



**Wall-mounting-set for Windows CE and
eXP based Web-Panels serie
PCD7.D5xxx TLW and PCD7.D6xxx TLW**

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0.1 Document History

0

Date	Version	Changes	Remarks
EN01	2009-09-17		New edition
EN02	2014-03-19		Change of logo

0.2 Brands and trademarks

Saia PCD® and Saia PG5®
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Technical modifications are based on the current state-of-the-art technology.

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1 Description of the function

The PCD7.D5xxx/6xxx wall-recessed series comprises compact, mechanically robust, fanless industrial PCs. This embedded PC system is supplied both as a box and in combination with high-contrast industrial colour TFT displays. Screen sizes of 10.4“, 12“ and 15“ are available. The analogue resistive touchscreen is the basis for man-machine communication. The combination of a standardised CPU unit and different front units enables it to be perfectly matched to your requirements. Its small dimensions are a further advantage. The use of special processors dispenses with the need for sensitive fan systems.

Hard disks are replaced with Compact Flash cards, so the breakdown rate is very low, in spite of the often harsh industrial environment. The PCD7.D5xxx/6xxx series is available with the Windows®XP Embedded or Windows® CE operating system, allowing you to visualise and control your equipment in a robust and reliable way.

The PCD7.D5xxx/6xxx recessed wall units have been specifically developed for flush mounting in buildings. The wall-recessed box is suitable for a variety of mounting methods including flush-mounting in concrete, plaster, studwork, wood frames, etc.

The modular design with supporting frame allows you to have front plates produced in many different designs and materials.

The devices basically comprise the following components:

1. Wall-recessed housing
2. Device with touchscreen
3. Supporting frame
4. Front plate (brushed aluminum as standard)

CPU unit	CPU:	Onboard AMD Geode™ LX 800/700 (533 MHz) CPU
	System memory:	200-pin DDR SDRAM, 256 MB (PCD7.D5xxx) and 512 MB (PCD7.D6xxx)
	Chipset:	AMD LX series + CS5536
	I/O chipset:	IT8712/FKX + IT8888G
	BIOS:	Award 512 KB FLASH ROM
	Battery:	CR 2032 lithium battery
	SSD:	Internal type II Compact Flash™
	Display chipset:	AMD LX series + TI SN75LVDS83
Interfaces	Serial:	1 x RS-232
	Ethernet:	2 x Realtek RTL8139DL, 10/100 base-TX RJ45 connector
	USB:	2 x USB 2.0
	Mouse and keyboard:	Via mini DIN PS/2 Y cable

1.1 Layout

Wall-recessed housing

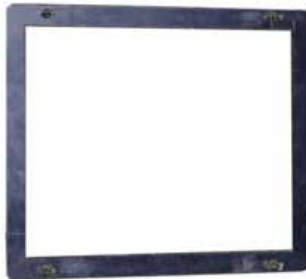


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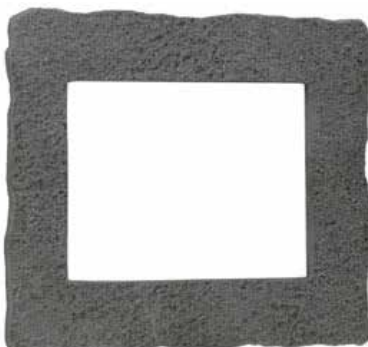
Unit



Basic front frame to fit the front plate to the unit



Front plate



1.2 Wall-recessed housing

Top view

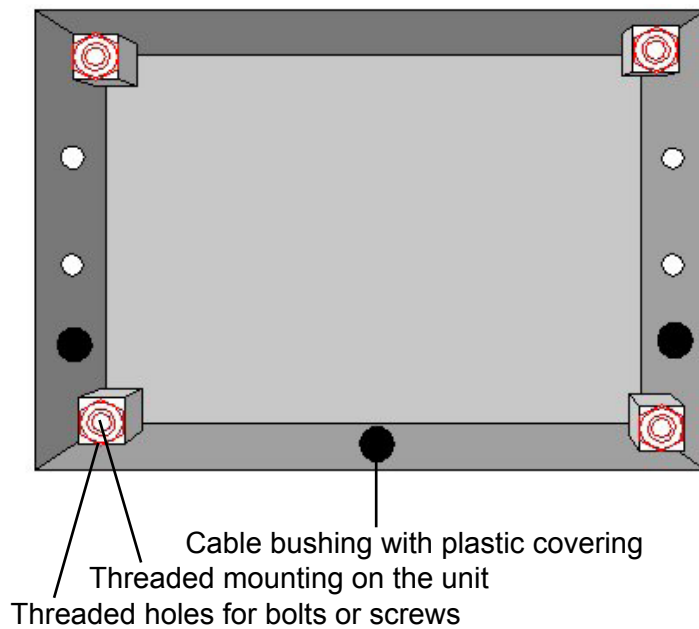
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Bottom



