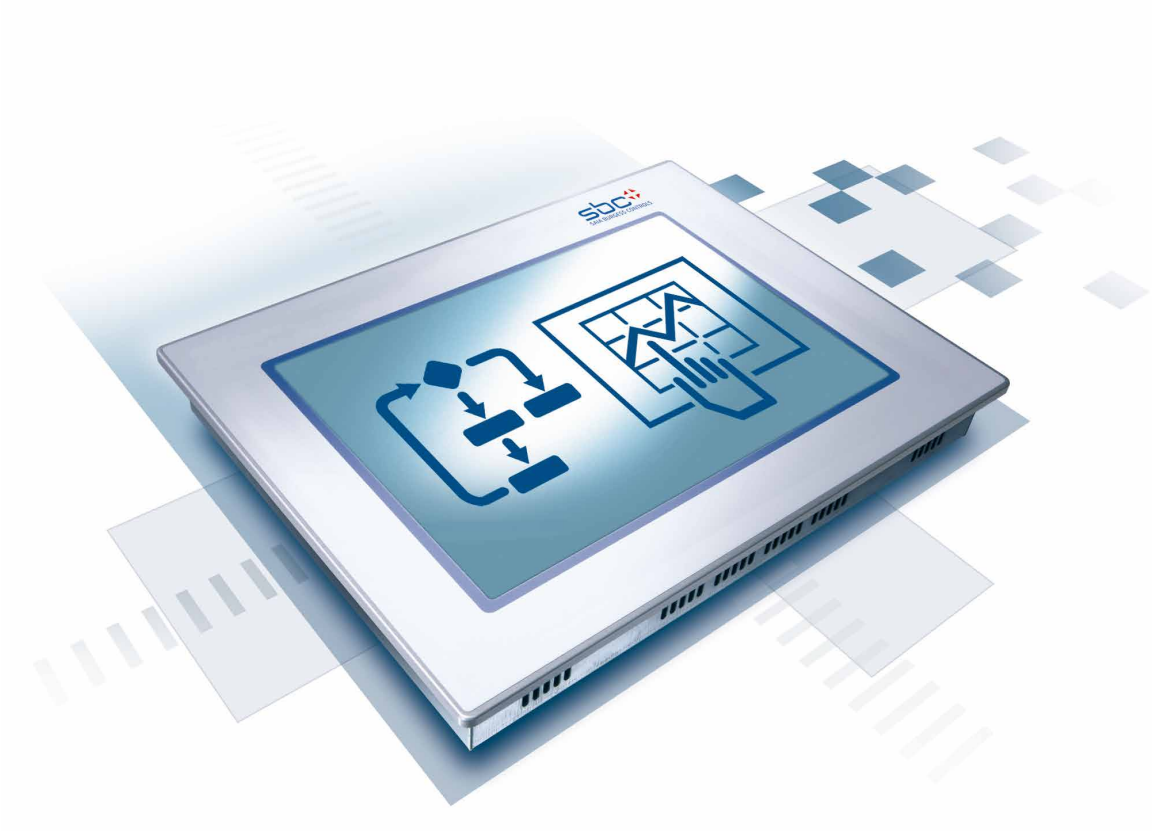
SAIA BURGESS CONTROLS



Standard SVGA MB Panel: PCD7.D412DTPF
and
PG5-programmable pWeb Panel: PCD7.D4xxxT5F

Document 27-620 | Release ENG07 | 2019-10-31

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Content

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0.1 Document versions

Version	Published	Redactor	Remarks
EN01	2012-10-10	ErDa	First version of manual
EN02	2012-11-28	HaMa	■ Ch1.2 Connection SD » D and /SD » D ■ Ch3.1.1 Picture RS-485-Network replaced
EN03	2013-12-18	ErDa	Chapter 7.6.2 Container variables removed
EN04	2013-05-31	HaMa	Chapter 3.1.2 Description oft the communication modules PCD7.F1xxS for Slot A
EN05	2014-01-20	HaMa	New logo and new company name
ENG06	2016-01-27	HaMa	New fixation set
ENG07	2019-06-20 2019-10-15 2019-10-31	HaMa HaMa HaMa	■ Added the crossed bin logo for “Waste of Electrical and Electronic Equipment (WEEE)” disposal ■ copied from Word to InDesign ■ small corrections ■ minor corrections (cross-references)

0.3 Brands and trademarks

Saia PCD® and Saia PG5®
are registered trademarks of Saia-Burgess Controls AG.

Technical modifications are based on the current state-of-the-art technology.

1 Quickstart

1.1 Introduction

This manual covers the technical aspects of the PCD7.D412DTPF SVGA MB panel and the PCD7.D4xxxT5F programmable pWeb panel. The aim of the Quickstart chapter is to facilitate the rapid installation of components of the PCD7.D4xxxT5F. The following are discussed:

- Definition of the connectors
- Power supply and consumption
- Dimensions
- Possible communications modes

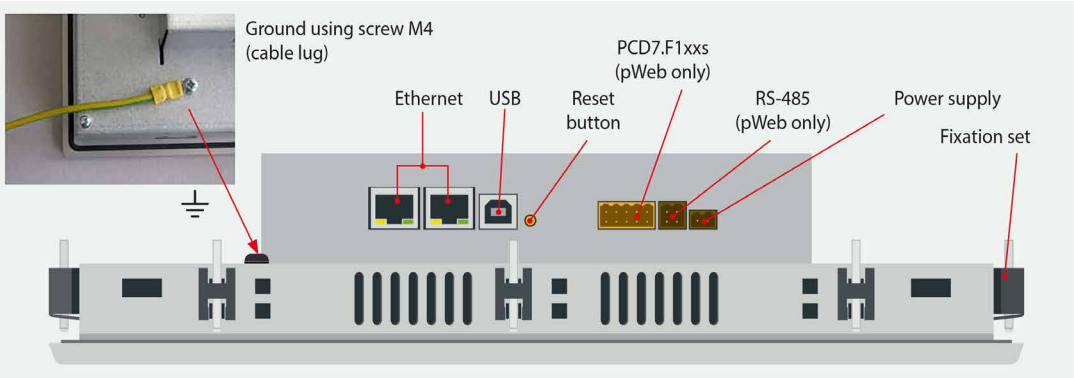
In other chapters, more details can be found about:

- Hardware
- Software (Setup menu step-by-step and configuration)
- Usage, firmware update, etc.
- Maintenance

Complementary manuals:

- PG5 2.0 User guide | 26-732
- File System and FTP Server | 26-855
- Ethernet TCP/IP | 26-766
- Smart RIO PCD3.T665 | 26-892
- Serial interface modules PCD7.F1xxx | 27-664

1.2 Definition of the connectors

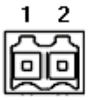


PROTECTIVE EARTH MUST BE CONNECTED!

1

Connections

Power Supply

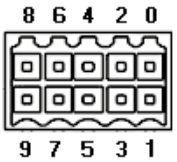


Connector pins	Signal
1	24 V (+)
2	GND (-)

RS-485

Connector pins	Signal
1	GND
2	NC
3	/D
4	D

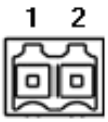
PCD7.F1xxS



Connector pins	Signal RS-232	Signal RS-485
0	GND	GND
1	TXD232	SD
2	RXD232	/SD
3	RTS232	
4	CTS232	
5	GND	GND
6	DTR232	
7	DSR232	
8	COM232	
9	DCD232	

Power supply	Earth (-) / 24V (+)	Connector, 2-pole
Communications	2× Ethernet (switch !)	2× RJ-45 with LED indicator
	USB	Standard USB slave
Reset button	Pushbutton	

1.3 Voltage supply of the panel



Pin	Signal
1	24V (+)
2	Earth (-)

Current supply:

→ 24 VDC +30% / –20%

or

→ 19 VAC ±15% current supply with full-wave rectifier

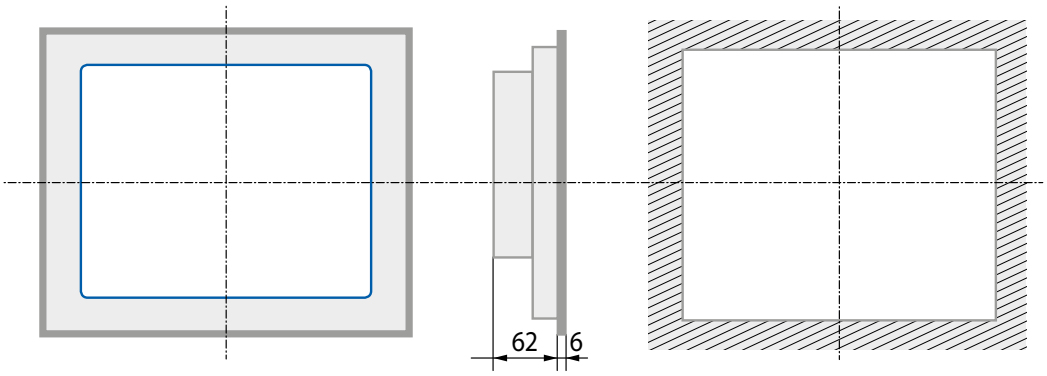
	Current consumption	Power output without backlight
PCD7.D412DT5F	Max 600 mA	5 W
PCD7.D410VT5F	Max 600 mA	5 W
PCD7.D457VT5F	max 500 mA	5 W
PCD7.D412DTPF	Max 600 mA	5 W

Current supply with jack plug for cable of max. 1.5 mm^2.

1

1.4 Dimensions and cut-out [in mm]

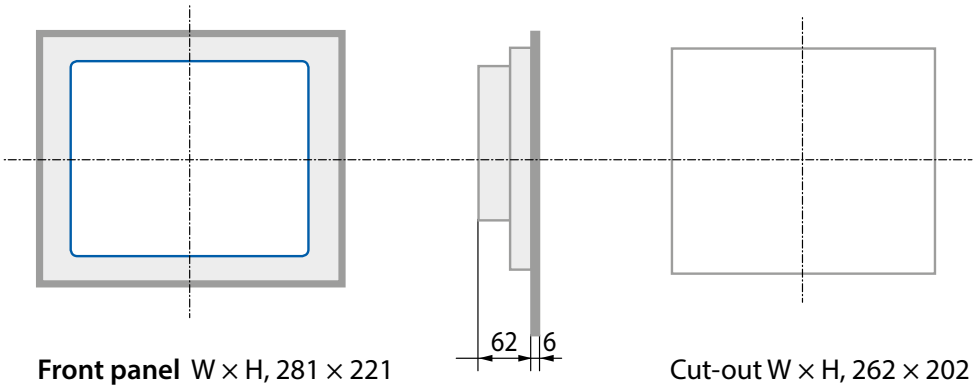
1.4.1 12.1" panel



Front panel W × H, 319 × 264
Display W × H, 245 × 185

Cut-out W × H, 300 × 244

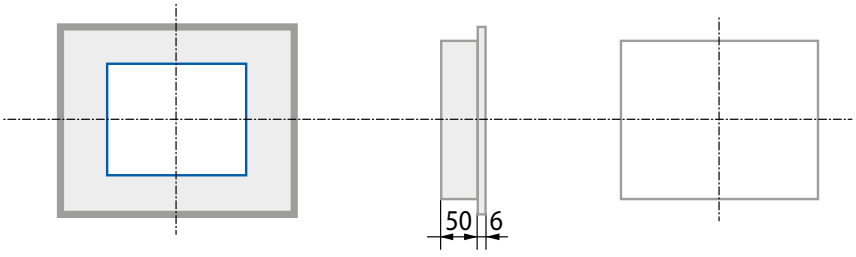
1.4.2 10.4" panel



Front panel W × H, 281 × 221
Display W × H, 211 × 150

Cut-out W × H, 262 × 202

1.4.3 5.7" panel



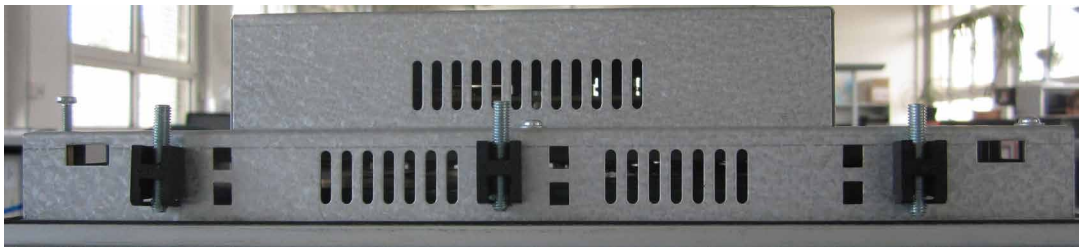
Front panel W × H, 202 × 156
Display 5.7" W × H, 117 × 88

Cut-out W × H, 189 × 142

1.5 Installation of the panels

1.5.1 Installation in control cabinet

- The installation position is horizontal. Slide the unit into the installation cut-out.
- Make sure that the ventilation slots are not covered, to allow air circulation and the device does not overheat.
- Install 4 mounting clamps for 5.7" (2 on top and 2 on the bottom), 6 clamps for 10.4" (2 on top, 2 on the bottom and 2 on the sides) and 8 clamps for the 12.1" (3 on top, 3 on the bottom and 2 on the sides). Refer to the photos below.



Mounting parts of 12.1" panels

Mounting parts of 10.4" panels

Mounting parts of 5.7" panels

Note:

- It is helpful to have somebody hold the unit from the front side of the panel while the brackets are being installed.
- The bolts require a 2.5 mm Allen key.
- Screw the bolts into the brackets up to the point when you can still clip them onto the MicroBrowser without being obstructed by the plate.
- Clip them onto the unit then tighten the bolts until they touch the plate.
- The required torque to seal the gasket is 20 cNm. To avoid breaking the clamp, do not exceed 30 cNm.

How to ensure spray water protection according to IP65:

→ The device must be mounted on a flat surface or wall. Tighten the bolts until the front plate of the PCD7.D4xx is just touching the mounting surface/wall.

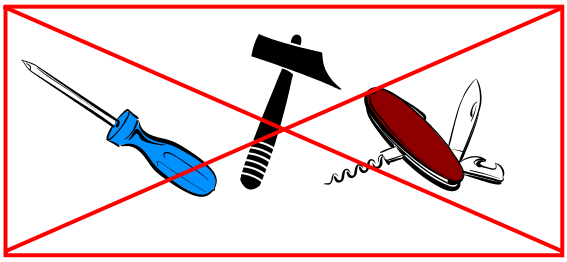
1.5.2 Drywall mounting set for MB panels

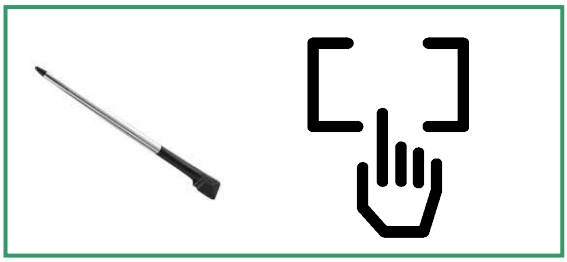
The MicroBrowser panels are not just for mounting in the control cabinet; They also look very good in the office or living room, or mounted on a wall. This is why we provide wall mounting kits for solid and cavity wall mounting.

	In-wall (cavity walls)	On-wall (solid walls)
		
Mounting kit for the 5.7” MB panel	PCD7.D457-IWS2	PCD7.D457-OWS2
Mounting kit for the 10.4” MB panel	PCD7.D410-IWS	PCD7.D410-OWS
Mounting kit for the 12.1” MB panel	PCD7.D412-IWS	PCD7.D412-OWS

1.6 Operation and handling of the touchscreen

To operate the touchscreen, use only your finger, the stylus or a soft finger stylus. Do not use sharp tools (e.g., sharp metallic objects, paperclips or a screwdriver, etc.).





