press the following in the basic menu. The following menu appears:

Special functions				
Language		Protocol		
English		J-Bus		
Powerfailtime		Baud		
240 min		19200		
Powerfailtol.		Address		
20 K		1		
			INTERN	

Fig. 3-1 Special functions

3 Setting the test system controller

3.3 Setting the test system with DMR controller

3.3 Setting the test system with DMR controller

At the terminal, make the following settings before starting the configuration program:

Base control panel	(→ chapter »Open and closed loop control« in the operating manual of the relevant test system)
Address	1 . . . 9 (version 38 and earlier) 1 . . . 32 (version 39 and later)
Baud rate	9600 baud
The address corresponds to the address in Simpati.	

3.4 Setting the test system with MOPS/CTC/TC controller

At the terminal, make the following settings before starting the configuration program:

E4 terminal (chapter 3.5 of the terminal operating manual)

Interface protocol OP 0	Select: 4 (TSI protocol)
Interface type OP 2	Select: 0 (RS 232)
Address selection OP 3	Selection: 0 to 31 - the address No. on the terminal is 1 digit smaller than the address no. in the Simpati software.

C terminal (chapter 3.2 of the terminal operating manual)

Interface protocol type	Select: External TSI (ISAR controller: transparent)
Interface type	Select: RS 232
Baud rate	Select: 9600
Address selection	Selection: 0 to 31 - the address no. on the terminal is 1 digit smaller than the address no. in Simpati software.

4 PATCH CABLE PIN ASSIGNMENT

4.1 Ethernet interface with Simcon/Simpac controller

For connection to the network you will need a standard twisted connecting cable of the following type: RJ45 patch cable, Cat.5, STP, 4 x 2

4.2 RS 232 interface for CTC/TC/MOPS controller

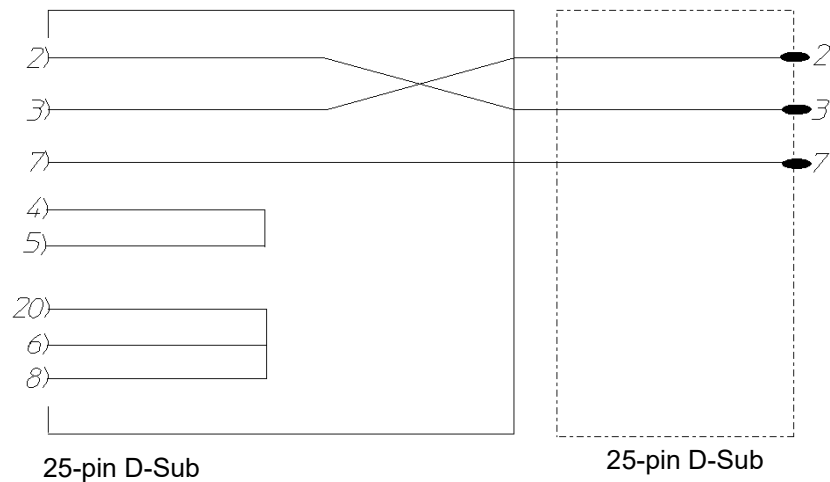


Fig. 4-1 Pin assignment for RS 232 interface cable 25/25 pin for CTC, TC, MOPS controllers

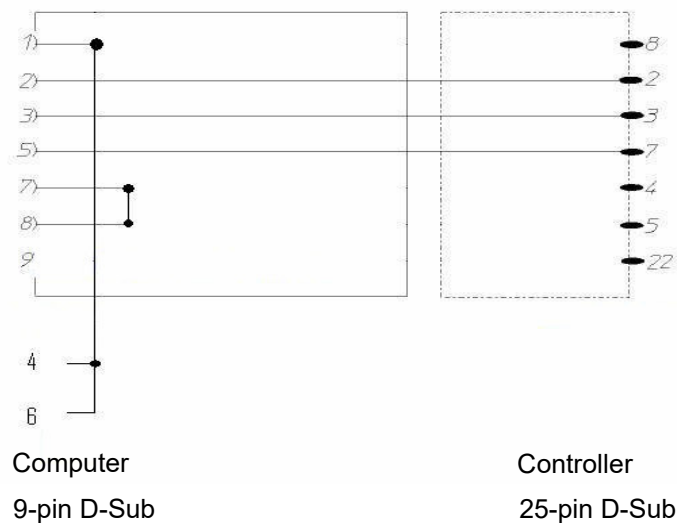


Fig. 4-2 Pin assignment for RS 232 interface cable 9/25 pin for CTC, TC, MOPS controllers