Layout

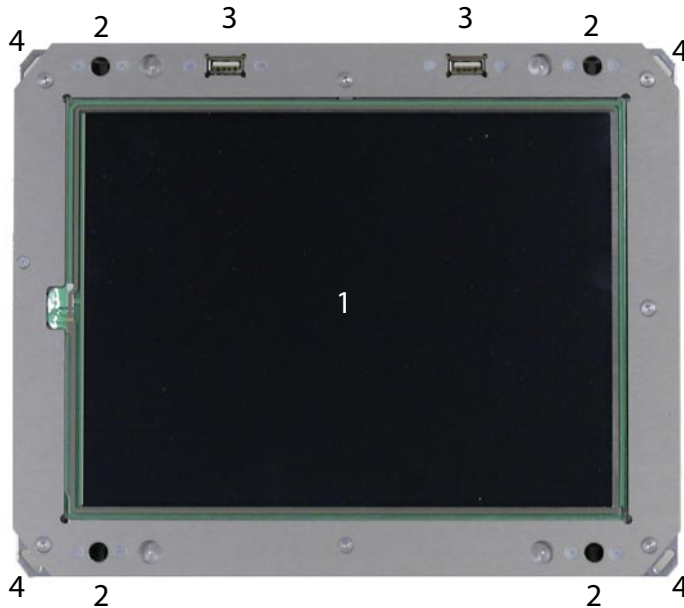


1.3 Device unit

1.3.1 User side

1

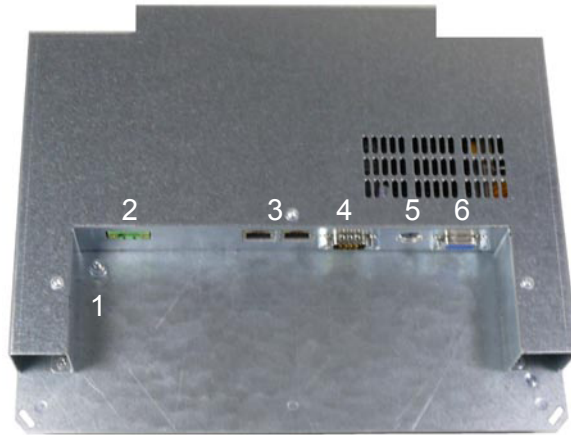
- 1 Display with touchscreen
- 2 Basic front frame
- 3 USB connections
- 4 Holes to screw into wall-recessed housing



1.3.2 Back

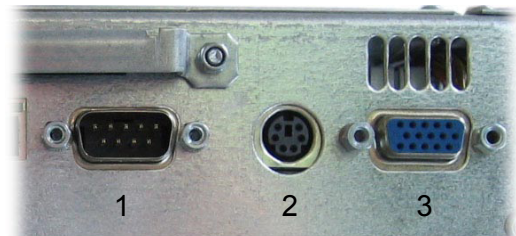
- 1 Earthing screw
- 2 Power supply
- 3 2 x Ethernet
- 4 Serial port
- 5 PS/2 mouse/keyboard
- 6 VGA





1.3.3 COM1 / PS/2 / VGA port

- 1 COM 1 port
- 2 PS/2 mouse/keyboard
- 3 VGA port



PS2 adapter cable for mouse / keyboard



COM 1 is only available when it has been software-enabled. The serial port is configured to the PC XT/AT standard.

The PS/2 mouse and keyboard may only be plugged or removed with the unit switched off. Otherwise these input devices will not be recognised by the operating system.

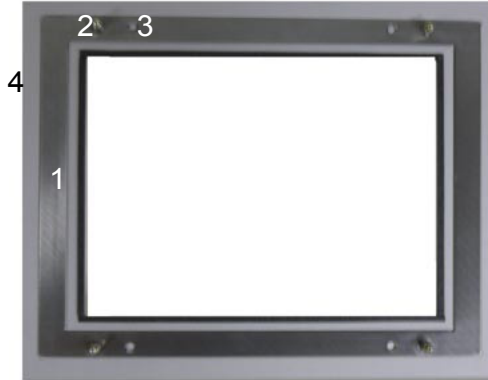
1.4 Basic front frame

The basic front frame is screwed or glued to the front plate and so serves to fix this to the built-in device.