1.7 Setting up communications for displaying a website

1.7.1 HTTP Direct over ethernet RJ-45 connector

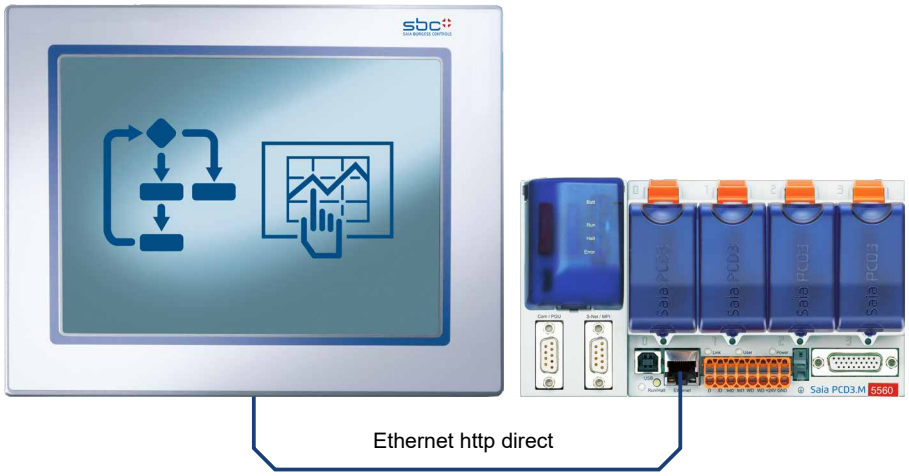
The quickest communications port is the ethernet port via RJ-45, with the HTTP Direct protocol selected. The speed is either 10 MBit/s or 100 MBit/s after an auto-negotiation protocol with the connected device.

Internal connection for programmed pWeb panels

The programmed panels are connected internally directly to the programmable logic controller, via an ethernet connection. It therefore suffices, in this case, to simply set the local host IP address 127.0.0.1 and HTTP Direct connection in the Setup menu under Web connection. The programmable pWeb panels are obviously also capable of displaying websites from controllers located within the network. The procedure for this is the same as with the standard 12” SVGA panel.

Connecting to external devices

If an ethernet connection to an Automation Server exists, the HTTP connection can be established between our PCD7.D4xx and any SBC controller. In the case of the programmable panels, the panel is generally connected to the internal controller.



Quick test of the SVGA panel

- First the Saia PCD must have a web program loaded which was created with the Web Editor (see 26-838_Manual_Web-Editor). You can ask the SBC Support Team for some examples. They will also soon be available on our website.
- Using a **CAT5 cable**, you can connect our PCD7.D4xx terminal to the SBC device. The current controllers support auto-crossing; a crossover cable is thus no longer required.
- Using PG5, define the **HW settings of the Saia PCD** device: S-Bus support must be selected together with the TCP/IP channel where a valid IP address is entered.

Setup settings of the SVGA panel:

Configure the SVGA panel by opening the **Setup menu** (refer to "5 Structure and description of the Setup menu" on page 5-1):

➔ First, be sure that you are on the same **network subnet**. For example, if the Saia PCD has the IP address 192.168.12.92, give your terminal (in the Network menu) an IP address like 192.168.12.90, as normally the subnet mask is set to 255.255.255.0.

➔ In the Configuration menu, enter the **Address of the start page** that corresponds to the IP address of the Saia PCD, and also enter its HTML start page name.

Your MB panel should now be connected to the Saia PCD and the start page selection should be displayed on the screen. You can now navigate your web pages.

1.7.2 USB port as Service port

The USB port on the programmable panels is used mainly to download the user program onto the controller with PG5.

On SVGA standard MB panels, this port is generally used as a Service port. It is used mainly to download new firmware programs onto the device.

The USB port meets the USB 1.1 specification. Maximum speed: 12 MBit/s.

1.7.3 Getting started with the Web Editor on the MicroBrowser panel PCD7.D4xx

Detailed documentation can be downloaded from our website. See manual 26-838 Manual Web Editor. To get started with programming the MB panel, some particular features must be observed:

- If no assistance is available from the Wizard when creating a new project, the project must be set up as follows:
  - Using the virtual keyboard with SVGA MB panels
  - See Chapter "5.6 Keyboard" on page 5-9
  - If you want to use the file Background.teq or foreground.teq, you first need to generate these files. Why is this? Before objects or text and fields can appear, these files must first be positioned on each page.
  - Once the project is ready to download, enter the desired HTML file name and generate a Build Project. Then make a Webserver Build in the Saia PG5 Project Manager, so that all the files are held in the PCD. If you just want to access the PCD with MB panel PCD7.D4xx and not with a PC browser, you can reduce the amount of data by deleting the .jar files, as they are already included on the panel.

2 Technical data for the two panel types

The hardware of the SVGA MicroBrowser panels and the programmable pWeb panels is differentiated in several areas by the Programmable Logic Controller on the pWeb panels. These are described in the following sections:

2.1 Technical data of the SVGA MicroBrowser panel

Display	
Display size	12.1" TFT
Resolution	SVGA 800 × 600
Backlight	LED
Colours	65,536
Contrast adjustment	Yes
On Board File System	128 MByte
Operating system	Saia PCD COSinus with SBC MicroBrowser expansion
Internet services	Automation Server, SBC MicroBrowser
Interfaces	
Ethernet 10 / 100 M	2× RJ45 (switch)
Current consumption	Max 600 mA
Voltage supply	24 VDC ±20 %
Protection class (front)	IP65
Temperature	Operation: 0 … 50°C Storage: –25 … +70°C
Relative humidity	Operation: 10 … 80% Storage: 10 … 98% (non-condensing)
Processor	Coldfire CF5373L, 240 MHz
Real Time Clock (RTC)	Yes, with Supercap

2.2 Technical data for the pWeb panels

2.2.1 Overview

Logic controller	
User program, ROM /DB/text	1 MByte
RAM/DB/text	1 Mbyte
Media	14,336 flags / 16,384 registers
Backup for user	User program is saved to the integrated micro SD card
File system for user	128 MBytes, on-board
Program cycle time	10 cycles / sec maximum
Protocols on field level	Serial-S-Bus, Ether-S-Bus, Ether-S-I/O, Modbus RTU, TCP or M-bus
Internet services	SBC MicroBrowser, Automation Server
Interfaces	
Ethernet 10 / 100 M	2× RJ45 (switch)
USB (1.1 / 2.0)	1× client
Serial interfaces	RS-485 & socket for PCD7.F1xxS communications module
Temperature range	Operation: 0 … 50°C Storage: –25 … +70°C
Relative humidity	Operation: 10 … 80% Storage: 10 … 98% (non-condensing)
Processor	Coldfire CF5373L, 240 MHz
Real Time Clock (RTC)	Yes, with battery backup
Battery	Lithium Renata CR 2032 (lifetime 1-3 years)

2.2.2 Product-related presentation

Technical data	PCD7.D457VT5F	PCD7.D410VT5F	PCD7.D412DT5F
Display size	5.7 TFT	10.4 TFT	12.1 TFT
Resolution/Pixels	VGA 640 × 480		SVGA 800 × 600
Touchscreen	Resistive four-wire		Resistive five-wire
Contrast adjustment	yes		
Backlight	LED		
Voltage supply	18…32 V		
Current consumption	Max. 500 mA	Max. 600 mA	
Protection class (front)	IP 65		
Front status LED	No	No	Yes

2.2.3 Battery of the pWeb panel

The hardware components are maintenance-free, with the exception of the CPUs for the pWeb panel, whose battery requires occasional replacement.

The components do not contain any user-replaceable parts. If hardware problems occur, please return the components to Saia-Burgess Controls.

The resources (register, flags, timer, counters, etc.) and the character strings/DBs are stored in the RAM. In order to prevent these from being lost, and to enable the hardware clock to carry on running during a power failure, the devices are equipped with a back-up battery:

CPU model	Buffer	Buffer time
PCD7.D4xxx	Renata CR 2032 lithium battery	1-3 years[1)]

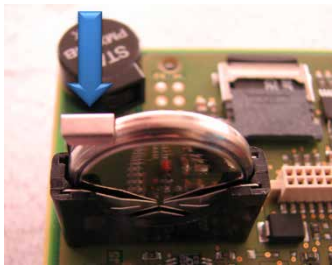
[1)] Depending on the ambient temperature: The higher the temperature, the shorter the buffer time.

New controllers include batteries in the scope of delivery, and these must be inserted during commissioning. Pay attention to the polarity of the batteries.

CPUs with lithium batteries are not maintenance-free. The battery voltage is monitored by the CPU. The status LED lights up (12” pWeb panel only) and XOB 2 is called if:

- the battery voltage is lower than 2.4 V;
- the battery is missing.

In order to avoid data-loss, we recommend changing the batteries while the panel is connected to the power supply.



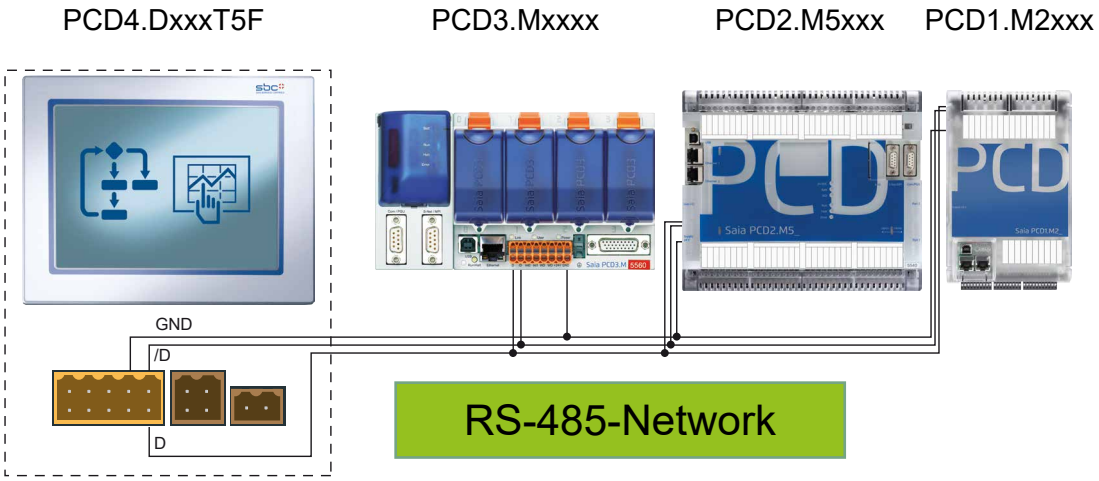
- Disconnect from the voltage supply.
- Remove the cover of the pWeb panel.
- To prevent data loss while changing the battery 119B, reconnect to the voltage supply.
- Push the terminal holder back slightly (see arrow in figure).
- Remove the battery.
- Insert a Renata CR 2032 button battery so that the positive terminal is in contact with the terminal holder.
- Disconnect from the voltage supply and reattach the back wall of the panel.

3 Logic controller of the programmable pWeb panel

3.1 Communications interfaces

Various communications interfaces are integrated into the programmable logic controller. These can also be expanded by installing an additional module.

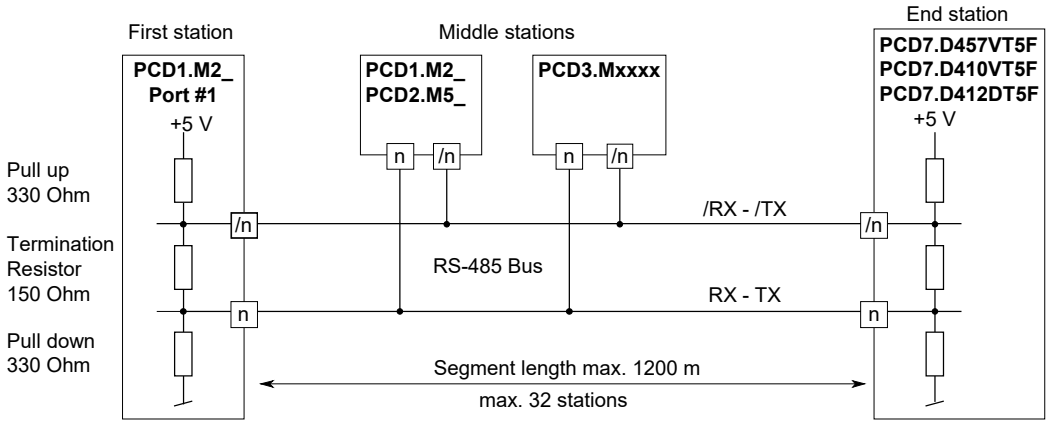
3.1.1 On-board RS-485



The pin nºs of the connected PCD are explained in the respective manual.

Make sure that the terminators are properly terminated.

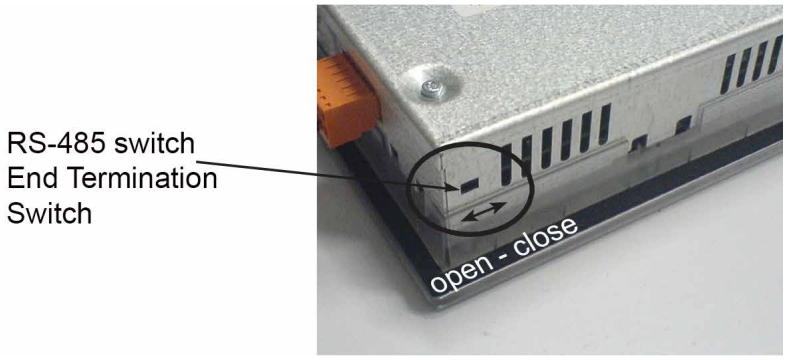
In the example below, you can see a possible connection between the terminals and PCDs. In order to avoid reflection on the communications channel, the network should be terminated with termination resistors. The PCD7.D4xx has a switch for this:



The following figure shows you where it is located.

➔ If the switch is in the **top position**, the network is **closed**.

➔ If the switch is in the **bottom position**, the network is **open**.

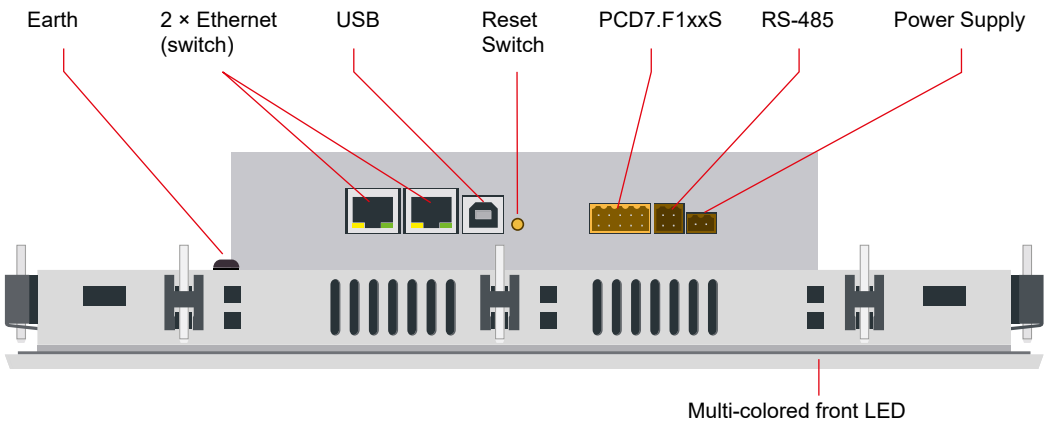


	Configuration can either be performed directly, via the Setup menu on the pWeb panel, or indirectly, via the Hardware configuration on the PG5. Overwrite the current configuration the same as when making a change.

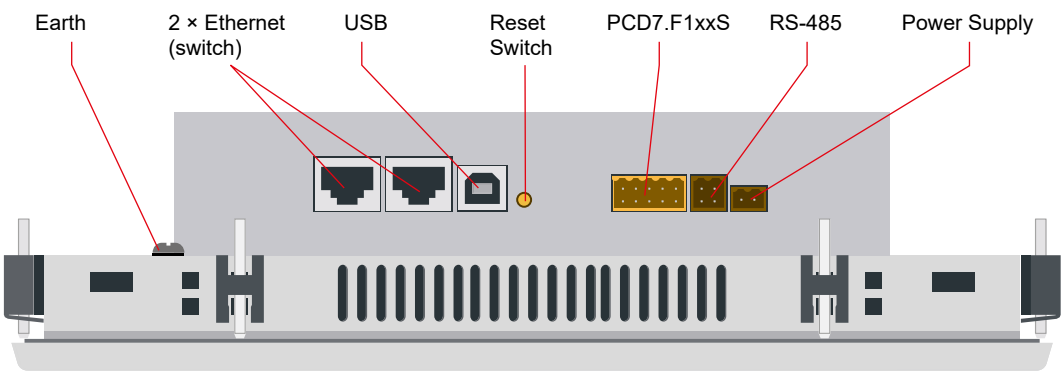
3.1.2 Additional communications ports using slot A (Port no. 1)

Slot A on the pWeb panels allows you to plug in optional modules for communications interfaces. Only modules of the PCD7.F1xxS series are supported.

