



User Manual

Industrial PCs

OPC7008



the rugged world of IT®

Product Portfolio



Copyright
 © ads-tec GmbH
 Raiffeisenstr.14
 D-70771 Leinfelden-Echterdingen
 Germany

INDEX

ABOUT US.....	5
1 REMARKS	6
1.1 RELEVANT DOCUMENTATION FOR THE DEVICE	6
1.2 EXPLANATION OF USED SYMBOLS	6
1.3 DATA, FIGURES AND MODIFICATION	6
1.4 TRADE MARKS	7
1.5 COPYRIGHTS.....	7
1.6 ENVIRONMENTAL CONDITIONS	8
1.7 STANDARDS.....	9
1.8 EQUIPMENT VERSION	9
1.9 SCOPE OF DELIVERY	9
2 OPERATING INSTRUCTIONS	10
2.1 OPERATING LOCATION.....	10
2.2 DAMAGE DUE TO IMPROPER USE	10
2.3 WARRANTY / REPAIR.....	11
2.4 TREATMENT AND DISPOSAL OF LITHIUM BATTERIES	11
3 INSTALLATION	12
3.1 INSTALLATION OPTION	12
3.2 EXTERNAL DEVICE DIMENSIONS.....	13
3.3 INSTALLATION LAYOUT FOR OPC7008	14
3.4 ORDER OF INSTALLATION	15
4 COMMISSIONING.....	17
4.1 AVAILABLE INTERFACES.....	17
4.2 CABLE INSTALLATION	17
4.3 ORDER OF STEPS DURING COMMISSIONING	18
4.4 CHECK FOR OPERATIONAL READINESS	18
5 OPERATION	19
5.1 FRONT CONTROL KEYS.....	19
5.2 SOFT KEYBOARD	20
5.3 TOUCH SCREEN.....	21
5.4 STATUS INDICATORS	21
6 INTERFACES.....	22
6.1 INTERFACE SETUP.....	22
6.2 24 V DC POWER SUPPLY	22
6.3 USB CONNECTIONS	22
6.4 PS/2 CONNECTOR	23
6.5 NETWORK CONNECTION (RJ45)	23
6.6 SERIAL COM INTERFACE (RS232)	24
6.7 EXTERNAL DRIVES	24
7 DRIVES.....	25

7.1	HARD DRIVE / FLASH SSD	25
8	SOFTWARE & DRIVER INSTALLATION	26
8.1	INSTALLING THE OPERATING SYSTEM	26
8.2	TOUCH SCREEN DRIVER INSTALLATION	27
8.3	SOFT KEYBOARD	27
9	TECHNICAL DETAILS	28
10	SERVICE AND SUPPORT	30
10.1	ADS-TEC SUPPORT	30
10.2	COMPANY ADDRESS	30
11	COMPONENT REPLACEMENT	31
11.1	1. REPLACING THE LITHIUM BATTERY	32
11.2	2. REPLACING THE FLASH MODULES	33
12	CE CONFORMITY DECLARATION	35

ABOUT US

ads-tec GmbH
Raiffeisenstr. 14

D-70771 Leinfelden-Echterdingen
Phone: +49 711 45894-0
Fax: +49 711 45894-990
www.ads-tec.com



As a supplier of high tech equipment, ads-tec supports large enterprises and globally operating groups of companies with state-of-the-art technology, know-how that is always up to date and delivery of comprehensive services in the area of automation, data and system technology.



ads-tec puts entire solutions for automation into practice - from the planning to the commissioning - and has particularly specialised in manipulation and material manipulation technology.



The Data Technology division develops and manufactures PC based solutions and holds a wide range of industrial PCs, thin clients and embedded systems available.



ads-tec has specialised in the adaptation and optimisation of operational systems and develops software tools to complement the offered hardware platforms.

1 REMARKS

1.1 RELEVANT DOCUMENTATION FOR THE DEVICE

The following documents are essential for setting up and operating this device:

USER MANUAL (THIS DOCUMENTATION):

Contains information for installation, commissioning and operating the device along with technical data of the device hardware.

WEBSITE

By using the website www.ads-tec.de, you can download drivers, software, user manuals, leaflets and flyers from the **Download** section on the website.



Note:

We would recommend you make use of our website contents (www.ads-tec.de) in order to ensure an optimised data quality and to be quickly and comprehensively informed of any technical modification.

SERVICE CD:

Contains drivers and user manuals.



Note:

The service CD menu automatically starts if the autostart option for removable media is activated.

The service CD was created by using Adobe Flash. The service CD menu is even available if the Flash Player is not installed.

1.2 EXPLANATION OF USED SYMBOLS



Warning:

The "Warning" symbol refers to activities which could cause personal injury or damage to the hardware and software!



Note:

The "Note" symbol describes conditions which unconditionally have to be observed in order to ensure trouble-free operation. Additionally, hints and advice for the efficient use of this device and for software optimisation are given using this symbol.

1.3 DATA, FIGURES AND MODIFICATION

All texts, data and figures are non-binding. All these materials are subject to modification due to technological advances. Our products comply with all provisions and requirements of the legislation at that point in time when the products leave our company premises. The operator/operating company bears sole responsibility for the compliance with any consecutive new technological requirement and adherence to any consecutive new legislative provision, as well as for the observance of their obligation as the operator/operating company.