Rear view

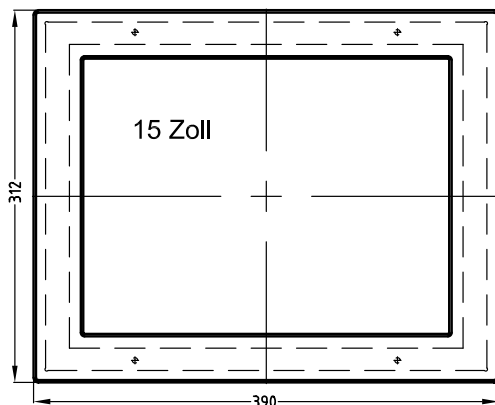
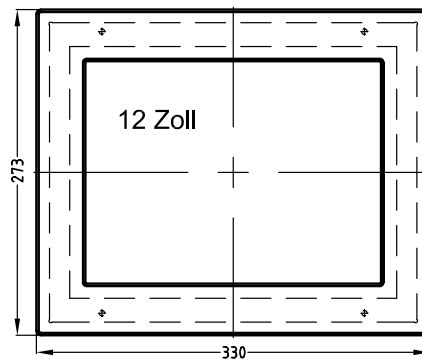
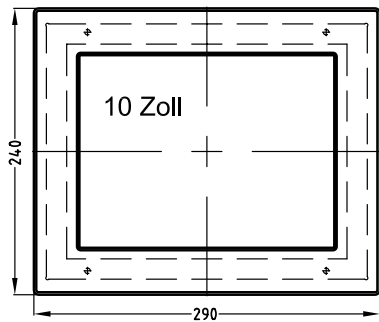
- 1 Basic front frame
- 2 Mounting bolts for the unit
- 3 Holes for attaching the front plate
- 4 Front plate



1.5 Front plate

The standard supporting frame, which can be either screwed or glued to the front plate, allows for the front plate to be custom-designed.

Front dimensions	10"	12"	15"
Recess W x H x D	282 x 232 x 68	322 x 265 x 68	382 x 304 x 68
Standard front external dimensions	290 x 240	330 x 273	390 x 312