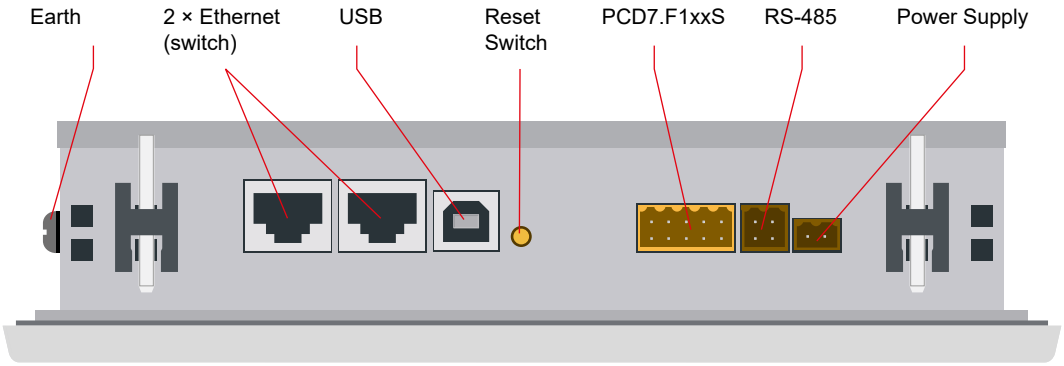
Installation - PCD7-D412DT5F



Installation - PCD7.D410VT5F

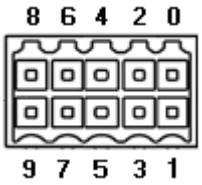


Installation - PCD7.D457VT5F



Connections

PCD7.F1xxS

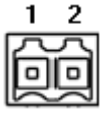


Connector pins	Signal RS-232	Signal RS-485
0	GND	GND
1	TXD	D
2	RXD	/D
3	RTS	
4	CTS	
5	GND	GND
6	DTR	
7	DSR	
8	COM	
9	DCD	

RS-485

Connector pins	Signal
1	GND
2	NC
3	/D
4	D

Power Supply

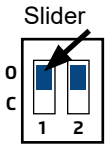


Connector pins	Signal
1	24 V (+)
2	GND (-)

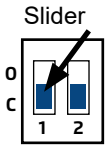
3.1.2.1 PCD7.F110S Serial Interface Module RS-485/RS-422

Termination resistors can be connected (CLOSED) or disconnected (OPEN) with slide switches.

PCD7.F110S	RS-485 terminator



Open not terminated (factory setting)



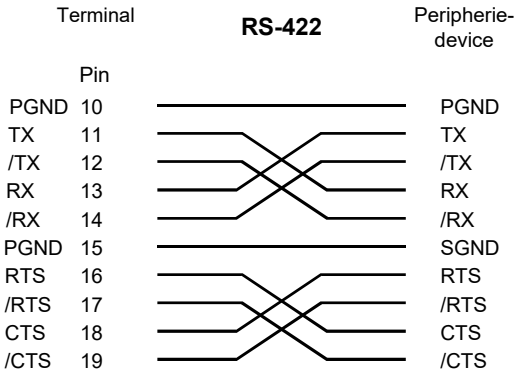
Closed terminated

RS-422 connection

Port x.1 - 10 pin spring-loaded terminal block

RS-422

0	PGND	Tx	1
2	/Tx	Rx	3
4	/Rx	PGND	5
6	RTS	/RTS	7
8	CTS	/CTS	9

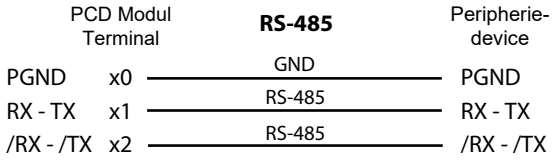


RS 485 connection (Electrically connected RS-485 interface)

Port x.1 - 10 pin spring-loaded terminal block

RS-485

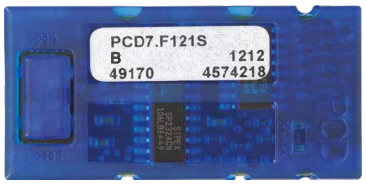
0	PGND	Rx-Tx	1
2	/Rx-/Tx		3
4		PGND	5
6			7
8	(SGD)		9



For more details, see Manual 26-740, section "Installation components for RS-485 Networks"

3.1.2.2 PCD7.F121S Serial interface module RS-232, up to 115 kBit/s, suitable for modem connection

PCD7.F121S



RS-232 connection

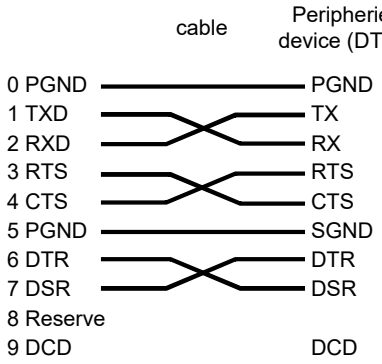
Port x.1

RS-485

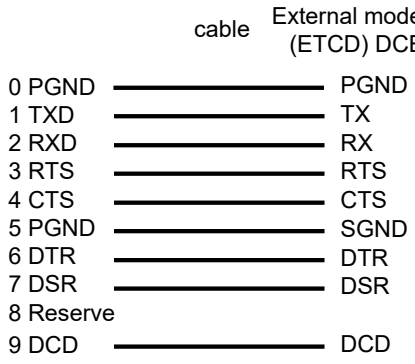
0	PGND	TxD	1
2	RxD	RTS	3
4	CTS	PGND	5
6	DTR	DSR	7
8	COM	DCD	9

10 pin spring-loaded terminal block

RS-232 connection to DTE



RS-232 connection to DCE



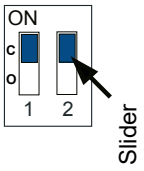
3.1.2.3 PCD7.F150S Serial Interface Module RS-485 with Electrical Isolation

Electrical isolation is achieved using three optical couplers and a DC/DC converter. The data signals are protected against overvoltage with an anti-surge diode (10 V).

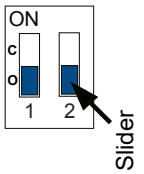
The line terminator for port x.1 is integrated into the module and can be activated using the slide switch on the module.

PCD7.F150S

RS-485 terminator



Closed terminated



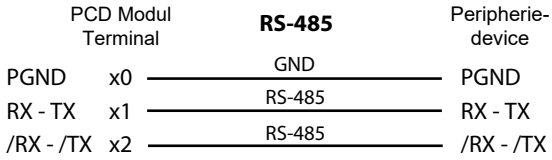
Open not terminated
(factory setting)

RS-485 connection - 10 pin spring-loaded terminal block

Port x.1

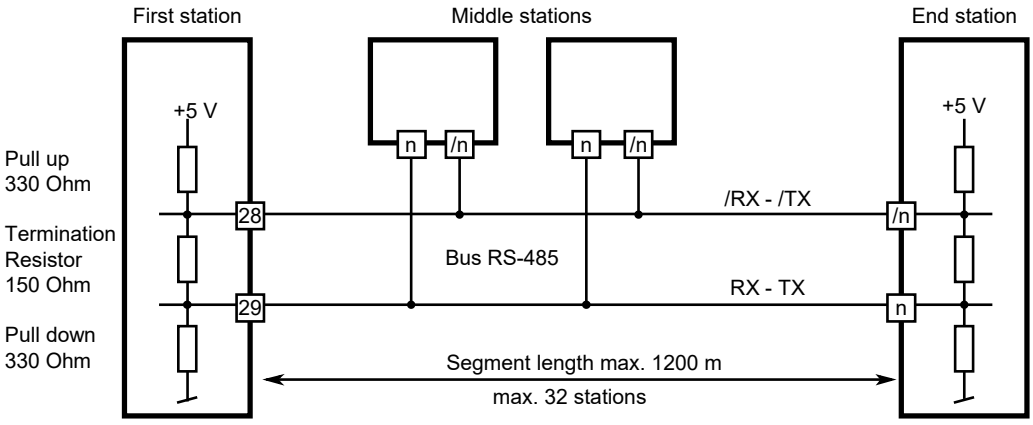
RS-485

0	PGND	Rx-Tx	1
2	/Rx-/Tx		3
4		PGND	5
6			7
8	(SGD)		9



When using this module, the permitted ambient temperature for the control unit is reduced by 5°C.

Line terminator:

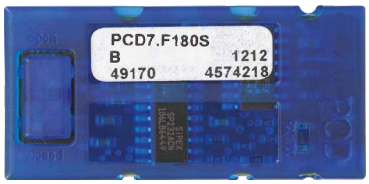


More details are available in the manual 26-740 “Installation components for RS-485 networks”.

3.1.2.4 PCD7.F180S Serial Interface Module Belimo MP-Bus

Up to 8 actuators and sensors can be connected.

PCD7.F180S



3

Belimo connection

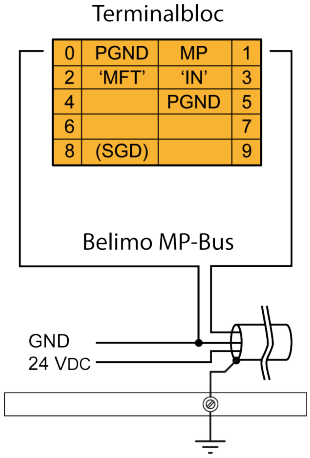
Port x.1

Belimo MP-Bus

0	PGND	MP	1
2	'MFT'	'IN'	3
4		PGND	5
6			7
8	(SGD)		9

10 pin spring-loaded terminal block

MP-Bus cabling



0	PGND	Earth connection, MP line
1	MP	Multi-point The MP-Bus is the Belimo master slave bus. Up to 8 slaves can be connected to a master device. These are: ■ MFT(2) flap drives ■ MFT(2) valve drives ■ MFT fire damper drives ■ VAV NMV-D2M compact controller
2	'MFT'	MFT programming unit (internal MP-Bus)
3	'IN'	detection of MFT programming unit (input 10 kΩ, Z5V1)
5	PGND	Earth connection, MFT programming unit

3.2 Configuration of the hardware settings in PG5

Configuration of the programmable panel is usually performed via PG5, which is also used to generate the project. However, it can also be configured directly on the panel, using the Setup menu described in Chapter "5.2 Logic Controller (pWeb panels, only)" on page 5-3.

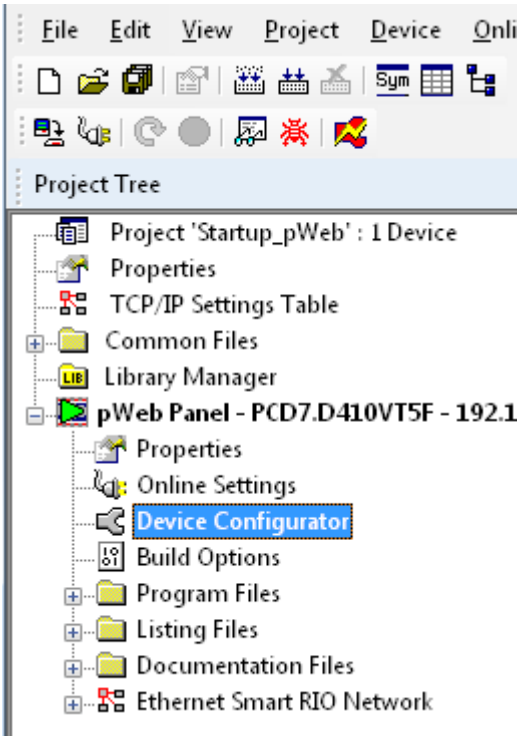
3.2.1 General information

The following description assumes that the user is familiar with the PG5 software. If this is not the case, we recommend reading the manual 26-733 „PG5, software requirements, PG5 V 2.0" The device configurator defines direct access to programming instructions, for reading values from the peripheral input module and writing values to the peripheral output module.

3.2.2 Running the device configurator

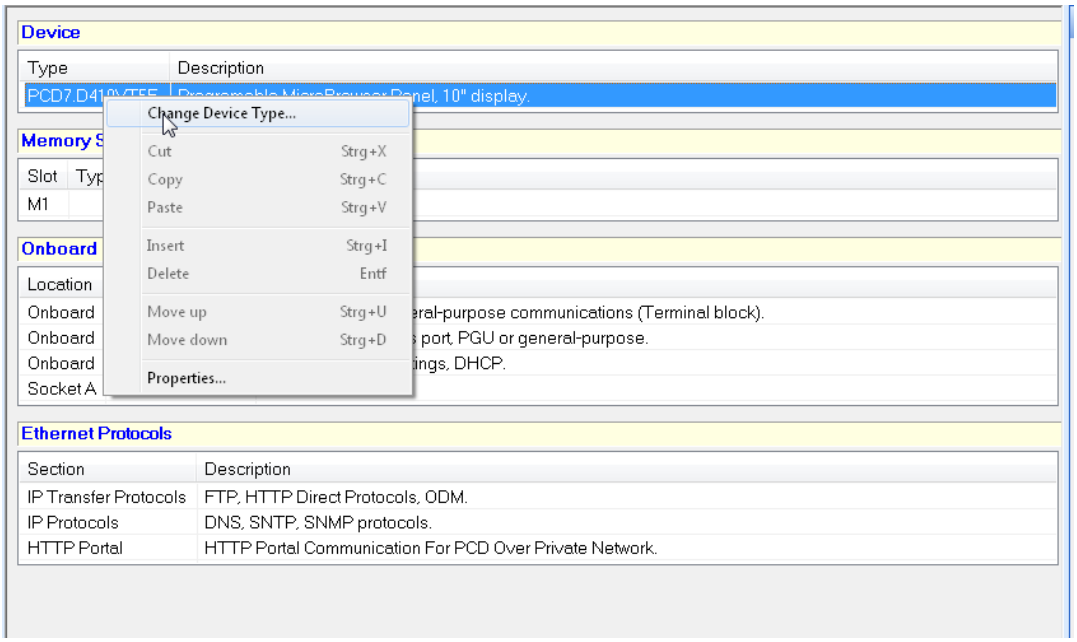
The device configurator is used for hardware configuration, setting up logs, and I/O handling.

Double click on the project tree icon to start the device configurator.



Use a right click to select the Device and use Change Device Type to set the panel to be configured.

The Download button  can be used to download the configuration onto the pWeb Panel.



3.3 Firmware version

The firmware of the programmable panel is stored on an SD card soldered to the motherboard. A firmware update can be applied by downloading a new version with the PG5. When doing so, pay attention to the following procedure:

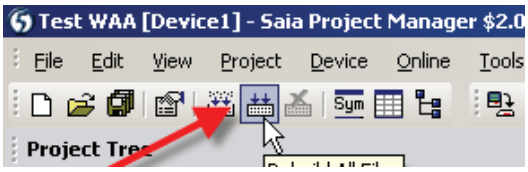
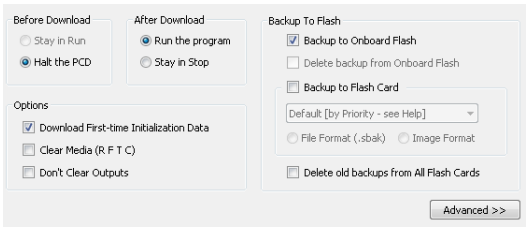
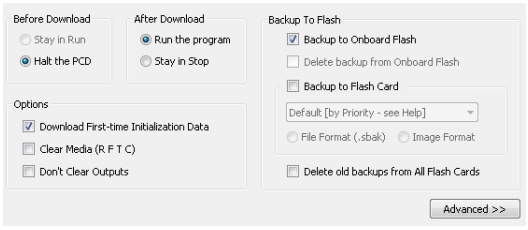
- Open www.sbc-support.com and download the latest firmware version
- Establish a connection between PG5 and the CPU, the same way as when downloading an application (in accordance with the available devices, serial with PGU cable, modem[1)], USB, Ethernet).
- In the Tools menu, select "Update Firmware" and use the Browse function to select the path for the file with the new firmware version. Make sure that only one file is selected for download.
- Start the download.

1) see chapter ""3.1.2.2 PCD7.F121S Serial interface module RS-232" on page 3-8"

3.4 Downloading the program and backup

The user program is downloaded to the pWeb panel in the same way as performing device configuration with the PG5 software. This process is described below.