1.4 TRADE MARKS

We would like to emphasise that all names of hardware and software products used in this documentation, as well as all brand names of corresponding companies are subject to the general copyrights of the intellectual property in terms of trademarks, brand names and patents.

Windows[®], Windows[®] CE are registered trademarks of Microsoft Corp.

Intel[®], Pentium[®], Atom[™], Core[™]2, are registered trademarks of Intel Corp.

IBM[®], PS/2[®] and VGA[®] are registered trademarks of IBM Corp.

CompactFlash[®] is a registered trademark of the Compact Flash Association.

RITTAL[®] is a registered trademark of Rittal Werk Rudolf Loh GmbH & Co. KG.

Any other national and international trademarks and product names shall hereby also be recognised.

1.5 COPYRIGHTS

This manual including all contained figures is protected by copyright law. Any use of this manual by a third party in non-compliance with the international copyright law shall hereby be prohibited. Any reproduction, translation and electronic or photographic archiving or modification requires previous written agreement by ads-tec GmbH.

In the event of non-compliance, you shall be obliged to compensate for damages.

1.6 ENVIRONMENTAL CONDITIONS

The device may be operated under the following conditions. Failure to observe these specifications will terminate any warranty for this device. Ads-tec cannot be held liable for any damages arising due to improper use and handling.

- Temperature for OPC7008
 In operation -20 ... +55°C*
 (*only with Flash SSD)
 for storage -30 ... +75°C

- Temperature for devices OPC7013/7015
 In operation +5 ... +45°C
 In operation -20 ... +60°C*
 (*valid only with Flash SSD, Automotive HDD or 2,5" Industrial SSD)

 for storage -30 ... +65°C
 for storage -30 ... +75°C*
 (*valid only with Flash SSD, Automotive HDD or 2,5" Industrial SSD)

- Temperature for device OPC7022
 In operation +5 ... +45°C
 for storage -20 ... +60°C

- Humidity:
 In operation 10 ... 85% without condensate
 For storage 10 ... 85% without condensate

- Vibration resistance
 In operation 1 G, 10 ... 500 Hz
 (DIN EN 60068-2-6)

- Shock resistance
 In operation 5 G, with a half-wave of 30 ms duration
 (DIN EN 60068-2-27)

1.7 STANDARDS

This device complies with the requirements and protective aims of the following EC regulations:

- This device meets the test requirements for granting the CE sign according to the European test standards EN 61000-6-4 and EN 61000-6-2.
- This device complies with the test requirements in accordance with EN 60950 (VDE0805, IEC950) "Safety of Information Technology Equipment"
- The device meets the EN 60068-2-6 standard test requirements (sinus excitation).
- The device meets the EN 60068-2-27 standard test requirements (shock resistance test).



Note:

A respective conformity declaration for the authority in charge is available at the manufacturer and may be viewed on request.

All connected components, as well as cable connections must also meet these requirements for compliance with the EMC legislation. For this reason, screened bus and LAN cables including screened connectors must be used and installed according to the instructions in this user manual.

1.8 EQUIPMENT VERSION

The system is available in the following equipment version:

Platform including a Flash SSD:

Platform without any rotating mass storage medium (hard disc, etc.) and with an embedded operating system (Windows CE 6.0 / XP embedded) for stationary use with a standard Ethernet or with radio networking cards installed on moving commissioning / forklift equipment.

1.9 SCOPE OF DELIVERY

Please check that all of the following components are contained in the packaging:

- 1 x device
- With 24V DC devices: 3-pin lead-through plug from Phoenix Contact, 3-pin 3.81 OPC7 with a screw connection (already connected with device socket)
- Service CD

Optional delivery scope

- Operating system

2 OPERATING INSTRUCTIONS

This device contains electrical voltages and extremely sensitive components. User intervention is restricted to plugging in additional cards only. The manufacturer or a service partner authorised by the manufacturer should be consulted if you plan to make further modifications. For this type of work, the device must be switched off at the mains and the power lead must be disconnected. Suitable measures for avoiding electrostatic discharge towards parts of the components when touching the equipment must be taken. If the device is opened by an unauthorised person, hazards for the user might arise and any warranty claim will cease.

General instructions:

- All users must read this manual and have access to it at all times.
- Installation, commissioning and operation may only be carried out by trained and qualified staff.
- The security instructions and the manual itself must be observed by all persons who work with this device.
- At the location of use the valid guidelines and regulations for accident prevention must be observed.
- The manual contains the most important instructions on how to use this device in a safe way.
- Appropriate storage, proper transport, installation and commissioning, as well as careful operation are prerequisites for ensuring safe and proper operation of the device.

**Warning:**

Any leads (e.g. power leads, interface cables) may only be connected if the device is switched off in order to avoid damaging the device.

2.1 OPERATING LOCATION

The control system is designed for use inside a switching cabinet. You must ensure compliance with the specified environmental conditions. Using the device in non-specified environments, for example, on board ships, or in areas that might contain explosive gases or in extreme heights is prohibited.

**Warning:**

The device may only be switched on after acclimatising to the ambient temperature in order to avoid condensate accumulation. The same applies if the device has previously been exposed to extreme temperature variations.

To avoid overheating: The device must not be exposed to direct radiation by sunlight or any other light or heat source.

If the device is integrated in a panel, casing or similar enclosures, you must ensure that no heat accumulation builds up. The maximum permissible environmental temperature must never be exceeded.