4 Patch cable pin assignment

4.3 RS 485 interface for CTC/TC/MOPS controller

4.3 RS 485 interface for CTC/TC/MOPS controller

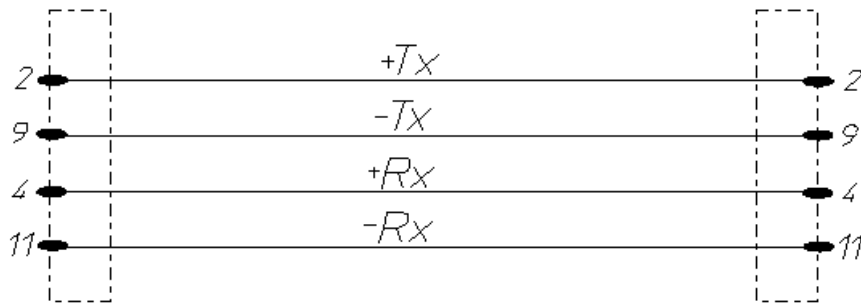


Fig. 4-3 Pin assignment for RS 485 interface cable for CTC, TC, MOPS controllers

4.4 RS 232 interface for Mincon/Simcon/Simpac/DMR controller

If the RS 485 interface option (art. no. 63823119) is used, the computer needs to be equipped with an RS 232-to-RS 485 interface adapter (art. no. 63823080).

If a test system with Simpac control is to be included in a Simcon/Mincon network, connection is via the RS 232 interface. In this case, the line interfacing conditions and methods of program integration are the same as for Simcon/Mincon controllers. Please note that a minicombox and a Simpaci version of 3.0 or higher are required for this.

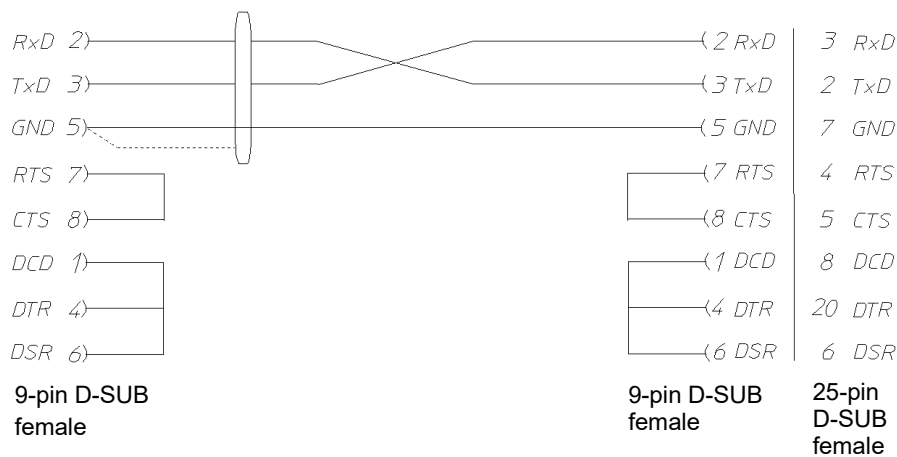


Fig. 4-4 Pin assignment for RS 232 interface cable for Mincon, Simcon, Simpac, DMR controllers

4.5 RS 485 interface cable for Mincon/Simcon/DMR controller

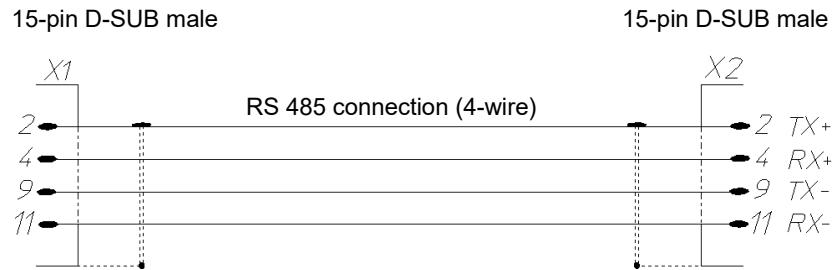


Fig. 4-5 Pin assignment for RS 485 interface cable for Mincon, Simcon, DMR controllers

Bond the shielding extensively to each cable housing.