3.4.1 Downloading the user program with PG5

1	**Create and compile the user program**		
	The file your_project.pcd contains the following information: User program (FUPLA, IL, etc.) Configuration files (in some cases) Data for first initialisation		
2	**Program download**		
	Clicking on the Download button shows the following window.  The user program is downloaded as a file in a particular partition of the internal file system. The user is not able to see this partition.		
4	**Options after download**		
	Execute program (RUN)	Sets the PLC to RUN, once the download is successfully completed	
	Remain STOPPED	After the download, PLC remains STOPPED	

- It is not possible to download only those blocks which have been modified.
- The user program is downloaded into the on-board memory in a file and, after a restart of the system, the process is complete.
- If the download is not successfully completed, the FW deletes all files inside the system folder.

Once the download has been successfully completed, start the controller:

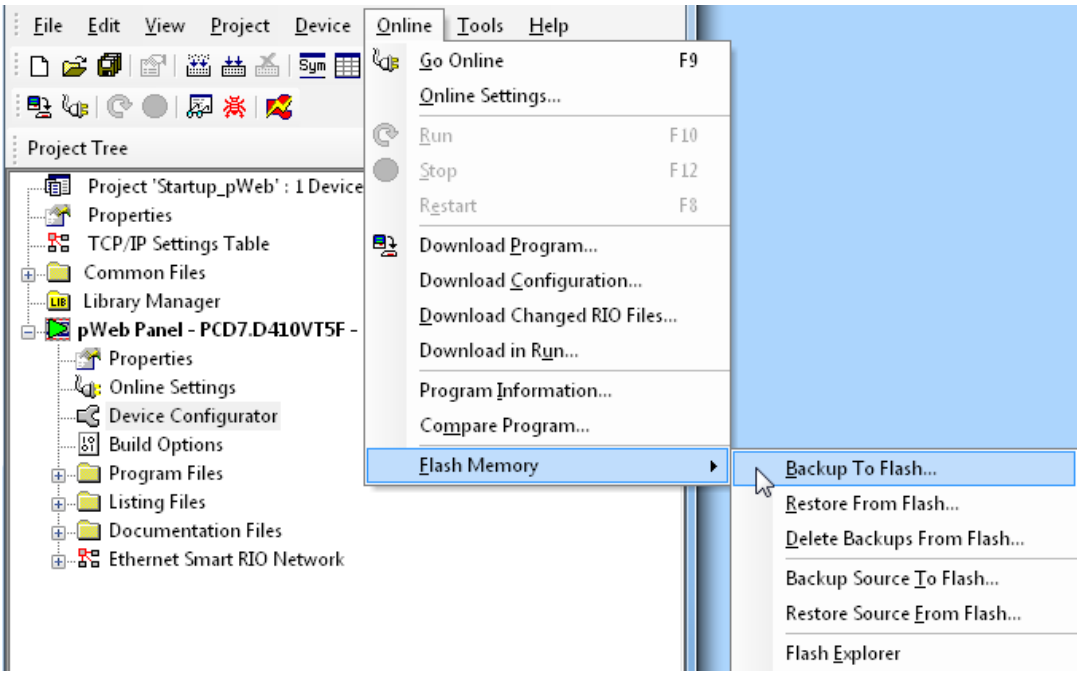
After the system restart, the user program and ROM DB/text are transferred into the execution memory. This is a write-protected memory and thus does not need to be backed up; all data is stored in the pWeb panel file system.

The data for the user program is transferred to the execution memory after the pWeb panel device starts up.

3.4.2 Backing up and restoring the user program

Backup with PG5

Select a backup with "Backup To Flash”



Since the user program is already stored in the on-board flash memory, only the RAM DB/text for the on-board flash memory are stored to the folder PLC_SYS (not visible to the user).

	Note: Registers, flags, timers and counters are not stored.

During a restore, the DB/text are copied back into the SRAM memory.

Backup to INTFLASH file system

The values RAM DB/text are stored in the internal PCD_Backup folder. This allows the backup files to be accessed via the FTP server and then uploaded to a PC.

3.5 LED and operating status (12" pWeb panel, only)

The CPU is capable of the operating statuses listed in the following table. On the 12" pWeb panel, the status is indicated by a multicoloured LED. On the other panels, the status can be shown on the display.

Status	Description	LED
No power	No power connected	OFF
Run	Normal processing of the user program after startup	green
Run (conditional)	Conditional Run status A condition has been set in the debugger (Run until...), which has not yet been fulfilled	green…green…green
Run with error	The same as Run, but with an error message	green
Run (conditional) with error	The same as Run (conditional), but with an error message	green…green…green
Stop	The status Stop occurs in the following cases: ■ Downloading with the option “Remain in Stop status” ■ PGU stopped by programming unit	red
Stop with error	The same as Stop, but with an error message	red
Halt	The status Halt occurs in the following cases: ■ Halt instruction processed; ■ Serious error in the user program; ■ Hardware fault; ■ No program loaded; ■ No communications mode on the S-Bus PGU or Gateway Master Port.	red
System diagnostics	**Description**	**LED**
Battery fault in Run	Flashes at interval of 500 ms	orange green orange green
Battery fault in Run conditional		red green red green
Battery fault in stop / halt		red…red…red
No SD memory card		red blue green red blue green
SD memory card but no firmware		red green blue red green blue

3.6 Software Watchdog

The pWeb panels have a Software Watchdog, which is a self-monitoring function of the pro-cessor which restarts the CPU in the event of a malfunction or loop. The core of the Software Watchdog is the instruction SYSER K 1000. The first time this is output, the Watchdog function is activated. This instruction must then be output at least every 200 ms, otherwise the Watchdog is triggered and the controller restarted.

Instruction:

```
SYSWR     K 1000 ; Software Watchdog instruction
R/K x            ; Parameters according to following table
                 ; K constant or entered value Register
```

x = 0	The Software Watchdog is deactivated
x = 1	The Software Watchdog is activated; if the instruction is not repeated within 200 ms, a cold start is performed.
x = 2	The Software Watchdog is activated; if the instruction is not repeated within 200 ms, XOB 0 is called, then a cold start is performed.

XOB 0 calls are entered in the PCD History as follows:

«XOB0WDOGSTART» if XOB0 was triggered by the Software Watchdog

«XOB0STARTEXEC» if XOB0 was triggered by a supply fault

3.7 RIOs

Smart-RIO PCD3.T66x modules can be used for decentralised expansion via ethernet (see also manual 26-892):

4 Using the Setup menu on the SVGA MB panels and pWeb panels

This chapter describes the menu structure of the SVGA MicroBrowser panel and programmable pWeb panel.

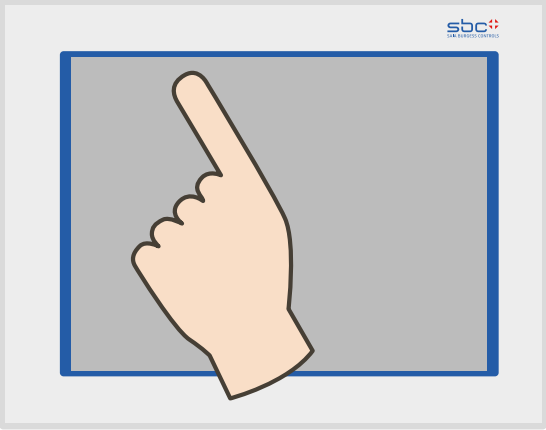
MicroBrowser SVGA panel

- PCD7.D (12.1” SVGA)

Programmable pWeb panels (firmware 1.19.34):

- PCD7.D412DT5F (12.1” SVGA)
- PCD7.D410VT5F (10.4” VGA)
- PCD7.D457VT5F (5.7” VGA)

4.1 Opening the Setup menu



To call up the Setup menu:

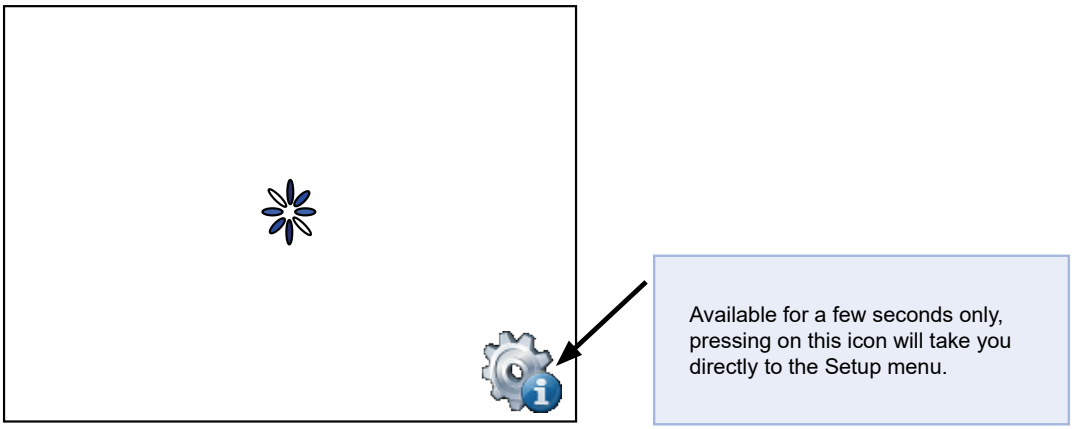
➔ Touch any area on the screen (except the buttons) for 4 seconds at any time

➔ Touch the icon displayed during startup (see “5 Structure and description of the Setup menu” on page 5-1)

➔ The SETUP menu also contains an ONLINE help function (touch the Help icon)

4.2 Customising the start screen

The title screen is displayed for a few seconds, immediately after the panel is switched on with ON. The greeting and welcome screen can be defined under ➔ System ➔ Start screen (see “5.4.3 Settings” on page 5-7)



= Animated icon for “Please wait, data loading”

User-defined ➔ System ➔ Start screen: “5.4.3 Settings” on page 5-7

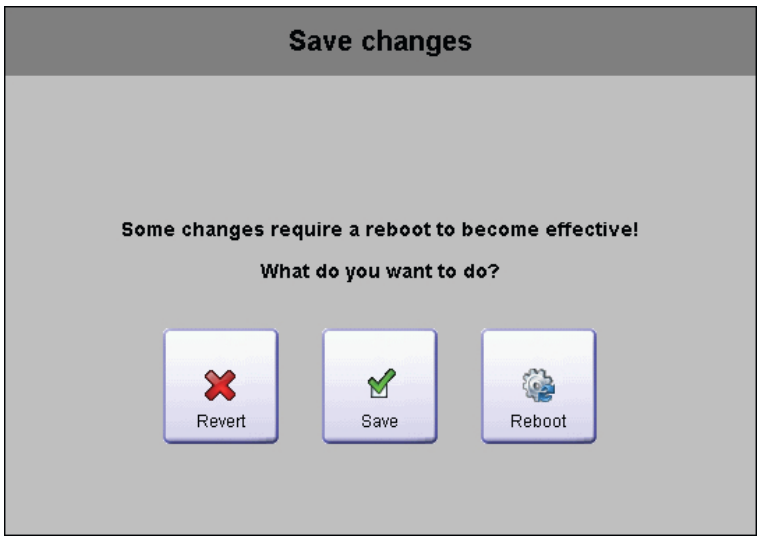
4.3 Changing the password

MB panels of the PCD7.D4xxxx series are supplied without a password on the Setup menu.

If, however, access to the Setup menu is subsequently restricted with a password, the correct password must be entered, and then confirmed with OK.

➔ For information on entering passwords, see “5.7 Password” on page 5-10

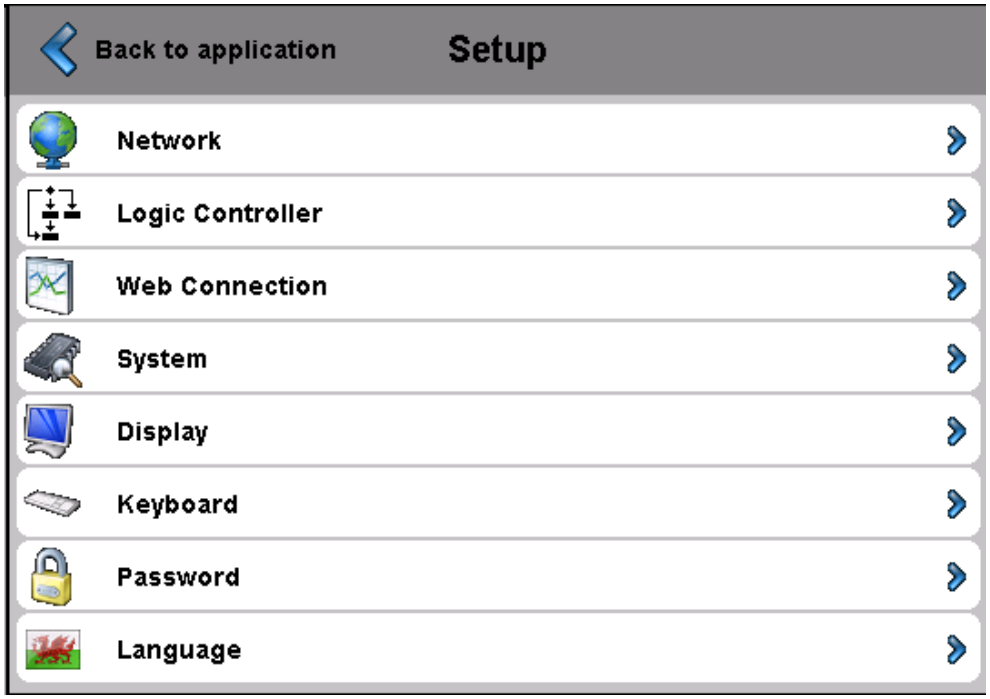
4.4 Saving and exiting



If you have changed one or more parameters, you must confirm if you want to save the changes, to save & reboot, or to reset the new parameters without saving.

5 Structure and description of the Setup menu

The Setup screen is the first screen which is displayed when the Setup menu is accessed.



1	Network	MB panel settings	See section	5.1
2	Logic Controller	Configure the internal logic controller (pWeb panels, only)	See section	5.2
3	Web Connection	Configure the web connection	See section	5.3
4	System	Info/Settings/Special Settings/FW download & Reboot	See section	5.4
5	Display	Display settings	See section	5.5
6	Keyboard	Virtual keyboard	See section	5.6
7	Password	Enter a password	See section	5.7
8	Language	Selection of the language (E, G, F, I and Dutch)	See section	5.8
9	Back to application	Back to application		

5.1 Network

This is where you can configure the network settings for the panel. Depending on the network, the connection may also work without setting a gateway or DNS server. You can exit the menu using the Setup button.

On pWeb panels, the network configuration is generally performed using the PG5 device configurator. If the Device Configuration is updated via PG5, the data set in Setup is overwritten. If you want this data to be carried over to the PG5, the configuration requires the configuration file to be uploaded into the PG5 project.

5.1.1 DCHP On

If DCHP is off, an IP must be set by the user. Otherwise all the necessary settings are acquired by the DCHP server.

5.1.2 TCP/IP address

IP address of the panel.

5.1.3 Subnet Mask

Subnet mask of the network on which the panel is located.

5.1.4 Default Gateway

IP of the standard gateway.

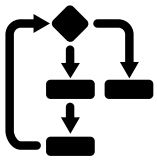
5.1.5 Primary DNS Server

IP of the primary DNS server.

5.1.6 Secondary DNS Server

IP of the secondary DNS server.

5.2 Logic Controller (pWeb panels, only)



Settings of the programmable logic controller in pWeb panels. The settings configured here can also be made in the PG5 Device configurator.

If the Device Configuration is updated via PG5, the data set in Setup is overwritten. If you want this data to be carried over to the PG5, the configuration requires the configuration file to be uploaded into the PG5 project.

5.2.1 Program Name

Displays the name of the loaded PG5 project.

5.2.2 Status: RUN or HALT

Displays the status of the logic controller.

5.2.3 S-Bus

Configuration of the S-Bus of the internal logic controller.