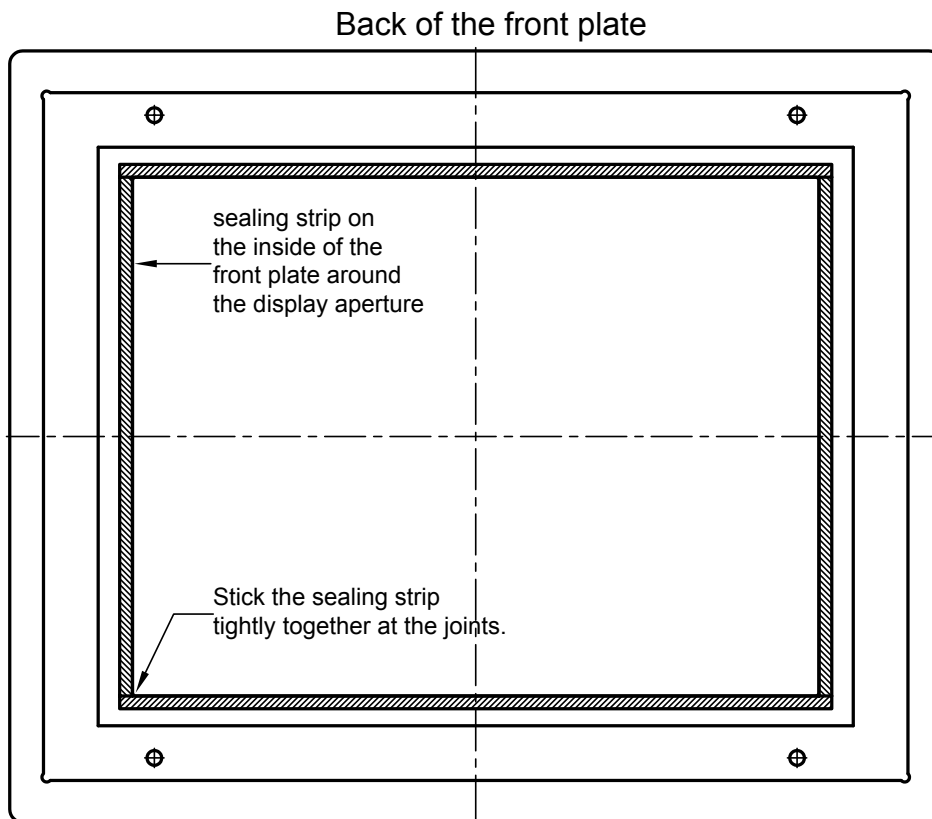
1.6 Sealing the front frame

Seal for the flush-mounted units As a dust seal and to protect small parts, we recommend fitting a sealing strip on the inside of the front plate around the display aperture.

1

The self-adhesive Metamoll 1002/3700, 4 mm wide by 2 mm high, has been found to be very effective.

Before attaching the sealing strip, this area of the back of the front plate should be cleaned with industrial alcohol. Stick the sealing strip tightly together at the joints.



2 Commissioning and support

2.1 Power supply



The web panel must only be used with functional extra-low voltage securely isolated in accordance with EN 60950. The control transformer must comply with EN 60742. The supply voltage must be checked against the type plate. Before commissioning the system, all cable connections should be checked. Ensure that all voltages and signals match the relevant specifications. The 0V power supply has a low-resistance connection to the casing (earth).

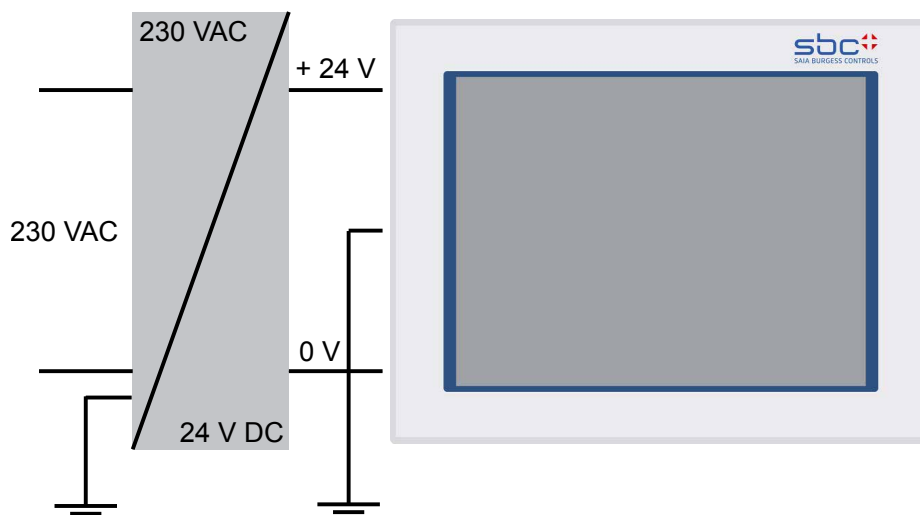
2

- 1 24V power supply 24V
- 2 Earth screw



The power supply is connected via a two-pole plug connector (Phoenix MST BT 2.5/2).

Supply layout



2.2 Earthing diagram

To ensure that electrical faults are dealt with safely, the following points should be observed:

- Connect device and switching cabinet by the shortest route to a central earthing point.
- Ensure lowest impedance possible in connection between device and switching cabinet.
- All data cables connected to the device should use shielded lines.
- The shields should be earthed at both ends. There must be a low-resistance connection between the linked systems. High equalising currents across the shield resulting from potential differences must be avoided.
- Earth connection to use green/yellow cable with min. 4 mm² cross-section.

2.3 Flush mounting

Flush mounting

The device should be installed in an HF shielded metal housing.



Risk of damage to the device. Protection to the front can only be guaranteed if the seal is correctly positioned on the front plate. When installed, a 100 mm space must be kept clear to allow air to circulate around the unit.



The use of Compact Flash cards from different manufacturers may cause faults. Where an internal and an external Compact Flash card are used, they must be from the same manufacturer (same type and same size).

The protective film on the display should only be removed when the unit has been fully mounted (before fitting the front plate). Improper use may cause damage or scratching of the display.

2.4 Switch on device

Start-up

The web panel boots and loads the operating system.