4.6 RS 485 interface cable for Dicon 50x/100x controllers, Imago 500

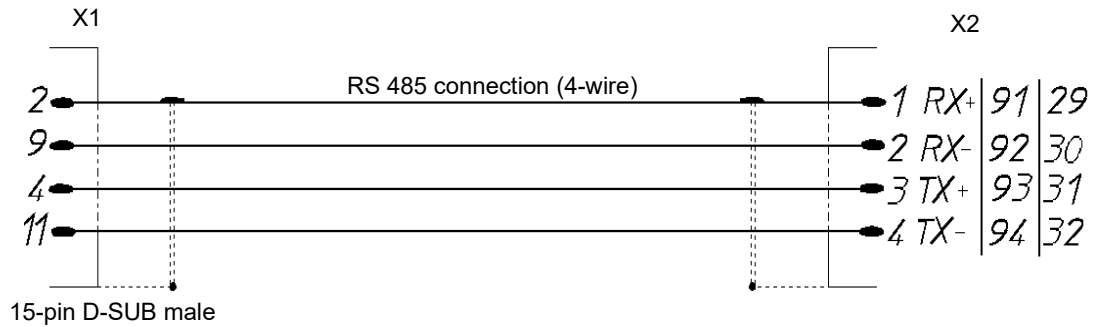


Fig. 4-6 Pin assignment for RS 485 interface cable for Dicon 50x/100x controllers, Imago 500

4 Patch cable pin assignment

4.7 RS 485 and RS 232 interface cables for Dicon SM

4.7 RS 485 and RS 232 interface cables for Dicon SM

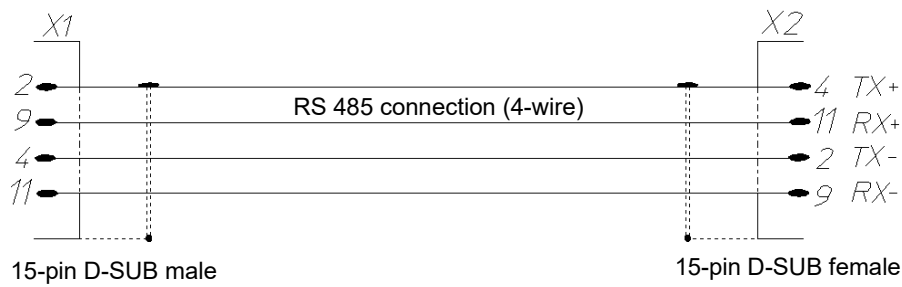


Fig. 4-7 Pin assignment for RS 485 interface cable for Prodigon Plus and SBC controllers