➔ **S-Bus Station**

S-Bus station of the logic controller

➔ **Serial**

Settings for the serial S-Bus connection

- **Active**
  Activates the serial connection
- **PGU**
  When PGU is activated, the panel can be programmed via the serial interface
- **Port**
  For setting the S-Bus port
- **Mode**
  Data or parity
- **Baud reate**
  Speed of the S-Bus
- **TS Delay**
  Sets a transmission delay. Setting 0 causes the default values to be used
- **TN Delay**
  Sets a transmission delay. Setting 0 causes the default values to be used

➔ Serial Master Gateway

Settings for the master gateways

- **Active**
  Activates or deactivates the master gateway
- **Port**
  Port of the master gateways
- **Mode**
  Data or parity mode
- **Baud rate**
  Sets the baud speed of the serial S-Bus
- **Start address**
  First S-Bus station on gateway
- **End address**
  Last S-Bus station on gateway
- **Speed**
  Speed of connection

➔ IP

For setting the IP address

- **Active**
  Activates S-Bus via IP
- **PGU**
  If PGU is activated, the panel can be programmed via this interface.
- **Port**
  Port of the IP connection

➔ IP Master Gateway

- **Active**
  For setting the master gateway
- **Timeout**
  Timeout for a expected response which should be received (Standard ➔ 0)
- **Start address**
  First S-Bus station on gateway
- **End address**
  Last S-Bus station on gateway

5.3 Web Connection

This is where you can set the data for the device from which the website is to be loaded and displayed. On programmable pWeb panels, this is usually the internal controller, and so the Local Host IP Address 127.0.0.1 must be set.

5.3.1 Connection

Name of the connection.

5.3.2 Type (no selection for pWeb)

Local	Only for SVGA MB panel No connection with any PCD Connection is made with the local IP address 127.0.0.1
HTTP Direct	Direct connection (Ethernet, only)

5.3.3 Start page

Name of the start page for this connection.

5.3.4 Remote Host IP

IP address of the connected PCD.

5.3.5 Remote Port

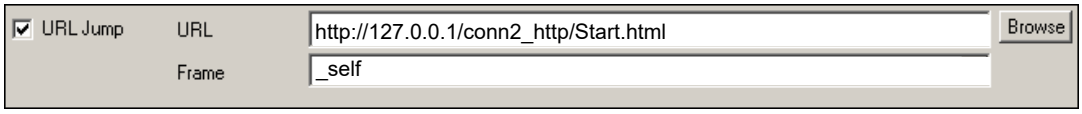
Remote port (default: 80).

5.3.6 Connection List

We advise you to establish one or more connections (up to x16) from the “List of Connections”. Edit the connection or connections and select the connection which you would like to use for your project. Each connection can be edited at any time.

The names for the connections are required as the URL jump target in the Web Editor:

Examples: the connection in the list is called conn2_http, and the start page of the project Start.html



5.4 System

5.4.1 Production data

Display of the most important production data, such as serial number and ASN.

➔ **ASN**
SBC product number (order number)

➔ **Serial number**
Serial number of the device

➔ **MAC Address**
MAC address of the device

➔ **HW Version**
Hardware version of the device

➔ **Production Date**
Month in which the device was produced

➔ **Display Type**
Type of display (internal designation)

➔ **HW LCD Rotation**
Rotation of the display

5.4.2 Info

System info, such as Firmware Version, Booter Version, etc.

➔ **Firmware Version**
Firmware version currently installed on the panel

➔ **Booter Version**
Booter version currently installed on the panel

➔ **M1 Expansion Info**
Indicates if an M1 memory expansion is present (or a F1xxS module on the pWeb panel)

➔ **Video Cache Permanent**
Info: permanent video cache used

➔ **Erasable Video Cache**
Info: cache is used for images. Dependent upon the size and number of gif files in the cache

5.4.3 Settings

General settings for the panel.

➔ **Buzzer**

Buzzer which sounds when buttons are operated or certain actions are performed

- **Buzzer On/Off**
  Buzzer signal when buttons are operated ON / OFF
- **Buzzer frequency**
  Pitch of the buzzer

➔ **File Search Order**

Local / remote files

- **No local file search**
  “No local file search” means files (teq, .gif, etc.) are not searched for on the local server of the MB panel.
- **Local before remote**
  “Local before remote” means files (.teq,.gif, etc.) are searched for first on the local server, before the PCD server is searched. Files are searched for first in INTFLASH/Webpages
- **Remote before local**
  “Remote before local” means file (.teq,.gif, etc.) are searched for on the remote server, before the local server on the MB panel is searched.

➔ **Start Delay [s]**

Start delay for restart (min. 1 sec., max. 15 sec.)

➔ **Start screen**

Enter the greeting & modify the welcome screen

- **Startup text**
  Freely-definable greeting (max. 64 characters)
- **X-position of the text**
  Value between 0 and 639
- **Y-position of the text**
  Value between 0 and 479
- **Name of the graphic file**
  gif graphic file: INTFLASH/WEBPAGES/…
- **X-position of the graphic**
  Value between 0 and 639
- **Y-position of the graphic**
  Value between 0 and 479

➔ **File Cache Active**

During normal operation, the file cache should be active.

The file cache can be activated and deactivated. Deactivation is used, for example during project handling, because changes to cached files are trackable.

➔ **Setup Call With Delay**

Activates or deactivates the delay.

5.4.4 Special Settings

Special system settings.

➔ **Reset All Parameters**

This command resets all parameters to the default values.

➔ **Format Intflash**

Extended function with request for confirmation: “Do you really want to format INFLASH?” This command wipes the flash memory and recreates the file system from scratch. After the Formatting OK message, the device returns to the System menu.

➔ **Time**

Real Time Clock (RTC)

- **Time**

  Real Time Clock (RTC): enter time (container: uBT_RtcTime)
- **Date**

  RTC: enter date (container: uBT_RtcDate)
- **Time Server Active**

  Activates/deactivates the time server

➔ **Memory**

Only in problem cases!
Outside of the permissible memory range ➔ Heap 1, 2, 3 and LR.

➔ **Show Runtime Info**

Extended command on the run time

5.4.5 Log

Clicking the button scrolls further through the list. This allows you to check, for example, if typefaces are found. The last screen gives info on error messages.

Access to log.txt via FTP: uBT_FS/LOG.TXT

5.4.6 Restart

Restarts the system.

5.5 Display

5.5.1 Brightness

Can be adjusted in a range between 0 and 20.

5.5.2 Backlight [min]

The touchscreen or buttons are not selected during this period, the backlight is switched off. You can activate it again by touching the screen or a button. Can be adjusted in a range between 0 and 5000.

5.5.3 Rotation

Landscape / Portrait

5.5.4 Calibrate Touchscreen

Carefully, using the stylus

5.6 Keyboard

5.6.1 SIP (Virtual Keyboard)

Activates/deactivates SIP (Soft Input Panel).

Virtual Keyboard

5.6.2 Name of the first keyboard

You can choose from: Alphapad.teq (alphanumeric) or keypad.teq (numeric) as the first keyboard to open.

5.6.3 Width of the Focus (in Pixels)

You can select a value from 0 to 6 pixels. A frame identifies the selected area or edit field. The entry defines the frame width in pixels. At a width of 0, no frame is displayed. This is advisable if you are working only with the touchscreen.

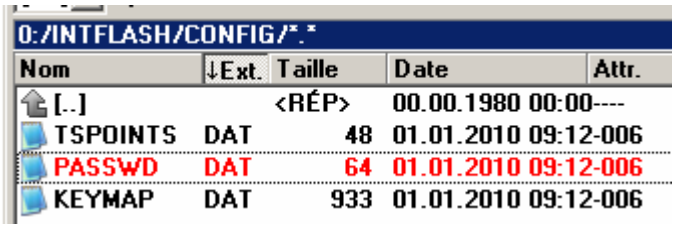
5.7 Password

You can enter an alphabetic, numeric or alphanumeric password (maximum number of characters = 32, incl. spaces). You must confirm the password after entering it.

When you enter a new password, you have to confirm it. If the characters entered in the confirmation field do not match the new password, the old password is retained.

If you would like to disable password protection, press the Enter key and confirm without inputting any characters.

Forgot your password? → Delete the file inflash/config/passwd.dat (FTP connection). This will resolve your problem.



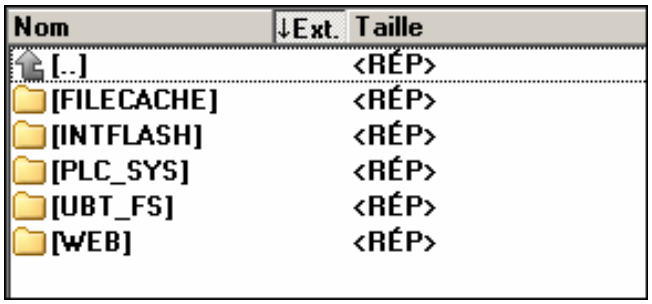
5.8 Language

You can select one of the preconfigured languages for the Setup process.

6 Local files / local server

6.1 Connecting via FTP access

The internal structure can be accessed only via FTP: SBC file system (FTP access: user name and password). ftp:// IP address



FILE CACHE: **Contains the cache memory**

INTFLASH: **Contains:**

- INTFLASH/CONFIG/

  KEYMAP.DAT → Configure keyboard - only MB with buttons (F-keys).

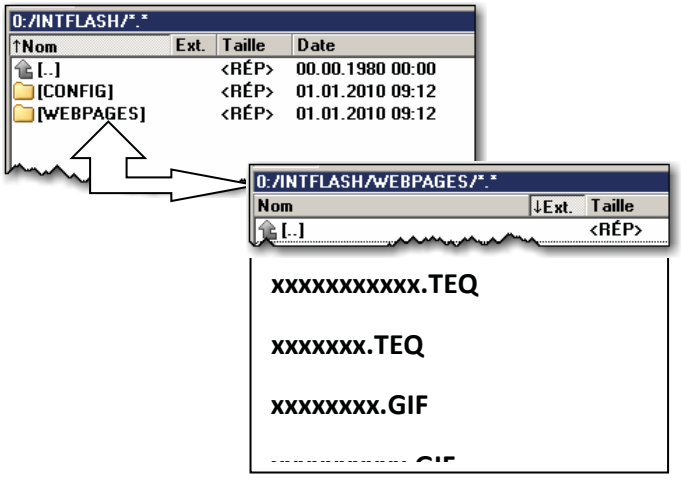
  Does not apply to this MB panel.

  PASSWD.DAT → Only displayed if a password has been creased (Forgot your password? → Delete this file.)

  TSPOINTS.DAT → For internal use
- **INTFLASH/WEBPAGES** → Directory for all project files which you want to save "LOCALLY" (**teq, gif files, etc.**)
- **INFLASH/FONT** → FONT directory must be created by the user. It contains all the special or additional .bft files containing typefaces.
- **INFLASH/TRENDLOGS** → TRENDLOGS directory is created automatically when logs are stored. The .CSV files with the logs are saved to this location automatically (this uses Web Editor MB Macro S2F).
- **PLC_SYS** → Internal use, no access (configuration sett., uBT_containers, etc.)
- **BUBT_FS** → UBT_FS/LOG.TXT List of the startup process + Error info (read, only)
- **WEB** → For internal use.
- **SLOFLASH** → Created automatically when an SD memory card is use with the SD card interface.

6.2 INTFLASH/WEBPAGES

Caution: the directory name "M1_Flash" used in the SBC file system on the current QVGA and VGA MB panel no longer exists on this panel. The directory name of the root level is "INTFLASH"

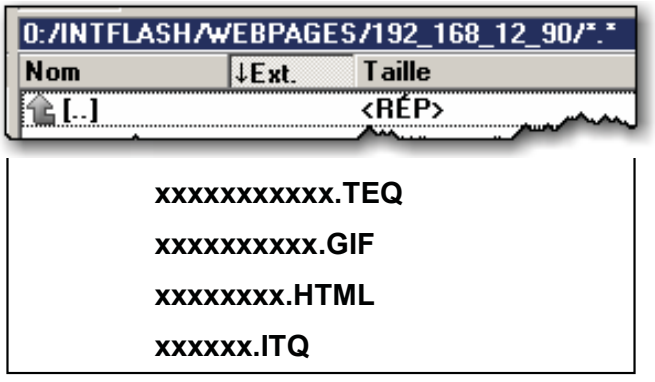


1) Recommended simplest method: Copy all shared files (.teq, .gif, etc.) to INTFLASH/WEBPAGES.
N.B.: If you have copy .teq or .gif files (or even .itq, .csv and .html files) when using a local server, then you must always create at least one .tcr with all the PPO data (Web Builder).

Caution: Switch the Setup option from "No local file search" to "Local file search before remote"!

2) Copy all associated files (.teq + .gif) to the corresponding subdirectories of INTFLASH/WEBPAGES/. Each associated station has its own subdirectory. The names of the subdirectories correspond to the communication method:

HTTP direct communication → IP address of the station with an underscore instead of a dot
e.g. IP address 192.168.12.90 becomes 192_168_12_90)
Copy files to INTFLASH/WEBPAGES/192_168_12_90



!!! → File names: max. 24 ASCII characters without spaces, including file extension.

N.B.: If you have copy .teq or .gif files (or even .itq, .csv and .html files) when using a local server, then you must always create at least one .tcr (Web Builder), as it contains all the PPO data. Do not forget to switch the Setup option from "No local file search" to "Local file search before remote".

7 Updating and special settings

7.1 Firmware update

7.1.1 Additional information on downloading FW

If problems occur while downloading via a USB connection, try the following solution:

Restart the MB panel with the USB cable REMOVED. Press the Download button and the MB panel's Download mode is activated. Next, connect the USB cable to the MB panel and press Start in the FW Download Service Program.

If problems occur while downloading via a USB or ethernet connection, try the following solution:

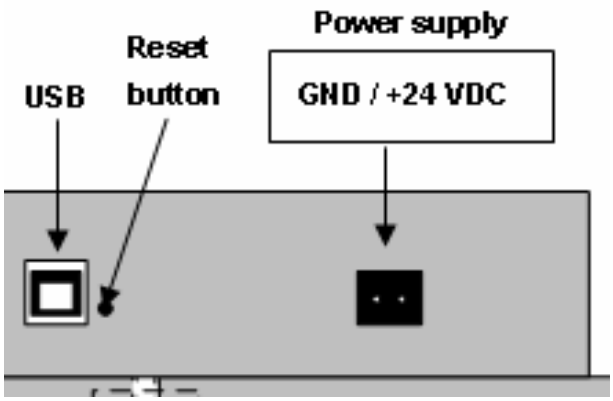
If communications are interrupted during the download process, no notification appears on screen. This is because the FW flash memory is erased at the start of the process.

7.1.2 Safe Firmware Download via USB

The safe method for downloading firmware is always via USB.

a) Switch off the MB panel

b) At the top of the back cover os a hole of 3 mm in diameter. It contains a button. Take a narrow-tipped pen or a small screwdriver (any cylindrical object with a diameter of 3 mm is suitable) and use it to hold down the button for short while. You can see the location of the Reset button in the figure:



c) Switch on the MB panel with ON at the same time. Wait 3…4 sec. until the LED starts to flash.
Then download the FW using the SBC FW Service Program.

CAUTION: The *.blk file type is used for a complete FW file. Use only those files intended for the PCD7.D4xx panel and which were supplied by Saia Burgess Controls.

7.2 Reset / Resetting the device to factory settings

In a number of particular cases, the Reset button can be used to fully reset the MB panel and restore the factory default settings.

When could this function be of use?

If, for example, you have copied the local file required for an FTP connection with the local server into the wrong directory or have unintentionally deleted data which is necessary for displaying the Setup menu. The most common error is the appearance of the message **"uBTerminal not found”**, while the content on screen remains unchanged. In such a case, proceed as follows:

1) A. Switch off the MB panel with OFF
2) Activate the Reset button, at the top of the device’s rear cover, by holding down the button(see "1.2 Definition of the connectors" on page 1-1 and "7.1.2 Safe Firmware Download via USB" on page 7-1.
3) Switch on the MB panel at the same time. After approx. 5 sec., the buzzer is activated with increasing frequency.
4) Once the pitch (or the frequency) of the buzzer has stabilised (after approx. 10 sec.), release the Reset button and wait.
5) You may have to wait to 1 to 2 minutes. During this time, the FW is reconstructing the whole organisation of the memory and recreating all the files which are required for the default settings. Finally, the MB panel reboots automatically, and you will be asked to recalibrate the touchscreen. Once you have calibrated it, the system has been fully restored.

7.3 Backlight

The period for which the backlight remains on can be set manually. This function helps to save energy. If the backlight is deactivated, you will save approx. 3/4 watts, which is a non-negligible value. This will also extend the **service life** of the backlight.

Service life of the backlight

The **normal** service life of the backlight (at 25°C) is defined as approx. 50 Kh. This corresponds to 5 years of continuous use. However, this value is **quickly reduced** (to half or less) if the operating temperature is 10°C or less. It makes sense for the user to take this into account and to adapt the standby period of the backlight accordingly.