2.5 Service

Tools

You can complete all assembly work with a 2.0 mm hexagonal recess driver and a size 5.5 socket wrench. Additional tools are a small screwdriver and pliers.

2

Preparation

Disconnect the device from the mains.

Danger

Ensure that your electrostatic mat cannot damage the front plate of the web panel.



Open the device

All work on the open unit must be carried out by certified specialists. Within the warranty period, you may only expand the hardware with memory and plug-in cards.

The device contains electronic components that may be destroyed by electrostatic charges. For this reason, you should take precautions even when opening the unit. These can be found in the guidelines for electrostatically sensitive components.



2.5.1 Replacing the internal CFC

The internal CF card can be replaced with the unit dismantled and disconnected from the power. To do this, the screws for the rear cover should be removed.



After removing the cover, the CFC slot is exposed on the top.



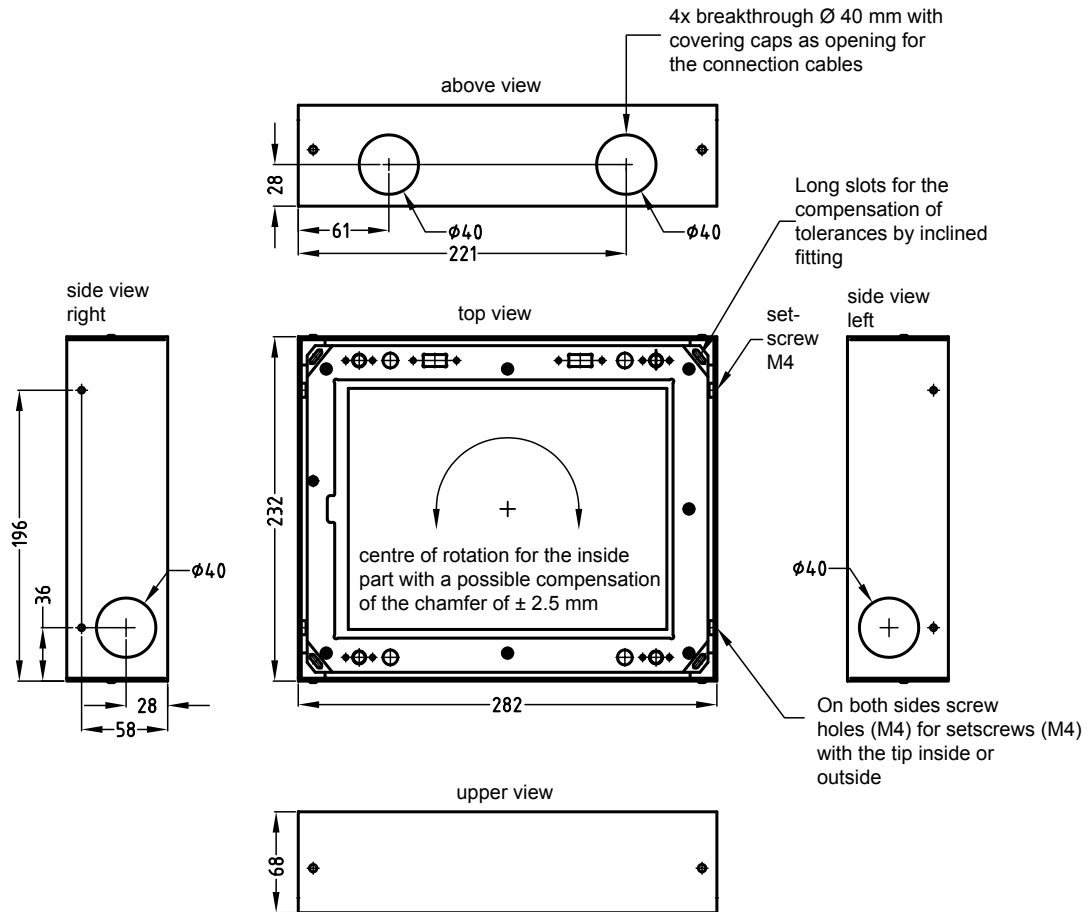
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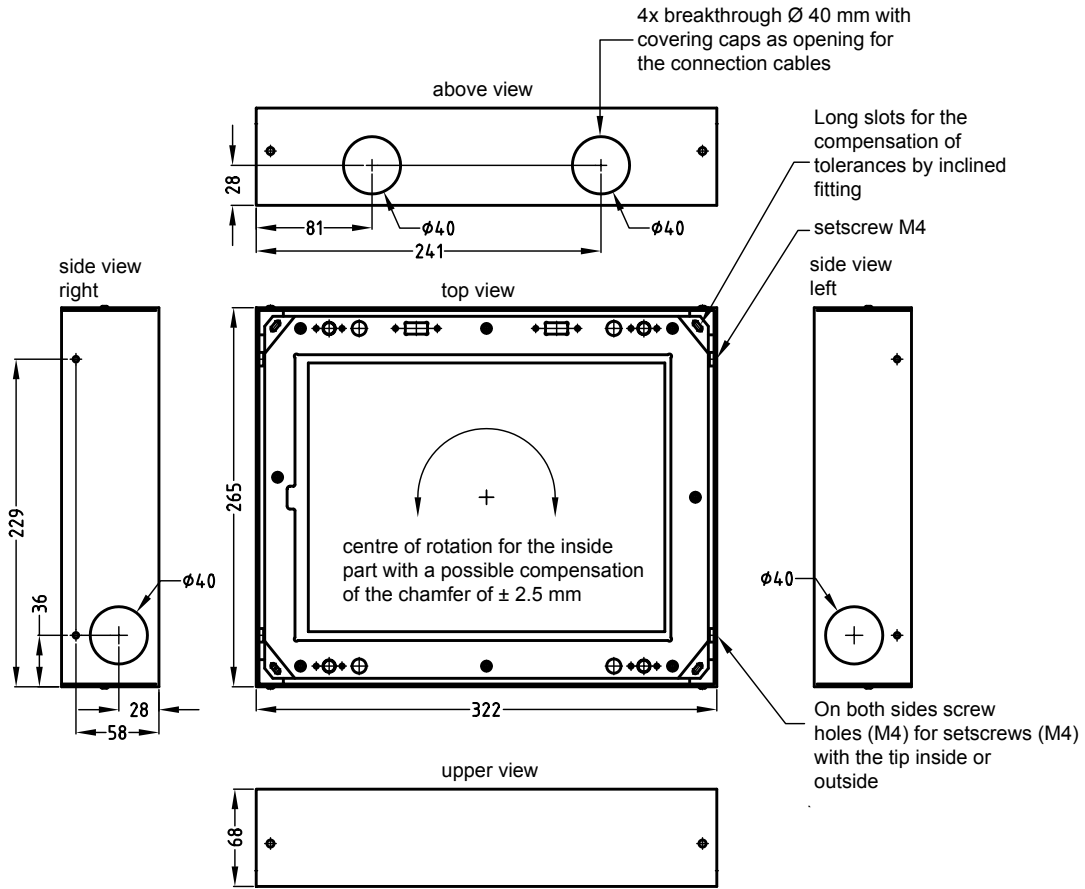
The card can now be replaced. Only tested and approved CF cards should be used. When reassembling the unit, ensure that no cables are trapped.