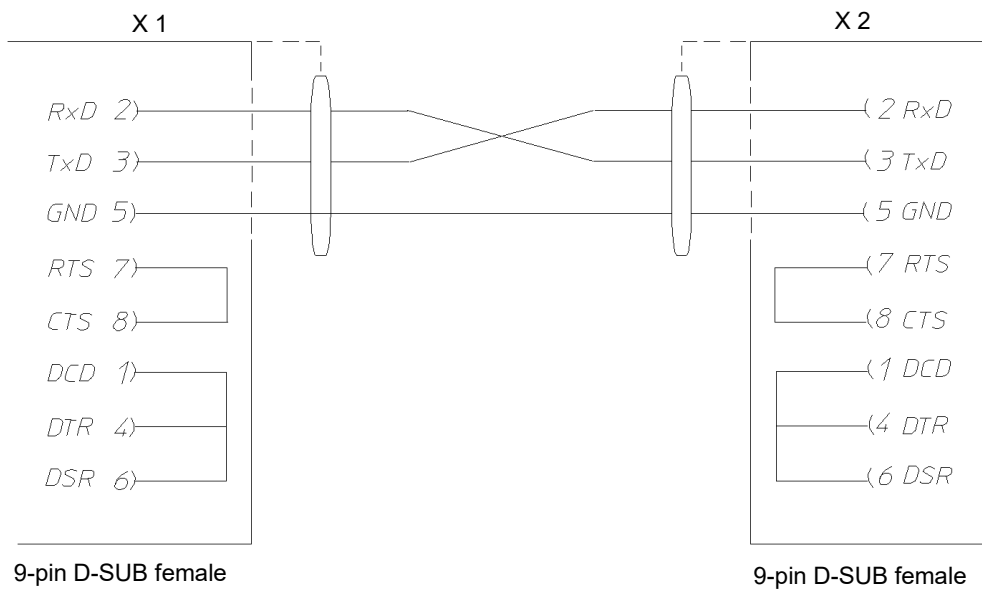


Fig. 4-8 Pin assignment for RS 232 interface cable for Prodigon Plus and SBC controllers

4.8 RS 232 interface cable for 2/3-channel process interface

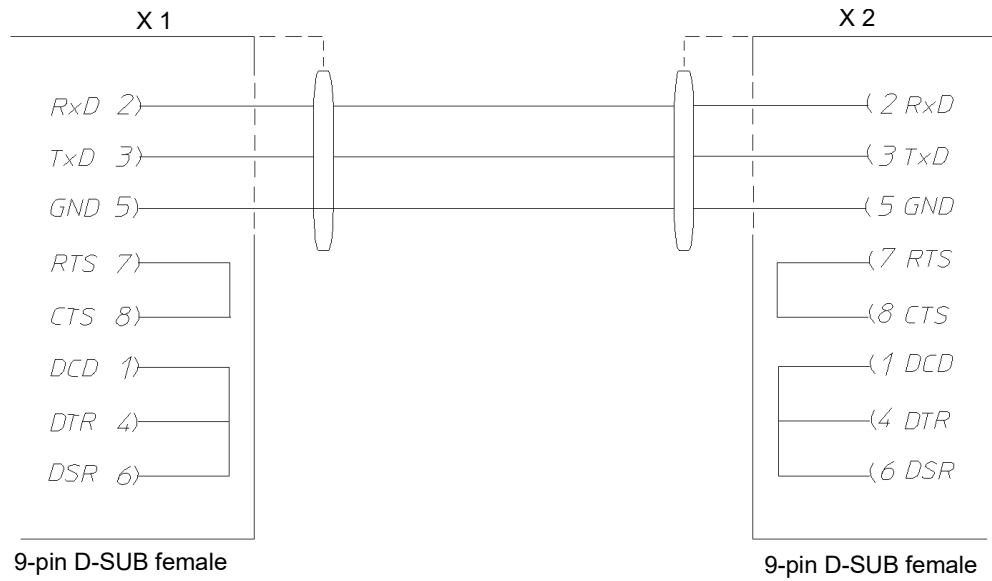


Fig. 4-9 Pin assignment for 232 interface cable for 2/3-channel process interface