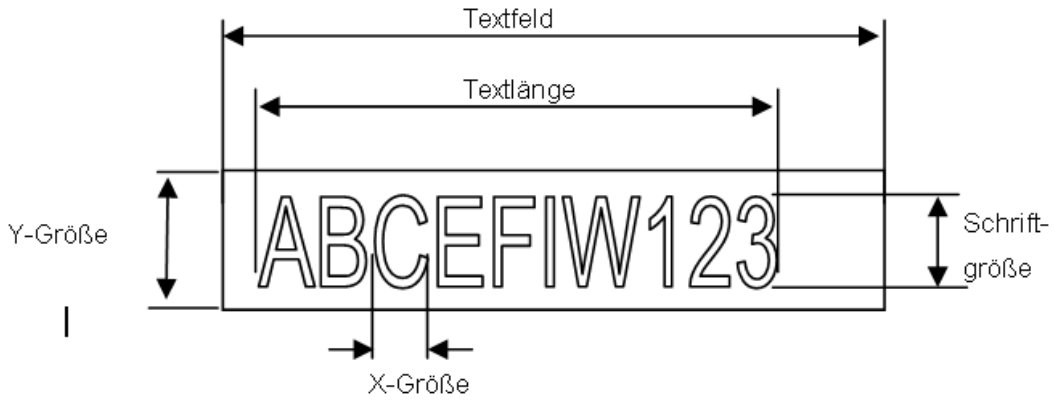
7.4 Typefaces supported by MB panel PCD7.D4xx

Default fonts available for the VGA MB panel

	FONT SIZE						
Fonts and formats	10	12	14	16	20	24	36
Arial	×	×		×	×	×	×
Arial Bold			×		×	×	×
Courier New		×		×	×		
Courier New Bold			×		×		
Tahoma		×		×	×	×	
Tahoma Bold			×		×	×	

Calculating the given amount of play for:

Single text field, multi-line text field, edit field for text field, and button with text.



Definitions:

Font size: Character size (font size in pixels)

Y-dimension: Size of the graphical symbol (in pixels)

X-dimension: Width of a character

Text length: Length of a single-line piece of text.

Text field: Length of the painter

General recommendations for **text fields** (you can find info in the online help for the first version of Web Editor)

We recommend using text fields exceeding the size displayed in the Editor by up to 20%. To determine the text field length, you can also consult the following table of the min. and max. X-dimension.

General recommendations for the **Y-dimension** in proportion to the font size and format

Basic rule: The text should be INSIDE the contours.

For buttons and edit fields, a shadow of 2 pixels is added (to the **inside** of the button contours and to the **outside** of the edit fields).

If the text is too large for the edit field, it is overlaid by the border and the 3D shadow.

The following borders must be planned for:

- Single text fields and such with multiple lines: 2 × border width + 1
- Buttons: 2 × border width + 5
- Edit fields 2 × border width + 5

	Font size	y Size	min x Size	max x Size
Arial	36	41	7	36
Arial	24	28	7	24
Arial	20	23	6	20
Arial	16	19	3	16
Arial	12	15	3	12
Arial	10	12	3	10
Arial Bold	36	41	9	35
Arial Bold	24	28	7	23
Arial Bold	20	23	6	20
Arial Bold	14	16	4	15
CourierNew	20	23	12	12
CourierNew	16	19	10	10
CourierNew	12	14	7	7
CourierNew	10	12	6	6
CourierNew Bold	20	23	12	12
CourierNew Bold	14	17	8	8
Tahoma	24	29	5	24
Tahoma	20	25	4	20
Tahoma	16	20	4	16
Tahoma	12	15	4	12
Tahoma	10	13	3	10
Tahoma Bold	24	29	7	29
Tahoma Bold	20	25	6	24
Tahoma Bold	14	17	4	17

7.5 Special Unicode fonts

7.5.1 General information

The user can add additional fonts, for example, which are required for some languages or special fonts/formats/sizes, which are not provided for by default on the MB panel.

Such languages include: Russian, Greek, Chinese, Japanese, Korean.

Such fonts include: Comic sans MS, Charleworth, Book Antica, Century, Trebuchet, Verdana.

Different sizes, such as 10,12,14, etc., or formats such as plain (or normal), bold, etc., can be used on all these fonts.

Fonts and Unicode fonts: http://www.sbc-support.ch ➔ Product Info ➔ HMI ➔ Web-Panel PCD7.D4xxx ➔ Additional information for Sales Companies (restricted Area).

Files containing typefaces for specific languages or fonts/formats/sizes not appearing in the list can also be installed on an MB panel. If you want to do so, please contact SBC Support.

To ensure that all characters are supported, we recommended using the Arial typeface. This is particularly the case for languages with a large number of characters, such as Chinese.

This means using Unicode files with typefaces (.bft) generated and made available by Saia Burgess Controls. The firmware searches the following locations for typefaces:

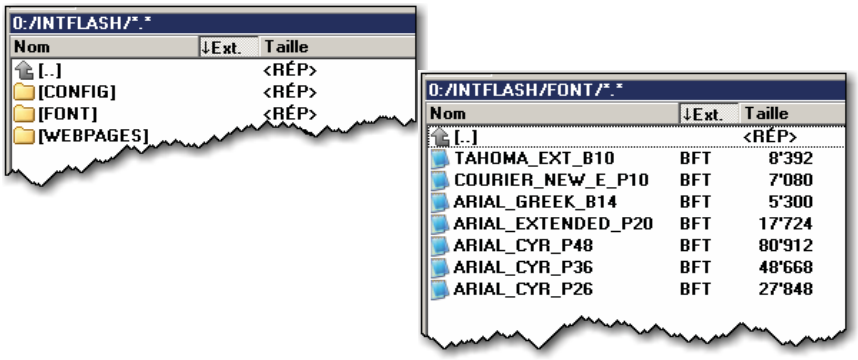
INTFLASH/FONT

A file with typefaces contains the data for a continuous string of characters. If, for example, Greek and Cyrillic are required, two files must be loaded: one with the Greek alphabet and another containing the Cyrillic characters.

The size of such a font file must not exceed 128 KBytes.

(Chinese requires many files with different font sizes to cover all the characters.)

If a font file is found, it is registered. A maximum of 65 different files can be registered. When a character is required, the front file is opened and the data for the characters is called up. The data is intended for subsequent use.



➔ Name of the font files: max. 24 ASCII characters without spaces (including file extension)

➔ To install font files: copy the files to the FTP server of the MB panel via an FTP connection.

➔ Chinese fonts: 12 is the smallest legible font size.

7

7.5.2 Multi-languages: Example

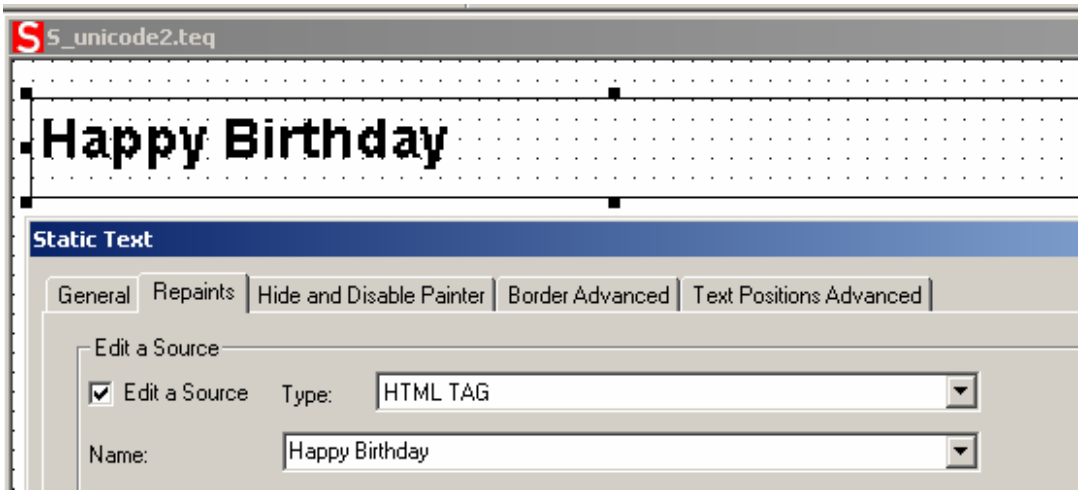
➔ Switch to a different language with the button (set the variable with the mouse button held down).

Examples: Translate "Happy Birthday" to Czech using the "HTML TAG" type.

The Czech requires an expansion of the European characters, which can be downloaded by logging into the SBC Support site.

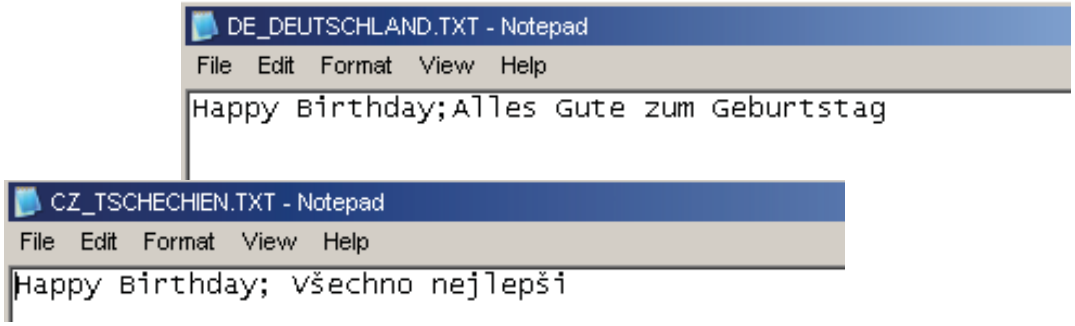
Procedure:

- The Unicode font .bft file(s) with expanded European character set must be copied into INTFLASH /FONT (see section "6.1 Connecting via FTP access" on page 6-1).
- Web Editor: create the static text "Happy Birthday" and select "HTML TAG" as the source type.
- Under the "Text Positions Advanced" tab for position settings: if you are using exotic characters (such as Katakana, Chinese, etc.), we recommend sticking with the default settings for the text position (not centred or justified).
- In some typefaces, it is not possible to represent all Unicode characters. We recommend using the "Arial Unicode MS" or "MS Sans Serif" typefaces, as they are well suited to use with Unicode characters.



Do not edit the CSV file in the S-Web Editor directly, because the text window of the S-Web Editor will save the CSV file in ASCII mode. You could, for example, use Notepad to edit your CSV files (or another text editor, which allows you to save the files in Unicode format). In the Notepad "Save As" dialog box, you can select the "Unicode" entry in the dropdown menu under "Encoding". In MS Excel, use the format "Unicode Text".

Once you have saved your CSV files in the Unicode format and selected a typeface in the HMI which can be used to display Unicode characters, then the Unicode strings should be displayed properly. If you want to use Unicode, you do not need to make any further settings in the S-Web Editor.



Web Editor: Create a button with the following action parameters "Actions Set Variables":

The type is the "Container", the name is "@LANGUAGE" and then the Unicode .csv file.

We recommend copying the .csv files into the local server of the MicroBrowser panel, under INTFLASH/ Webpages/…

➔ For information on the topic of multilingual displays, see also "Multilingual HMIs" in the online help of the Web Editor.

7.5.3 Analysing incorrect fonts, font sizes or format templates

1 Arial, same format, **keep** size
2 Arial, simple, **keep** size

If the size is not available for Arial:

3 Same typeface, same format, **reduce size to next possible size**
4 Same typeface, simple, **reduce size to next possible size**

If there is no smaller typeset for this typeface:

5 Arial, same format, **reduce size to next possible size**
6 Arial, simple, **reduce size to next possible size**

If there is no smaller typeset for Arial:

7 Arial, same format or simple, **use the smallest available font size**

If you replace a typeset, then this is logged in the log file
(See "5.4.5 Log" on page 5-8).

7.5.4 Web Editor

Unicode character sets are available:

- using the source type "HTML TAG" in the Web Editor and with a .CSV file.
- by entering the text directly into the Web Editor as a string. In this case, no .CSV files are necessary. Do not import any Web Editor projects created using Microsoft Windows using Unicode Character Set A into any other Windows project created using Unicode Character Set B.

7.6 Internal special functions

7.6.1 Container variable for SVGA MB panel

The configuration file UBTERMINAL.TXT is not accessible via the FTP connection, because this file is located in the (write-protected) subdirectory / PLC_SYS/CONFIG/.

Containers allow the application to exchange data with the firmware. All container variables havethe prefix "uBT_". Pay attention to upper/lower case!!!

Config file entry	Container (source HN 10.03.10)	Type	Default	Min value Min length	Max value Max length	Description
R/W	uBT_AlarmFre-quency	Decimal value string	1000	125	8000	Frequency setting for the acoustic alarm (Hz) (based on 125,250,500,1000,2000,4000,8000) Set before using the alarm. A change in frequency while the alarm is sounding will take effect only when the next alarm is called.
No	uBT_AlarmStart	Decimal value string	0	0	30000 = 30 sec.	Define a value to start or stop the pulsed, acoustic alarm. The acoustic alarm can be started by setting an interval time (0 - 30,000 mSec) for the pulsed signal. A 50% pulse/pause ratio is used, i.e. the pulse time is equal to the pause time. Changes made while the alarm is already sounding are ignored. At a setting of 0, however, the alarm is immediately deactivated. **The alarm is stopped immediately by touching the screen.**
R/W	uBT_AlarmVolume	Decimal value string	10	0	20: 100%	Volume of the acoustic alarm (0 - 20). As pulse width modulation is used, this setting has an effect on the per-ceived pitch of the alarm. Set before using the alarm! A change in volume while the alarm is sounding will take effect only when the next alarm is called.
R/W	uBT_AutoRepeat	Boolean value string	0	0	1	Via the Soft Input Panel SIP (on-screen keyboard), use: SIP keyboard: AutoRepeat on (1), off (0)
No	uBT_BackLight	Boolean value string	1	0	1	Read/Write 1, 0 → Remote control for backlight OFF. The backlight is switched OFF if the value was previously ‘1’. When the screen is touched, the backlight is switched back on again immediately. Read/Write 0, 1 → Remote control for backlight ON. The backlight is switched ON if the value was previously ‘0’. There may be a delay when switching off. Remote control via PPO ←→ Container coupling, only. Use on painters for buttons and edit fields is not supported.