2.2 DAMAGE DUE TO IMPROPER USE

If the control system shows any obvious damage, e.g. caused by improper operating or storage conditions or by improper use or handling, you must immediately put the device out of operation and protect it from being accidentally switched on.

2.3 WARRANTY / REPAIR

During the warranty period, any repair must be carried out by the manufacturer or by persons duly authorised by the manufacturer only.

2.4 TREATMENT AND DISPOSAL OF LITHIUM BATTERIES

This device contains a lithium battery for supplying the system clock with power as long as the supply voltage is not connected. The battery has a life cycle of 3 - 5 years depending on which load is applied.



Note:

The more the battery is exposed to higher temperatures, the faster it ages.



Warning:

There is an acute risk of explosion should the wrong type of battery be used.



Warning:

Do not put lithium batteries into a fire, do not solder on the cell body, do not recharge them, open them, short-circuit them, do not reverse their polarity or heat them up over 100°C; dispose of them properly and protect lithium batteries from direct sun light, humidity and condensation.

Lithium batteries may only be replaced by the same type, or by a type recommended by the manufacturer.

The lithium battery must be disposed of according to the local legislation at the end of its life cycle.

3 INSTALLATION

3.1 INSTALLATION OPTION

This device is intended for integration into switch panels or switching cabinets. In order to allow for a safe installation and operation (connector access), these switch panels or control desks must be accessible from the back. The device can be integrated into switching cabinets with a wall thickness of 2 to 13 mm. We recommend **a minimum of 3 mm for** correct installation with an **IP65 front** protection class.

**Warning:**

To avoid overheating in operation: The device must not be exposed to direct radiation by sunlight or any other light or heat source.

If the device is integrated in a panel, casing or similar enclosures, you must ensure that no heat accumulation builds up. The maximum permissible environmental temperature must never be exceeded.

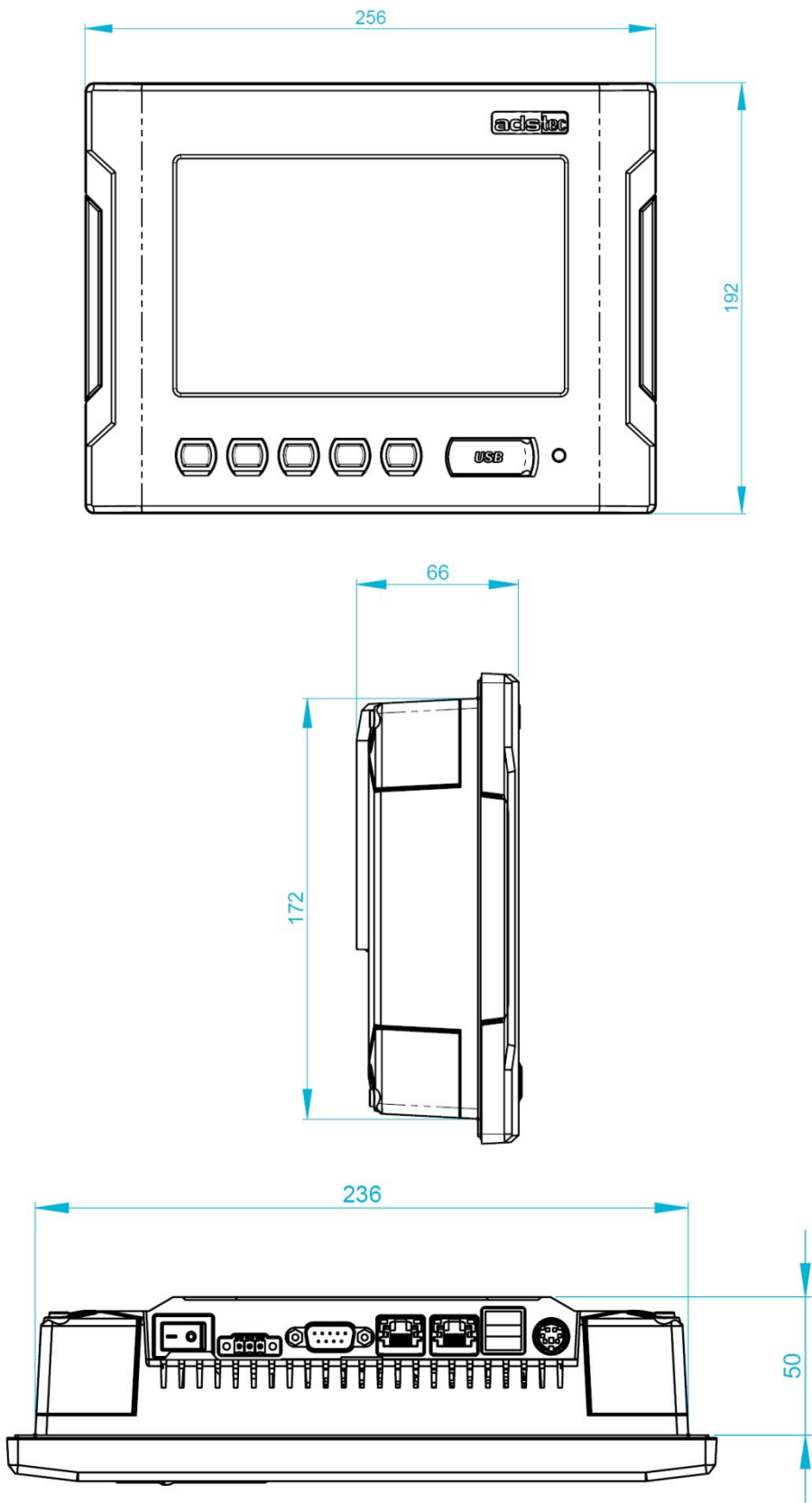
Devices including a data drive must only perpendicularly be integrated. Any deviation must be agreed with ads-tec.