4.9 RS 232 interface cable for Dicon PRS controllers

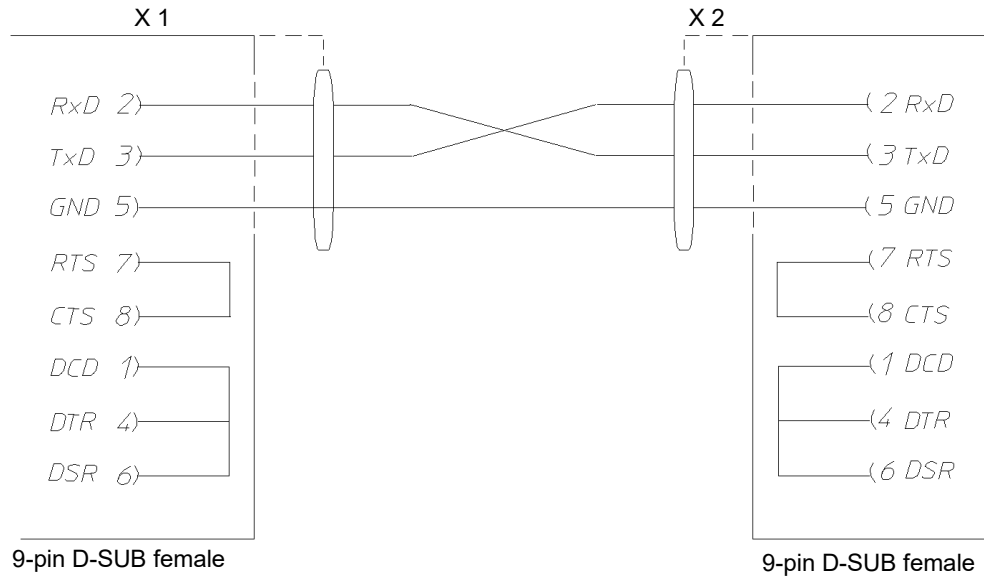


Fig. 4-10 Pin assignment for RS 232 interface cable for Dicon PRS controllers

4 Patch cable pin assignment

4.10 RS 485 interface cable for Anaprog controllers

4.10 RS 485 interface cable for Anaprog controllers



Fig. 4-11 Pin assignment for RS 485 interface cable for Anaprog controllers

4.11 RS 232 interface cable for ZPG 2000 / ZPR 2000 controllers

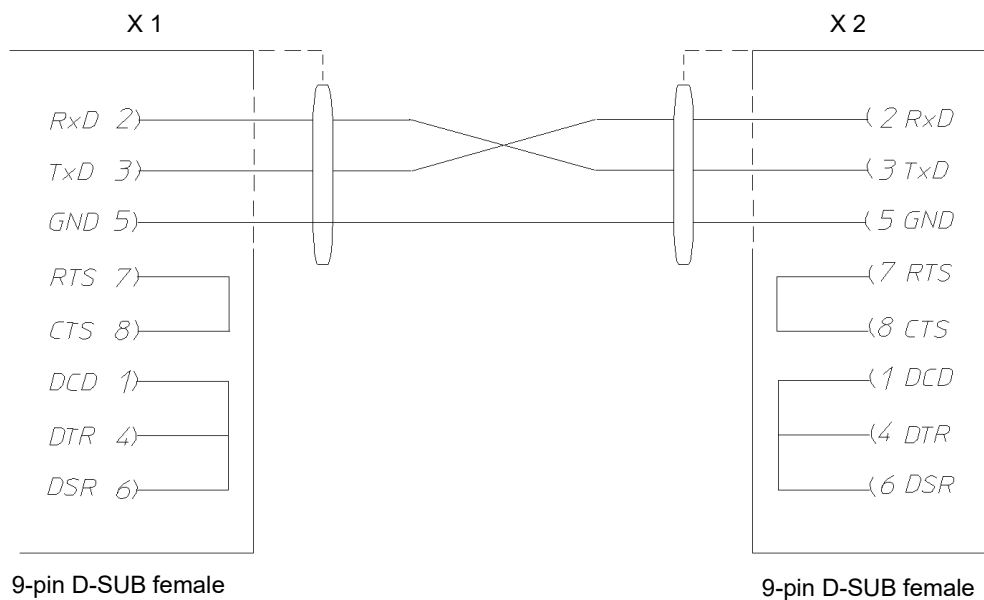


Fig. 4-12 Pin assignment for RS 232 interface cable for ZPG 2000/ZPR 2000 controllers