Config file entry	Container (source HN 10.03.10)	Type	Default	Min value Min length	Max value Max length	Description
No	uBT_BackLightOn	Boolean value string	1	0	1	Direct operation of the backlight by making an entry in this container (1: On, 0 : Off). Status of the backlight is set to read back. Container is set by activating the backlight by touching the screen and reset after switch off with uBT_BackLightTimeout. Areas of application: remote monitoring and remote control via PPO ←→ Container coupling, local user control right on the terminal via the painter for buttons (mouse button pressed, mouse button released) and locally via the painter for edit fields in the web project.
R/W	uBT_BackLight-Timeout	Decimal value string	15	0	5000	Time (min) until backlight switches off. When the screen is touched or switched on by the container, the backlight is switched on and the countdown begins. If value=0: no time-delayed monitoring of the backlight. In this case, the backlight remains permanently switched on.
Read only	uBT_BooterVersion	ANSI text string	Current version string	0	8	Firmware booter version String read, only
R/W	uBT_BuzzFreq	ANSI text string	1000	125	8000	Frequency settings of the acoustic signal from touching (125,250,500,1000,2000,4000,8000) If using the touch function to define the pitch of the acoustic signal when touching the screen.
R/W	uBT_BuzzOnOff	Boolean value string	1 (On)	0	1	Acoustic signal from touching On (1)/Off (0)
R/W	uBT_BuzzVol	Decimal list string	1	0	20: 100%	Read/write volume of the buzzer (0 - 20). When using the touch function, this defines the volume of the acoustic signal when touching the screen. Using pulse width modulation, this setting changes the perceived pitch of the alarm. Switch off by setting the volume to 0.
Read only	uBT_ConfigType	ANSI text string	Curr. config. type	0	24	Configuration type String read, only
R/W	uBT_DefaultGateway	String IP address	0x00 00 00 00	*	*	Read/write IP address of the gateway on the subnet being used (forced position, overwrites default). * Setting is 0: forced position deactivated. If the setting=0: depending upon the router you are using, it may not be possible to reach external addresses outside of the subnet. If this setting is changes, a restart is necessary. This will mean FTP connections are lost.
No	uBT_DispResolution	ANSI text string	<Screen width> <Screen height> <Color depth>	0	16	Info on resolution String read, only

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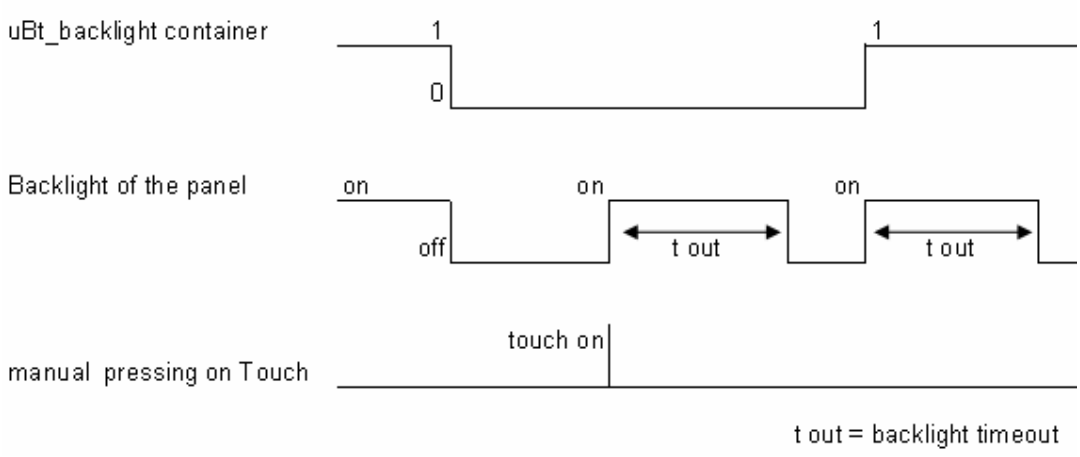
Config file entry	Container (source HN 10.03.10)	Type	Default	Min value Min length	Max value Max length	Description
Yes	uBT_DisplayRotation	UTF8 1) !!! Text string	0° (0x30 C2 B0)	0°	270°	Rotation 0°,90°,180°,270° If a change is made, a restart will be necessary. This will mean FTP connections are lost. !!!! 1) Direct display of UTF8 may not be supported by the FTP client. The screen is displayed rotated, meaning that it may not be fully visible, even with automatic scaling. When the upscaling function is activated, the scaling of the non-rotating screen remains consistent with the rotating screen. Calibration of the rotating screen is the same as on the non-rotating screen. In order to alter the calibration, please return to the non-rotating screen.
R/W	uBT_EnableCache	Boolean value string	1 (activated)	0	1	The file cache is used (1), 0 no file cache for all visualisation files, which are not images. Files are cached for the first time as soon as they are used. Regardless of the local file settings, files are searched for first in the cache memory. The cache memory is wiped upon startup and URL jumps. Image files are decompressed and cached in a separate, always activated video cache. This video cache is wiped upon startup, URL jumps and whenever too much data has been loaded. When this occurs, all necessary files are reloaded and decompressed.
R/W	uBT_EnableSIP	Boolean value string	1 (activated)	0	1	Read/write SIP → Select the Soft Input Panel (virtual keyboard) Write 0 1→ SIP is deactivated. Virtual keyboards are deactivated Write 1 → SIP is activated. Virtual keyboards (alphapad.teq and keypad.teq) are activated.
No	uBT_FlashStatus	Decimal value string	0	0	255	INTFLASH Status 20: Device present, no file system Status 21: Device present, file system OK Status 22: Device present, error during creation of file system Status 23: Device present, creation of file system in progress Status 24: Device present, compression of flash sector in progress Status -1: Unknown error
R/W	uBT_FocusBorder-Width	Decimal value string	2	0	5	When the painter for edit fields and buttons is displayed, a rectangular focus frame indicates that it is activated. This setting is used for the line thickness (in pixels) of the focus frame: 1-5 0: Focus frame is switched off.
R/W	uBT_InactivityPoll-Time	ANSI text string	0	0	5	Setting for touchscreen / keyboard inactivity (1), switched off at 0. To switch to a less frequent touchscreen/keyboard call.

Config file entry	Container (source HN 10.03.10)	Type	Default	Min value Min length	Max value Max length	Description
No	uBT_IntFlashStatus	Decimal value string	0	0	255	Status of the internal flash memory 20: Device present, no file system 21: Device present, file system OK 22: Device present, error during creation of file system 23: Device present, creation of file system in progress 24: Device present, compression of flash sector in progress -1: Unknown error
R/W	uBT_IntroGraphic-Name	ANSI text string	SBCSU Grande.gif	0	20	Intro graphic
R/W	uBT_IntroGraphicX-Pos	Decimal value string	100	0	639	Position of the intro graphic (horizontal position, from the left)
R/W	uBT_IntroGraphicY-Pos	Decimal value string	50	0	479	Position of the intro graphic (vertical position, from the top down)
R/W	uBT_IntroText	ANSI text string	Welcome	0	32	Startup text
R/W	uBT_IntroTextXPos	Decimal value string	350	0	639	Position of the startup text (horizontal position, from the left)
R/W	uBT_IntroTextYPos	Decimal value string	300	0	479	Position of the startup text (vertical position, from the top down)
R/W	uBT_TCPIPAddr	String IP address	0xC0 A8 0C 5A: 192.168 12.90	*	*	Read/write the TCP/IP address of the terminal (own address) within the subnet being used. * If the setting is changed, a restart is required. This will mean FTP connections are lost.
No	uBT_IsTSPresent	Decimal value string	Current value	0	255	Touchscreen was detected (1). If the value is 0, calibration will be skipped during startup.
R/W	uBT_LcdContrast	Decimal value string	10	0	20: 100%	Contrast and brightness setting for the backlight (0:20). Increasing the value means greater brightness.
R/W	uBT_LocalFileSearch	Decimal list string	Local before remote (1)	0	2	Search mode for local file search 0: Do not search local files 1: Search local files before remote files 2: Search remote files before local files
No	uBT_MACAddr	ANSI text string		0	20	Own MAC address (read, only)
No	uBT_MultiKeyValue	ANSI text string	0	0	1	Container is not available External SIP keyboard multikey display (1). At 0: multikey combinations not activated
R/W	uBT_S-BusAddr	Decimal value string	10	0	253	Own S-Bus address

Config file entry	Container (source HN 10.03.10)	Type	Default	Min value Min length	Max value Max length	Description
R/W	uBT_ ScaleMode	Decimal list string	Auto (0)	0	2	Setting for upscaling mode Auto (0): Smaller views are automatically adapted to the size of the terminal screen, one view at a time. QVGA views are enlarged to the full screen size of VGA terminals (2x horizontal and vertical zoom with pixel doubling). VGA (1): Forced position for VGA without upscaling of smaller views. This is why upscaling is switched off on VGA terminals. QVGA (2): Force upscaling with pixel doubling on VGA terminals. The setting takes effect on the next view jump, URL jump, or after a restart.
Read only	uBT_SerialNumber	Hex. or dec.		0	8	Serial number (read, only)
No	uBT_Setup	Text	-	-	-	Enter "show" (pay attention to upper/lowercase). A pop-up window opens on the terminal containing the Setup menu.
R/W	uBT_SubNetMask	String IP address	0xFF FF FF 00	*	*	Read/write subnet mask of the subnet used by the terminal. * If a change is made, a restart will be necessary. This will mean FTP connections are lost.
Read only	uBT_Version	ANSI text string	Current version string	0	32	Firmware version String read, only
R/W	uBT_RtcDate	ANSI text string				The date is obtained from the real time clock on the MB panel. (Real Time Clock (RTC) must be activated in the Setup menu)
R/W	uBT_RtcTime	ANSI text string				The time is obtained from the real time clock on the MB panel. (Real Time Clock (RTC) must be activated in the Setup menu)

*: In general, IPv4 private addresses are used. The default settings are:
- 1 x A class with subnet mask 10.x.x.x and mask 255.0.0.0 – sections can also be used.
- 16 x B class with subnet mask 172.16.x.x to 172.31.x.x and mask 255.255.0.0 – sections or combinations can also be used.
- Or 256 x C class with subnet mask 192.168.0.x to 192.168.255.x and mask 255.255.255.0 - combinations can also be used.

7.6.2 uBT_BackLight Containerdiagramm



7.6.3 Additional uBTerminal container for "Save logs to File" function

Name of the container	Default	Meaning	Access
uBT_TrendPath		Dynamically chained file path	Read only
uBT_TrendDevice	INFLASH:	Power-saving device	Read only
uBT_TrendDir	WEBPAGES/TRENDLOGS	Subdirectory for storing all trends	Read
uBT_TrendSDFlash	0	0: INTFLASH (SVGA) 1: SL0FLASH* (*not on this MB panel)	Read/Write
uBT_TrendPrefix	TR	File name prefix, max. 5 characters	Read/Write
uBT_TrendSave		Last-saved file	Read only
uBT_TrendLoad		File currently loaded	Read/Write
uBT_TrendSelect	Last file in the directory	File currently selected. When saving a trend, the value is set with the saved file name.	Read/Write
uBT_TrendOldest	Change to the uBT_TrendSelect container. Used for button actions.	Select oldest file	Write only
uBT_TrendNewest		Select newest file	Write only
uBT_TrendPrev		Select previous file	Write only
uBT_TrendNext		Select next file	Write only
uBT_TrendDelAll	Use for button actions.	Delete all files in the directory	Write only
uBT_TrendDelSel		Delete currently selected file	Write only
uBT_TrendDelLast		Delete last-saved file	Write only
uBT_TrendDelOld		Delete all files which are older than the selected file.	Write only

➔ Based on the example of the online minimum S2F macros for the MB panel "**MB_OnlineTrendMinimal_5_13_01.esm**"
See "9.8 Trend macros for MB panels with "save logs to files"" on page 9-5

7.7 List of message box messages

Messages	Comments
Out of memory in Ramdisk	Can be displayed if a file (generally a .gif) is too large. VGA MB panel: < 256 Kb (see also section "9.6 Expanded error messages for the SVGA panel" on page 9-5)
Language	
Failed to parse .csv	No memory available for parsing a .csv file
LR: out of memory! Or out of memory for language resource	No memory available for parsing a .csv file Or the total amount of memory needed is > 512 kbytes (see also section "9.6 Expanded error messages for the SVGA panel" on page 9-5)
Failed to initialize LR heap!	The memory for the .csv file is initialised each time a file is parsed. This message means that the process has failed.
Memory	
Failed to initialize heap 1	The painter objects and the list of current PPOs are assigned to heap 1. This heap is deleted after each .teq jump.
Out of memory in heap 1	Total amount of memory used by the painters is > 1536 Kbytes (see also section "9.6 Expanded error messages for the SVGA panel" on page 9-5)
Failed to initialize heap 2	Container variable, HTML tags, TCR table + Source & object display of online trends are stored in heap 2. This heap is initialised at each URL jump.
Out of memory in heap 2	The total amount of memory used by HTML tags and container variables is > 1024 Kbytes. The most likely cause of this message is there being too many active offline trends. ➔ Can be displayed for online and offline trends.
Out of memory in heap 3	➔ Usually displayed due to there being too many data points. Offline trend, alarm events, HD log and online trend are stored in heap 3. Total amount of memory used by offline trend data and HD log is > 1280 kbytes (see also section "9.8 Trend macros for MB panels with "save logs to files"" on page 9-5) Before using trends, you must first calculate the amount of memory required. **Online trends:** If update period of process points (Web Editor parameters) = < 1000 milliseconds ➔ (storage time in sec.) × (total number of trends) × (size of a data point ➔ 28 Bytes) Example: 4200 sec. × 4 trends × 28 Bytes = 470 Kbytes **Offline trends:** Macros of offline trends (with or without "save to file" function). Avoid freezing the trend lines, by pressing the Clear button in the macro upon receiving the message "out of memory in heap 3", in order to assign space in the memory to heap 3. You can then load the next files.
Object	
Maximum number of object reached!	Maximum number of objects (e.g. buttons, rectangles, etc.) in a .teq view was exceeded. Maximum objects = 512 ➔Siehe "9.3 Definition of an object in the Web Editor" on page 9-2
PPO	
OrderValues on remote host has failed!	Request for the list of current PPOs from the remote host has failed.
ReadFile on remote host has failed!	Regular polling of the PPO has failed.
Communication	
buffer OVF in Spider_fileReadln()!	When loading the file, more data was received that the buffer is able to accept.
Range is null!	Range of a bar diagram was incorrectly calculated.
TCR	
Value out of range!	The min/max limits of a TCR value were exceeded.
Value out of default range!	Invalid value for a TCR, e.g. "aa" for time.
TEQ	
Reading UTF string failed	The end of the file was probably reached while a string was being read.
Painter	

8 Handling: precautionary measures

8.1 Glass touchscreen

Since the touchscreen is pressure-resistant, you can perform actions by pushing on the screen with your finger or a stylus. Under no circumstances should you use sharp-tipped pens, which could leave behind lasting damage on the touchscreen.

The pressure required to activate the display is predefined, and cannot be modified. When the touchscreen (or any button on a membrane keypad) is pressed, a short buzzer (button tone) is triggered, as long as the volume is not set to 0.

Never hit the touchscreen with force, as the two touchscreen layers are reinforced by a layer of glass, which could be shattered by doing so.

8.2 Information on the LCDs of the MB panel display

The fluid in the LCD display contains an irritant. Should this fluid come into contact with your skin, rinse the area affected under running water for at least 15 minutes.

Should fluid from the LCD display get into your eyes, rinse out your eyes under running water for at least 15 minutes and seek medical attention.

Features of the LCD display

The colours and brightness of the individual MB panel displays are individual characteristics, and may differ slightly from one display to the next.

8.3 Care

These display terminals have been developed for maintenance-free continuous operation.

Recommendations for cleaning the surface of the MB panel.

Scouring cleaning agents and/or cleaning equipment which could damage or scratch the surface of the MB panel must be avoided!

Apply denatured alcohol to a clean, soft cloth.

Finish by wiping it down with clean water and a clean, soft cloth (recommended).

During cleaning, make sure that no liquids of any kind are allowed to penetrate inside the panel. Resistant to chemical substances according to DIN42115.

9 General recommendations for the Web Editor

9.1 In the "Project configurations"

➔ Select a standard typeface to be used for most projects!

9.2 In the Web Editor project (general information)

- You are recommended to use text fields, which exceed the size displayed in the Editor by up to 20%. You can find details in section 12.
- IMasterSBC5_xx_xx.jar is not required in order to display a website on the MB panel.
- The .tcr file is the only file which needs to be integrated into the Web Server project (.wsp). All other project files can be copied into the flash memory (PLC or local server of the MB panel) under INFLASH/webpages/.
- Add Unicode fonts ➔ Consult: http://www.sbc-support.com ➔ Product Info ➔ HMI ➔ Web-Panel PCD7.D4xxx ➔ Additional information for Sales Companies (restricted area)
- If the correct typeface is not in the list ➔ please contact PCD Support in Murten, where we would be happy to help.
- The container offset name (container name) must not contain any underscores or @ signs (i.e., not: PDP-ADDRESS+@COFF_containername@, PDP-FORMAT).
- Consider that the suffix for container offset is d for a decimal and k for the format HH:MM
- Use "Online trends macros" with the right timestamp: The time server must be activated in the Setup menu.
- For information on calculating the amount of memory required, see "7.7 List of message box messages" on page 7-16 and "9.5.3 Decompression of Gif files: analysis/calculation" on page 9-4
- Viewing angle: the surface (front panel of the unit) projects a few millimetres over the display. You should therefore leave a frame of 4-5 pixels free (black) around the view.
- PPOs: ➔ Number of objects per page: tested with 1024 objects (1024 objects with 3 flags per object = 3072 flags)
- PPOs: ➔ Number of registers per page: tested with 475 registers
- Maximum number of objects (painters) per page is 512 objects
- Project configuration ➔ Scaleable HTML: define HTMLs, where the HMI is adjusted during the run time by a defined factor. For example, scale your HMI to 200%, without having to modify the TEQ views. MicroBrowser adapts the TEQ views during run time if you enter your new ‘scaleable' HTML file instead of the standard HTML file.
  Examples: Factor 2.000000 means 200% of 640 × 480, i.e. 1280 × 960;
  a factor < 1 (< 100%) is not suitable for applications with the MB panel.

9.3 Definition of an object in the Web Editor

- An object is a static text component, a multiline label, a line, a rectangle, an ellipse, a polygon, an edit field, a button, or a bar chart. Macros contain many objects (an offline trend contains 44 objects).