The IP65 protection class is only achieved after correct installation.

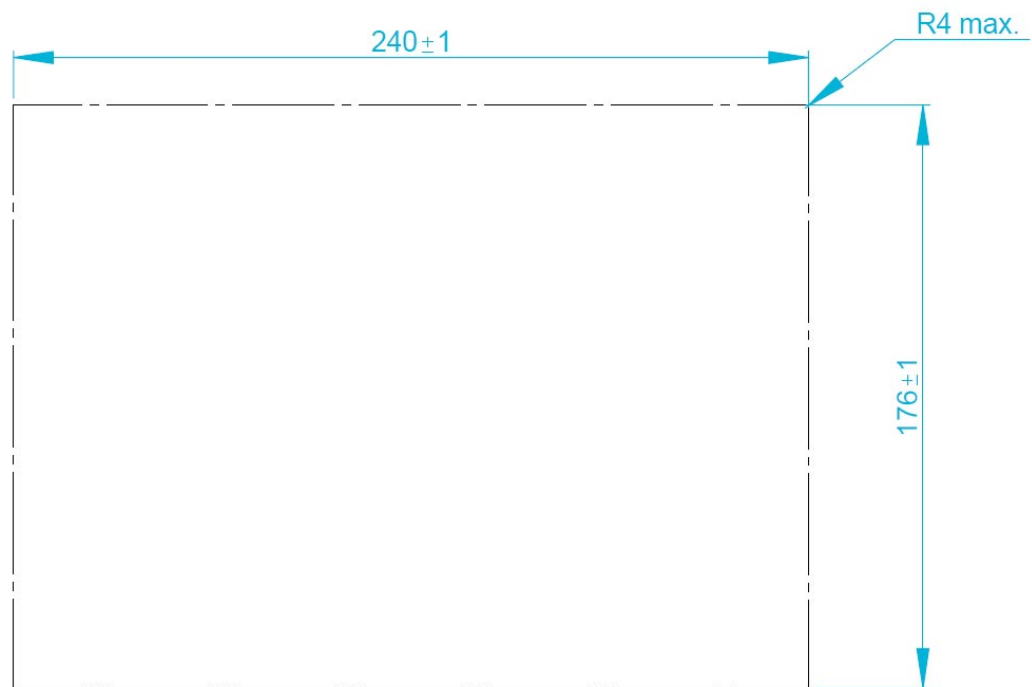
**Note:**

When selecting the enclosure for integration, the power dissipation total of the system including that of all integrated PCBs must be taken into account. The enclosure must be calculated in such a way that the maximum environmental temperature is not exceeded in any case.