3 Technical data

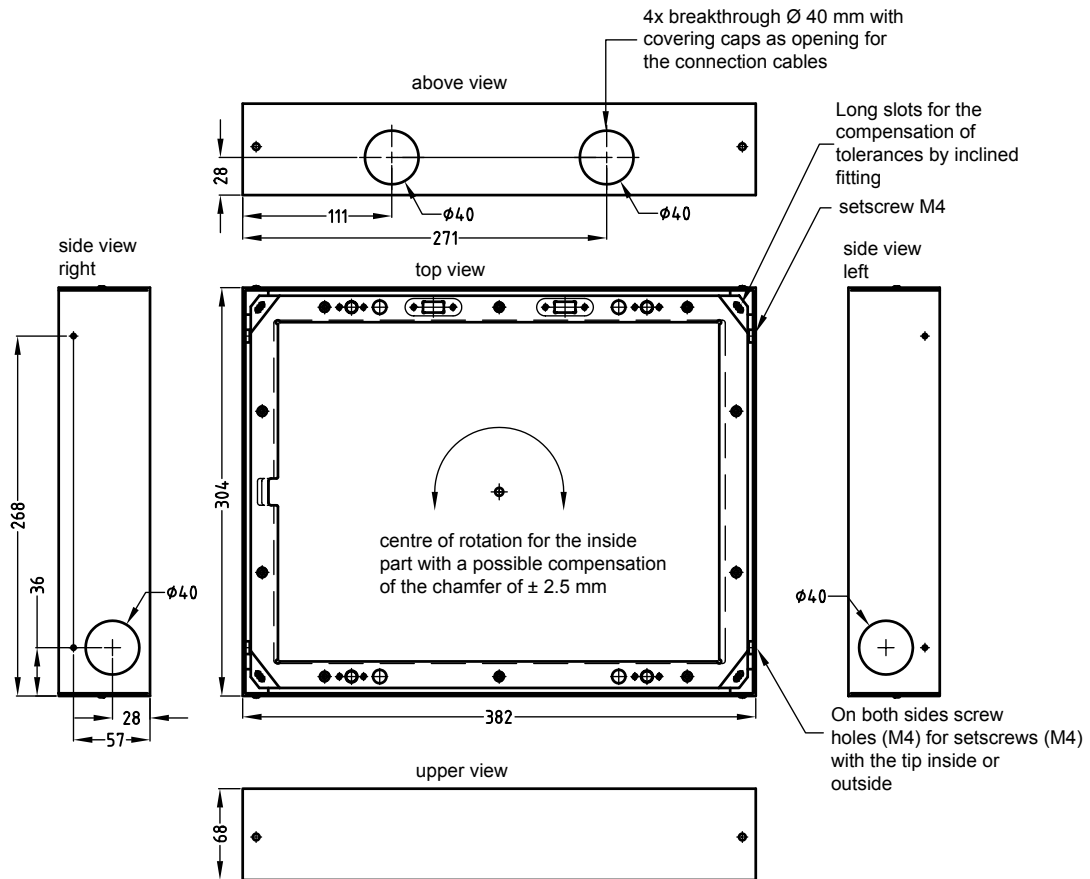
3.1 PCD7.D5100 TLW 10 and PCD7.D6100 TLW 10 external/recess dimensions



3.2 PCD7.D5120 TLW 10 and PCD7.D6120 TLW 10 external/recess dimensions



3.3 PCD7.D5150 TLW 10 and PCD7.D6150 TLW 10 external/recess dimensions



3

3.4 Electrical data






Power supply	Operating voltage:	24 V ± 20%, reverse voltage protected			
	Current consumption:	approx. 0.7 A			
	Fuse:	2.5 A slow-blow			
	Jumper time:	1 ms at 19.2 V (Ub-20%)			
	Display:	1000	1200	1500	
	Resolution:	800 x 600	800 x 600	1024 x 768	
	Brightness in cd/m ² :	350	300	300	
Current consumption	PCD7.D5100 TLW 10:	0.90 A			
	PCD7.D5120 TLW 10:	1.10 A			
	PCD7.D5150 TLW 10:	1.10 A			
	PCD7.D6100 TLW 10:	0.90 A			
	PCD7.D6120 TLW 10:	1.10 A			
	PCD7.D6150 TLW 10:	1.10 A			
Touchscreen	Resistive				
CPU unit	CPU:	Onboard AMD Geode™ LX 800/700 (533 MHz) CPU			
	System memory:	200-pin DDR SDRAM, 256 MB (PCD7.D5xxx) and 512 MB (PCD7.D6xxx)			
	Chipset:	AMD LX series + CS5536			
	I/O chipset:	IT8712/FKX + IT8888G			
	BIOS:	Award 512 KB FLASH ROM			
	Battery:	CR 2032 lithium battery			
	SSD:	Internal type II Compact Flash™			
	Display chipset:	AMD LX series + TI SN75LVDS83			
	Interfaces	Serial:	1 x RS-232		
		Ethernet:	2 x Realtek RTL8139DL, 10/100 base-TX RJ45 connector		
USB:		2 x USB2.0			
Mouse and keyboard:		Via mini DIN PS/2 Y cable			

3.5 Environmental conditions

Ambient temperature	Operation:	0...35° C	
	Storage:	-20...60° C	
Humidity	Operation:	10...75 %, non-condensing	
	Storage:	10...95 %, non-condensing	
Vibration and shock resistance	Sinus:	2 g, 10...500 Hz	
	Shock:	15 g, 11 ms	
	Prolonged:	10 g, 16 ms	
	Free fall:	from 1 m (in packaging), 1 x per axis	
Protection type	Front (without frame):	IP 20	
	Front (with frame):	IP 54	
EMC/CE	Resistance to interference:	EN 61000-6-2	
	Noise emission:	EN 61000-6-4	

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.2 Contact**Saia-Burgess Controls AG**

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