4.12 RS 232 interface cable for Testa FID 2000 MP

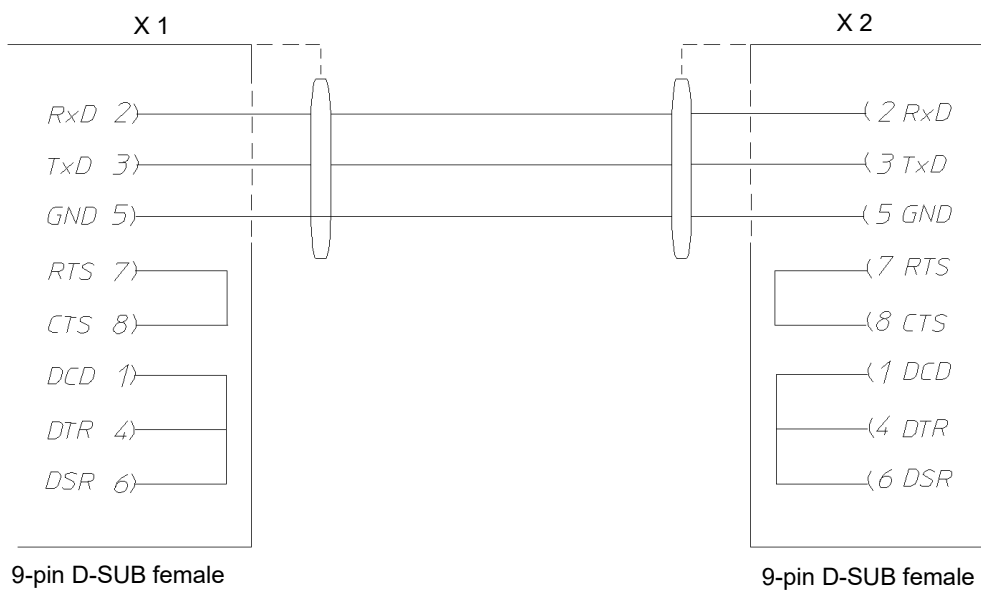


Fig. 4-13 Pin assignment for RS 232 interface cable for Testa FID 2000 MP

5 OPERATION OF SHOCK CHAMBER TS130 MODEL WITH SIMCON/32 CONTROLLER

When running Simpati to create programs, verify that control value #3 "Max. AmbTemp.Time" is set to at least 15 minutes as the nominal value.

If the control value is not programmed (nominal value = 0 minutes) this leads to error message **A031: Timeout wait function** immediately after the program starts.

In order that the control value is always initialised to at least 15 minutes, the steps below must be performed once during installation (or later as well).

Procedure:

- ▶ Exit Simpati.
- ▶ Edit the configuration file:
 - ▶ In the **c:\simpati\init** directory, open the configuration file **simpati.cxx** of the corresponding test system using a text editor (xx = Simpati-ID of the test system).
 - ▶ Change MIN value of control value **3** from **0.0** to **15.0**.

```
/** analog output ** short/long/unit/Min-Max/ID *****/
```

```
:ST:001:Speed:Valve.Speed :% : 30.0: 100.0:1:  
:ST:002:DEF:Defrist : : 0.0:1000.0:2:  
:ST:003:MAT :Max.AmbTemp.Time :Min : 15.0: 100.0:3:
```

- ▶ Close and save file.
- ▶ Delete shared memory. To do this, delete the concealed files **sim_cxx**. of the corresponding test system in the **c:\simpati\system** directory (xx = Simpati-ID of the test system).
- ▶ Start Simpati.
- ▶ In Simpati, select the entry **Configuration** in the context menu of the test system.
- ▶ Select the tab **Profiles/Limits**.
- ▶ Set the nominal value of the control value to **15.0**.
- ▶ Choose **Default** as a control variable and then select **[Set]**.

6 USING DATA LOGGER MODEL 8990-6C

Prerequisite:

- The configuration file **Simpati.cxx** must be available. You receive the configuration file **Simpati.cxx** through our Service hotline.
- The computer must have a free RS 232 serial interface. The interface must be permanently available. No other application may access this COM port.

Procedure:



Copying will overwrite special configurations, if any.

- ▶ If the file **Simpati.str** is modified, contact our Service hotline.
-
- ▶ Connect the D-Sub plug of the data logger interface cable to a RS 232 interface on the computer.
 - ▶ End Simpati.
 - ▶ Adapt the Simpati start file:
 - ▶ Extend the **Simpati.str** file in the **simpati\system** directory by the entry **30:01:simwutdata::**
 - Or:
 - ▶ Copy the **Simpati.str** file contained in the **simpati\system** directory the configuration disc to the **simpati\system** directory on the hard drive.
 - ▶ Copy the **Simpati.cxx** configuration file to the **simpati\init** directory.
 - ▶ In the **simpati\init** directory, change the file extension from **cxx** to match the corresponding test system number, e.g. if the data logger is the second device supported by Simpati, change to **c02**.
 - ▶ End Simpati.
 - ▶ Start Simpati.
 - ▶ Check whether the entry **simwutdata.exe** is available on the computer task bar.
 - ✓ If the entry is available, installation was successful.

7 CONTACT

If you have any technical problems with our product, please contact our service hotline:

+49 180 5666556

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Test it. Heat it. Cool it.