3.2 EXTERNAL DEVICE DIMENSIONS

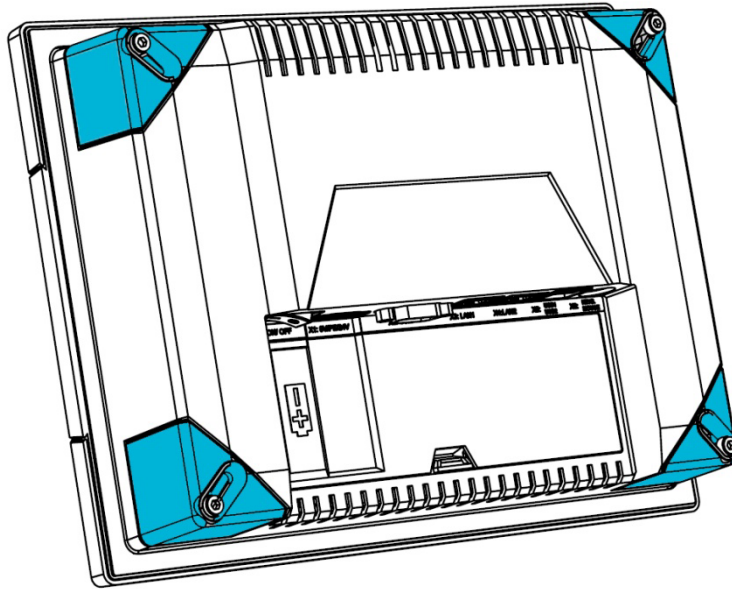


3.3 INSTALLATION LAYOUT FOR OPC7008



3.4 ORDER OF INSTALLATION

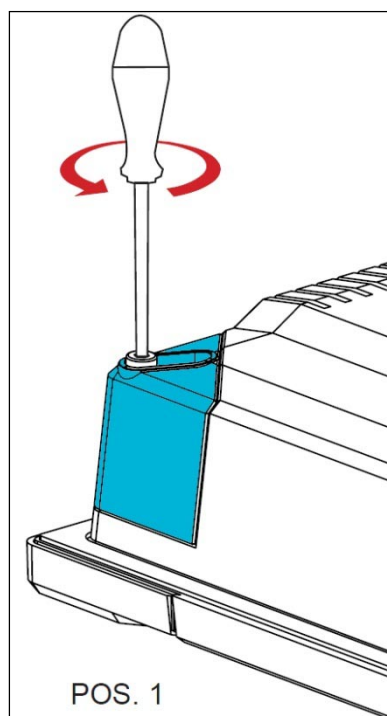
INTEGRATING THE DEVICE IN AN INSTALLATION RECESS



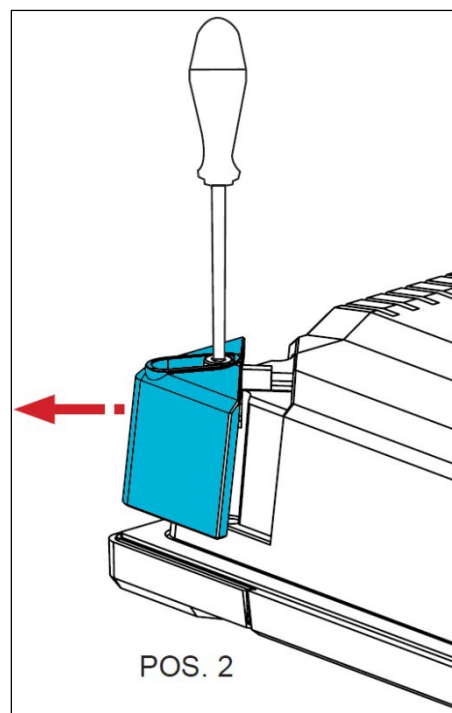
- 1) Before the device can be integrated in the panel, the tensioner fixing screws must be loosened until the tensioners open.
(Item 1 - item 2).

**Note:**

Tensioners can be opened by using an Allen key of 3mm size.



POS. 1



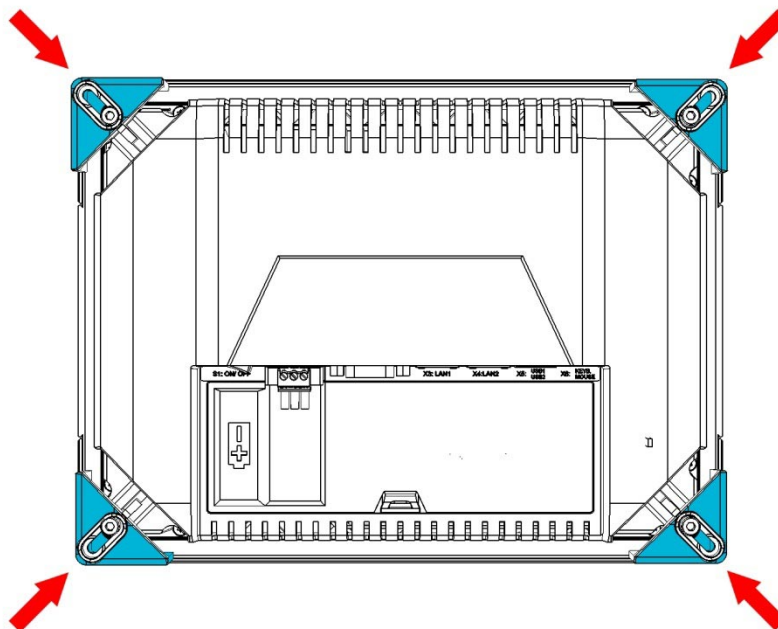
POS. 2

- 2) Now, position the device inside the installation recess.

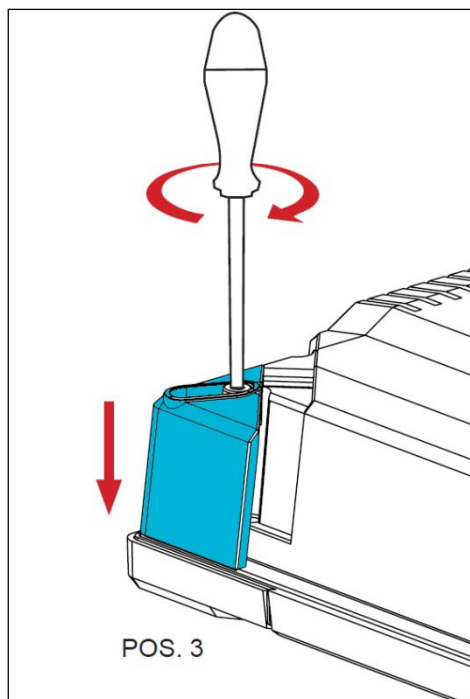


Warning:

In order to position the device correctly, the opened tensioners should be held back by hand while inserting the device in the installation recess.



- 3) Fasten the tensioner screws until hand-tight once the device is installed in the recess.
(Item 3)



4 COMMISSIONING


Warning:

The PC must be switched off before connecting or disconnecting any cables in order to prevent damage to the electronics!