9.4 Handling

- Touchscreen: The base material of the touchscreen is glass. For this reason, you should therefore not touch the screen with a screwdriver or hard objects, which could damage the screen. Use only a finger or special input stylus for operation.
- In addition: use the right tool for a hardware reset(see "7.2 Reset / Resetting the device to factory settings" on page 7-2. Do not use a paperclip or pin, but rather push the microswitch carefully with a Ø 3 mm drill bit.

9.5 Some rules regarding gif images

- The three timestamps on the MB panel's graphical display are:
  - Repaint video cache
  - Decompression in the video cache in case of URL jump and after startup (almost linear with the number of pixels). See "9.5.3 Decompression of Gif files: analysis/calculation" on page 9-4
  - File transfer time via the link if not local.
- If the total size of the gif files is the same, one large image (max. 512 Kbytes) is better than two smaller ones.
  Recommended max. size 798 × 598 pixels (one pixel remains free all-around).
- It is better to use the same image multiple times in the same project, because it then has to be transferred only once, decompressed and stored in the video cache. Place it, for example, in the teq file for the general background.

9.5.1 Decompression in the video cache at startup using the Gif list

This solution allows gif files to be decompressed in the video cache in the background.

Advantage: You do not have to wait for decompression to finish until the first page can be displayed.

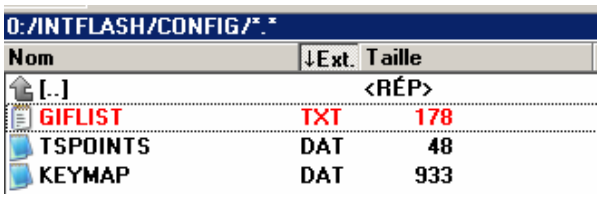
The first page is displayed immediately (as with a project with no gif list) and you do not have to wait until all gif files in the gif list have been decompressed. Decompression continues in the background until the video memory is full (if there are multiple gif files in the gif list). See "9.5.3 Decompression of Gif files: analysis/ calculation" on page 9-4

Operation of:

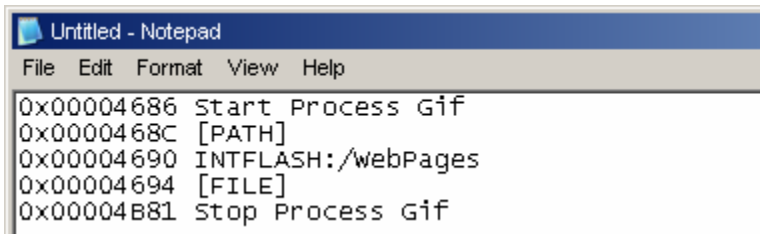
- Open MicrosoftP® Notepad Editor
- Write the following header text for the file:
  - [PATH]
  - INTFLASH:/WebPages
  - [FILE]
- Enter the name of all gif files (as listed in the local directory INTFLASH/WebPages.
- Save the file under the name "GifList.txt".
- Example of a GifList.txt:

```
[PATH]
INTFLASH:/webPages
[FILE]
A_SETTINGS.GIF
A_WATER_IA.GIF
B_ALARM.GIF
B_ALARM_A.GIF
B_BACK.GIF
B_CLIMATE_A.GIF
B_CLIMATE_A_DE.GIF
B_CLIMATE_A_EN.GIF
B_CLIMATE_A_FR.GIF
B_CLIMATE_A_IT.GIF
B_CLIMATE_DE.GIF
B_CLIMATE_EN.GIF
B_CLIMATE_FR.GIF
B_CLIMATE_IA.GIF
B_CLIMATE_IA_DE.GIF
B_CLIMATE_IA_EN.GIF
B_CLIMATE_IA_FR.GIF
B_CLIMATE_IA_IT.GIF
B_CLIMATE_IT.GIF
B_CLOCK.GIF
B_ELECTRO_A.GIF
```

- Copy of the GifList.txt under INTFLASH/Config/



- For checking in LOG.TXT (UBT_FS/LOG.TXT)



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9.5.2 Decompression of Gif files in the video cache at startup using a dummy start screen

➔ Place all the gifs in a teq start screen, which will serve as a placeholder.

This solution allows you to decompress gif files in the video cache before the real first page of the project is displayed.

Advantage: Decompression is already finished when the first page of the project is displayed.

Disadvantage: You have to wait for compression to finish, before the first page is displayed.

Tip: Create a dummy page with:
…a messages such as "Images loading, please wait."
…the View Jump_onTimeout macro to jump to the correct first page of the project

9.5.3 Decompression of Gif files: analysis/calculation

Available for the solutions from sections "9.5.1 Decompression in the video cache at startup using the Gif list" on page 9-3 and "9.5.2 Decompression of Gif files in the video cache at startup using a dummy start screen" on page 9-4.

How do you analyse the number of gifs in the video cache, based on the number of pixels in the gif images? The video cache has a total size (permanent and flushable) of 16 MByte. Of this, 4 to 6 Mbyte are used for the permanent cache. The remaining ~ 10…12 Mbyte are available.

Example calculation of the number of images in the 4 Mbyte permanent video cache

Example 1: The number of pixels in the images is 640 × 480 pixels (the whole screen)
12 000 000 Byte / (640 × 480) × 2 = 19.53125
That means, that the cache can hold a maximum of 19 gif files.

Example 2: The number of pixels in the images is ~ 120 × 120 pixels
12 000 000 Byte / (120 × 120) × 2 = 416⅔
That means, that the cache can hold a maximum of 400 gif files.

Note: The ratio between the size of the gif files and the number of pixels is not a constant.

9.6 Expanded error messages for the SVGA panel

Other: The following messages * can be displayed if the amount of memory required by the gif files, painters, HTML tags, container variables, online /offline trends, HD logs, and language resources (.csv files) is too large. In this case, some parameters must be adjusted by modifying their values directly in the Setup menu (see "5.4.4 Special Settings" on page 5-8)! After making modifications, the panel must be restarted.

Recommendations:

We do not recommend setting the maximum value immediately, but rather first trying a moderate value, as problems could occur and performance is substantially reduced by setting all the memory values to their maximum value.

Error messages *	Default values	Moderate values	Maximum values
■ out of memory in ramdisk	512 kbytes	640 kbytes	1024 kbytes
■ out of memory in heap 1	1536 kbytes	792 kbytes	2048 kbytes
■ out of memory in heap 2	1024 kbytes	2048 kbytes	4096 kbytes
■ out of memory in heap 3	1280 kbytes	2048 kbytes	4096 kbytes
■ out of memory for language resource (or LR: out of memory)	512 kbytes	768 kbytes	1024 kbytes

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9.7 Extended alarm macros

9.8 Trend macros for MB panels with "save logs to files"

The Web Editor macro library does not contain any special trend macros with S2F (save to files) for MicroBrowser panels* . These macros must, for the moment, be downloaded on the Support screen, and will only be integrated in the next version of PG5.

- These trend macros are 100% based on the default trend macros (minimum and complete) with some additional edit fields and buttons (container variables), which allow for display and management functionality, and if necessary for the deletion of csv files.
- The names of the macros are identical to the default macros and have the prefix "MB_”
- The online and offline trend logos can be saved as a "CSV format file” on the MB panel itself, and be played back there. These .CSV files can be read as text via FTP access, and are stored on the MB panel in a subdirectory of INTFLASH/ WEBPAGES/ "TRENDLOGS" (or optionally on the SD memory card).
- The name of the CSV file is created automatically up to a prefix of max. 5 characters. The name contains the full date when the file was created: Day, Month, Day and Hour/Minute/Second.

Examples: TR_20110713081305.CSV (TR_is the prefix).

Web Editor

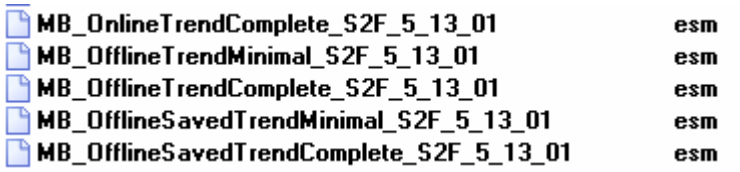
After downloading the macro, create two subdirectories and copy them.

MacroLib/SBCTrendMacro/MB_ trend macros with S2F

MacroLib/ SBCHDLogTrendMacro/MB_ HDlog macros with S2F

➔ MacroLib /SBCTrendMacro/MB_ trend macros with S2F

The applies to "Online Trends", "Offline Trends" (DBs) and "Offline Saved Trends", which allow you to play back all of the stored files.

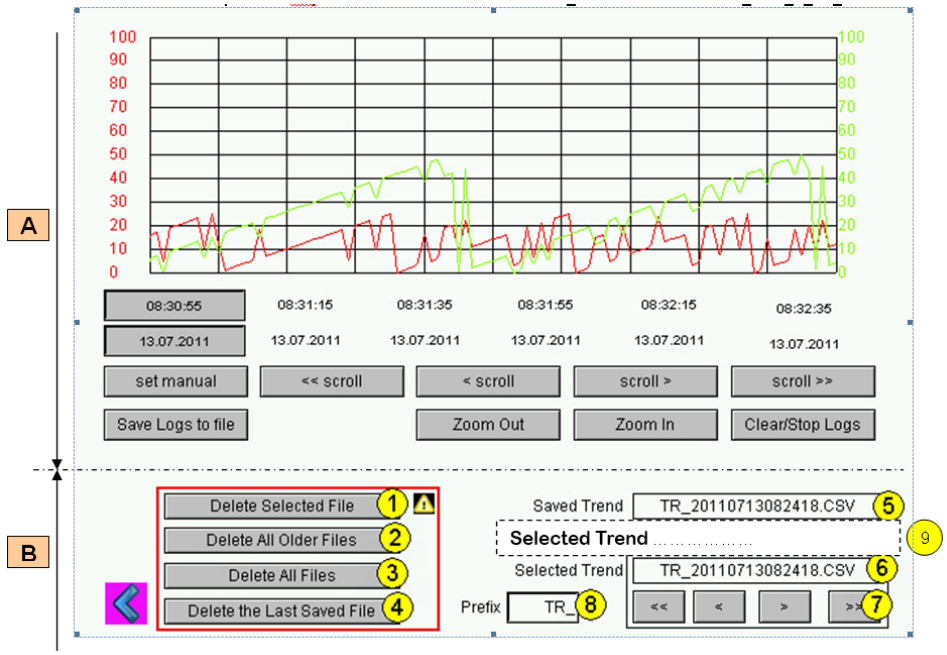


➔ MacroLib/SBCHDLogTrendMacro / MB_ HDlog macros with S2F

This applies to "Remote Offline Saved Trends" (HDlog macros)

Section "7.6.3 Additional uBTerminal container for "Save logs to File" function" on page 7-15 shows a list of the containers, which are required by the individual MB_Trends.

MB panels ➔ Example of teq trend view with "MB_OnlineTrendMinimal_ S2F_5_13_01.esm"



A	Standard Online Trend Minimal macro	
B	Additional buttons and edit fields for: displaying saved file names, list of saved file as well as navigating within the list if .CSV files.	
1)	Delete selected File	Delete the selected file (6).
2)	Delete All Older files	Delete files which are older than the selected file.
3)	Delete All files	Delete all saved files.
4)	Delete the last Saved File	Delete the last saved file.
5)	Saved Trend	Full name of the last saved file.
6)	Selected Trend	Newest file in the directory. Navigate through the list of saved files, using the buttons, and select one of them.
7)	<<<>>>	Navigate through the list of files with the same prefix.
8)	Prefix name	Free characters, which are available as a prefix (max. 5 characters). Do not modify the prefix name between the login processes. Such carelessness can cause problems. The name is used to identify a group of .CSV files.
9)	Loaded Trend	Not in the online trend, but only with the MB_Offline-SavedTrend macros.! Name of the selected and loaded file.

Important information: Depending upon the application, many buttons or edit fields may be unnecessary.

Procedure: Remove the edit fields for macro and delete buttons, which cannot be used, from the group. Regroup the fields.

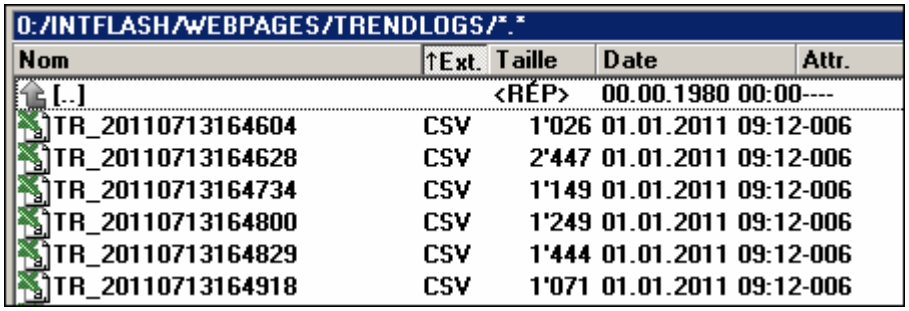
Example: The edit field given the prefix in its name can be removed without impacting the trend function.

You can also reorganise the macro: increase button size. The position of the date and time (X-axis) must not be changed (inverted).

FTP access

By selecting FTP access, you can display and read the list of .CSV files.

In INTFLASH/TRENDLOGS/



A Appendix

A.1 Icons

	In manuals, this symbol refers the reader to further information in this manual or other manuals or technical information documents. As a rule there is no direct link to such documents.
	This symbol warns the reader of the risk to components from electrostatic discharges caused by touch. **Recommendation:** Before coming into contact with electrical components, you should at least touch the Minus of the system (cabinet of PGU connector). It is better to use a grounding wrist strap with its cable permanently attached to the Minus of the system.
	This sign accompanies instructions that must always be followed.
	Explanations beside this sign are valid only for the Saia PCD® Classic series.
	Explanations beside this sign are valid only for the Saia PCD® xx7 series.

A

A.2 Safety information

ATTENTION

These devices must only be installed by a professional electrician, otherwise there is the risk of fire or the risk of an electric shock.

WARNING

Product is not intended to be used in safety critical applications, using it in safety critical applications is unsafe.

WARNING - Safety

The unit is not suitable for the explosion-proof areas and the areas of use excluded in EN 61010 Part 1.

WARNING - Safety

Check compliance with nominal voltage before commissioning the device (see type label). Check that connection cables are free from damage and that, when wiring up the device, they are not connected to voltage.

NOTE

In order to avoid moisture in the device due to condensate build-up, acclimatise the device at room temperature for about half an hour before connecting.

CLEANING

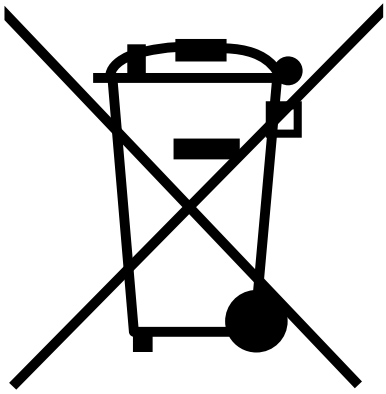
The device can be cleaned in dead state with a dry cloth or cloth soaked in soap solution. Do not use caustic or solvent-containing substances for cleaning.

MAINTENANCE

These devices are maintenance-free. If damaged during transportation or storage, no repairs should be undertaken by the user.

A

A.3 Waste of Electrical and Electronic Equipment (WEEE) disposal



WEEE Directive 2012/19/EC Waste Electrical and Electronic Equipment directive

This symbol on our product shows a crossed-out “wheelie-bin” as required by law regarding the Waste of Electrical and Electronic Equipment (WEEE) disposal. This indicates your responsibility to contribute in protecting the environment by proper disposal of this waste, i.e., not disposing of this product with your other wastes. To know the right disposal mechanism, please check the applicable law.”

A.4 Contact

Saia-Burgess Controls AG
Bahnhofstrasse 18
3280 Murten
Switzerland

Phone..... +41 26 580 30 00
Fax..... +41 26 580 34 99

Email support: ..... support@saia-pcd.com
Supportsite: ..... www.sbc-support.com
SBC site: ..... www.saia-pcd.com
International Represetatives &
SBC Sales Companies: ..... www.saia-pcd.com/contact

Postal address for returns from customers of the Swiss Sales office

Saia-Burgess Controls AG
Service Après-Vente
Bahnhofstrasse 18
3280 Murten
Switzerland

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