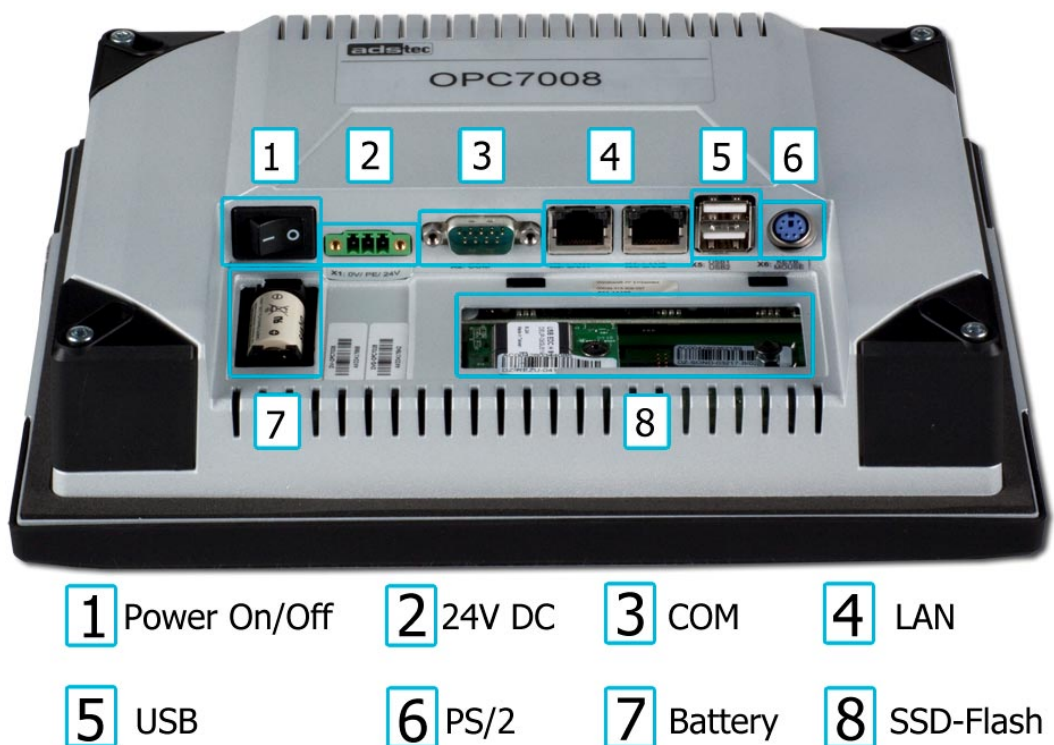
The device may only be switched on after acclimatising to the ambient temperature in order to avoid condensate accumulation.

Make sure to meet the permissible voltage requirements for this device.

After switching off and before switching on you must wait for at least 5 seconds.

4.1 AVAILABLE INTERFACES

The devices have the following interfaces by default:


Note:

The screen of a data cable must always be connected with the connector housing (EMC). Under the embedded operating system, interfaces must explicitly be enabled and required drivers must be installed in order to be able to use them.

4.2 CABLE INSTALLATION

The interfaces as well as power supply plugs for the device are accommodated in the device service slot.

4.3 ORDER OF STEPS DURING COMMISSIONING

- With 24V DC devices: Connect the power supply cable with the terminals by using cable end sleeves
- Connect cable for serial / parallel data transmission and fasten the screws between the connector plug and socket
- Plug in all other required cables and protect from accidental disconnection

4.4 CHECK FOR OPERATIONAL READINESS

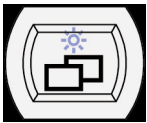
Check the device for any hidden damage potentially caused by improper transport, operating or storage conditions or by improper use or handling (e.g. smoke development from the device, etc.). If any damage is detected, the device must be put out of service immediately and protected from accidental switch-on.

5 OPERATION

5.1 FRONT CONTROL KEYS



Depending on the equipment version, an operating system and a soft keyboard has previously been installed ex works. The keys on the front panel are occupied with the following functions by a specific driver in the soft keyboard:

	<u>Level 1:</u> Activate and deactivate the soft keyboard for letter/character input by using the touch screen. <u>Level 2:</u> Decrease display brightness.
	<u>Level 1:</u> Change task (Alt+ESC) in Windows. <u>Level 2:</u> Increase display brightness.
	<u>Level 1:</u> Not allocated. The configuration of this level can be customised by programming via the soft keyboard programme
	<u>Level 1:</u> Right mouse-key function.
	Shift key (SHIFT) for activating the second keyboard level. This key must be pressed simultaneously with the desired function key.

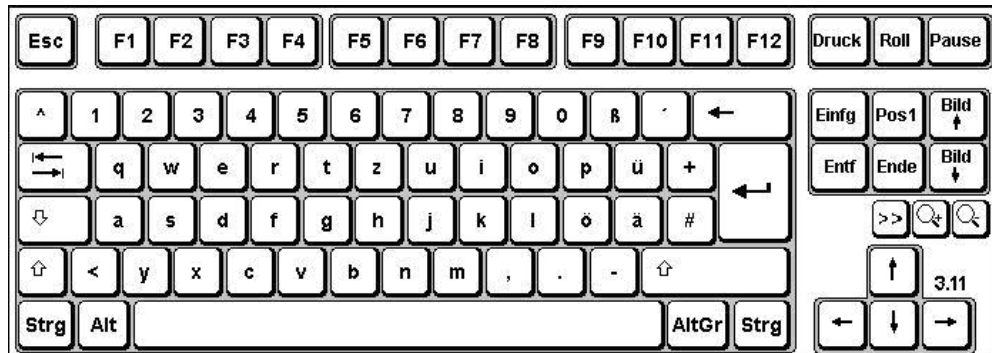


Note:

If the software keyboard is not installed, only the functions for display settings are active. When changing the values, no representation is visible on the screen. The key functions can have been previously modified in accordance with customer specific requirements. The above described functions are pre-set ex works.

5.2 SOFT KEYBOARD

If an operating system is installed ex works, the soft keyboard is also preinstalled. If the operating system is delivered separately with the device, the soft keyboard must also be installed on site. By using the soft keyboard, data can be entered via the touch screen like with an external keyboard.



HOW TO OPERATE THE SOFT KEYBOARD FROM VERSION 3.11:



Activate and deactivate the soft keyboard for letter/character input using the touch screen



Switches numeric keys on and off
(only if numeric keys are visible)



Switching between different representations
(Alphanumeric keys → Numeric keys → Function key bar)



Soft keyboard representation, zoom in



Soft keyboard representation, zoom out



Note:

If a function is to be activated, which requires pressing two keys at the same time (e.g. Alt + F4), these keys have to be pushed one after another at the soft keyboard, and the special keys Shift, Alt and Ctrl must always be pushed first.

Due to differences in programming of a large variety of software programmes, we cannot ensure that the soft keyboard works properly with all available software.

When deactivating the soft keyboard, the previously active state (alphanumeric / numeric keys or function keys) will be stored and will be displayed when re-activating the keyboard.

5.3 TOUCH SCREEN

The control system is equipped with a touch screen monitor. The touch screen monitor is internally connected with the USB interface. The driver software required for using the touch screen is integrated in the corresponding operating system, or can alternatively be installed from the enclosed service CD.

5.4 STATUS INDICATORS

SYS LED (BICOLOURED)

Depending on the colour and type of flashing, different device states are displayed by the SYS LED.

The following signals are displayed:

- LED lights green The device is ready for operation (Power ON).
- LED is off The device is switched off. (POWER OFF)

6 INTERFACES

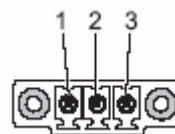
6.1 INTERFACE SETUP

INTERFACE	IRQ	ADDRESS
COM1	4	3F8h
COM2	3	2F8h

6.2 24 V DC POWER SUPPLY

This power supply is provided to the device by using a lead-through terminal with a screw connection. (The figure shows the socket inside the device)

PIN NUMBER	SIGNAL NAME
1	24 V DC
2	PE
3	0 V DC



Technical data of the power adapter

- Input voltage: 19...29V DC
- Max. switch-on current: 7A (10ms)

6.3 USB CONNECTIONS

The USB interfaces are used for connecting peripherals with USB connection. The interface complies with the USB 2.0 standard.

PIN NUMBER	SIGNAL NAME
1	VDC
2	D -
3	D+
4	GND



Note:

The USB interfaces can be locked by using the "Lock USB" software tool.

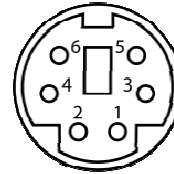
USB CONNECTION IN THE FRONT PANEL

One USB interface can be accessed from the front. The interface is located under a plastic cover underneath the display. The cover has a tab on the right-hand side, which is used for opening. The plastic cover of the USB interface must be returned in protective position after use.

6.4 PS/2 CONNECTOR

A keyboard can directly be operated by using the PS/2 socket connector.

PIN NUMBER	SIGNAL NAME
1	Keyboard data
2	Mouse data
3	GND
4	+5V
5	Keyboard clock
6	Mouse clock



Note:

Since the timing of the integrated controller is specifically set up for Cherry keyboards, keyboards of this manufacturer should preferably be used.

If the soft keyboard is actively displayed on the monitor, the use of the external keyboard for control purposes is limited.

The keyboard must be connected before switching the device on, because the keyboard interface is initialised in the process of booting. If the keyboard is plugged in while the device is running without having had the keyboard connected while booting, it will not be functional.

6.5 NETWORK CONNECTION (RJ45)

If the drivers required for functioning are installed on the device, the control system may be integrated in an Ethernet network supporting the 10/100 Mbit standard by using the Ethernet 10/100BaseT network connector. Specifications of this network topology must be observed in this case. You can install the drivers required for the network function from the enclosed service CD, should they not be installed on the device.

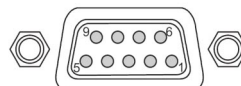
PIN NUMBER	SIGNAL NAME
1	TX +
2	TX -
3	RX +
4	NC
5	NC
6	RX -
7	NC
8	NC



6.6 SERIAL COM INTERFACE (RS232)

The serial interface is also used for digital data transmission. The RS232 interface can be connected by using a commercially available 9-pin SUB-D cable.

PIN NUMBER	SIGNAL NAME
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI



Note:

This interface is not electrically isolated.

6.7 EXTERNAL DRIVES

By default, no drive for removable media (CD/floppy disk) is integrated in the device. Instead, the system provides a USB interface, to which an external drive can be connected. In this case you'd have to ensure that the used device is suitable for industrial environments.



Warning:

Connecting or disconnecting external drives during operation is not admissible, since it cannot be excluded that the drive might be in use while connecting or disconnecting it. Data loss might result in the event of non-compliance!

7 DRIVES

7.1 HARD DRIVE / FLASH SSD

The storage medium is selected according to the customer requirements. The following options are available for storage:

Flash SSD: A Flash SSD with a storage capacity of at least 1GB is used. Its capacity depends on the desired operating system and the additional programmes to be installed.



Note:

*Recommendation for the choice of storage medium with a basic installation:
SSD Flash memory: Windows CE 6.0 / Windows XP embedded*

8 SOFTWARE & DRIVER INSTALLATION

The device will be delivered with a pre-installed Windows / Linux operating system depending on what the customer wants. The drivers required for this are already installed and the operating system will be enabled by entering the licence information. Should an initial installation be required, please proceed according to the following steps. With a newer operating system like Windows XP, the network card and graphics card will properly be recognised during the initial installation, so that only the touch screen driver and the soft keyboard must be installed separately.

**Note:**

If the hard drive was formatted, the operating system can be reinstalled by using one of the existing interfaces.

An external keyboard is required for installation.

8.1 INSTALLING THE OPERATING SYSTEM

The device does not have any integrated CD drive. The installation of the operating system can therefore only be carried out by using the USB interface.

Procedure for installation:

- The boot drive in the system BIOS must be switched to USB in order to be able to boot the device from the USB interface.
- Restart the device and insert a Windows CD.
- Install Windows and set up the basic data.
- With devices including a touch screen monitor, the touch screen driver as well as the soft keyboard should be installed in order to ensure full functionality.

With Windows CE or Windows XP embedded, a complete image can also be installed by using a USB stick.

8.2 TOUCH SCREEN DRIVER INSTALLATION

**Note:**

When installing the driver, you'll have to take in account that the touch screen monitor is internally connected with the USB interface!

The installation has to be carried out as described below:

- The device does not have any integrated CD drive. The installation of the operating system can therefore only be carried out by using the USB interface.
- Access the service CD by using the Explorer and start the Installer file in the TouchScreen folder.
- Follow the on-screen instructions and acknowledge the licence terms and conditions.
- Once the installer has completed the installation, shut down the computer and restart it subsequently.
- After restarting, the touch screen monitor has to be calibrated. If the driver does not automatically start, activate the setup menu via "**Start => Settings => Control panel => Elo Touchscreen**".
- Via the "**Calibration data**" menu, calibrating the touch screen monitor can be started, and the crosses appearing in a succession on the monitor have to be pushed for calibration. Once the cursor position perfectly matches the touch point of your finger, you can exit this control menu by pushing "**OK**".

8.3 SOFT KEYBOARD

The soft keyboard must be installed from the enclosed service CD-ROM in order to ensure usability of the 5 keys (except for the VMT series, where you have 6 keys) underneath the monitor. The installation has to be carried out as described below:

- Plug in connector of external drive at the device
- Switch on PC, insert driver CD into drive after booting
- Start installer from the service CD
- Follow on-screen instructions, install the driver, select the language and confirm the restart of the computer.

**Note:**

You can make further changes to the basic settings of the soft keyboard, if required. You'll find more information about this topic in the "Readme" file in the installation folder for the soft keyboard.

9 TECHNICAL DETAILS

OPC7000 series	7008	7013	7015	7022
Display data				
Display	8" TFT, 800 x 480 pixels	13.3" TFT, 1280 x 800 pixels	15.4" TFT, 1280 x 800 pixels	22.5" TFT, 1920 x 1080 pixels
Display colours:	16.1 million colours at max	256 thousand colours at max		16.7 million colours at max
Manual display brightness adjustment				
Touch screen	Resistive industrial touch screen monitor			
Computer data				
Processor	Atom™ 1.1 GHz (Z510)	Atom™ 1.6 GHz (N270)		-
	-	Celeron® 1.2 GHz (dual core) Core™2 Duo 2.26 GHz		
RAM	1 GB or 2 GB DDR2 RAM	1 GB or 2 GB DDR2* 1 GB to 8 GB DDR3 RAM		1 GB to 8 GB DDR3 RAM
Chip set	Intel® SCH US15W with integrated graphic controller	Intel® GMA 950 integrated in Intel® 945GSE* Intel® GMA X4500 integrated in Intel® GS45**		Intel® GMA X4500 integrated in Intel® GS45
Graphic memory ¹	A minimum of 8 MB shared memory	A minimum of 8 MB shared memory * A minimum of 256 MB shared memory **		A minimum of 256 MB shared memory
Mass storage device	2 x Flash SSD (via internal USB connections)	1 x Flash SSD (via internal USB connection)* 2 x Flash SSD (via internal USB connections)**		2 x Flash SSD (via internal USB connections)
Mass storage device Optional	-	As an option: 2.5" hard disk with a minimum of 120 GB (SATA) 2.5 " automotive hard disk with a minimum of 40 GB (SATA) 2.5" industrial SSD (SATA, SMART)		
Interfaces	COM 1 (RS232) 1 x PS/2 (keyboard/mouse) 2 x USB 2.0** 1 x USB 2.0 in front panel***	COM 1 (RS232) 5 x USB 2.0*** 1 x USB 2.0 in front panel***		
Network	2 x Ethernet (10/100/1000MBit) RJ 45	3 x Ethernet (10/100/1000MBit) RJ 45		

General data				
External dimensions:	256 x 192 x 66 mm	353 x 261 x 64 mm	413 x 290 x 68 mm	553 x 355 x 68 mm
Required depth clearance for panel integration	50mm		54mm	
Match dimensions for panel integration ²	240 x 176 mm	332 x 240 mm	392 x 269 mm	532 x 334 mm
Weight	Approx. 1.6 kg	Approx. 2.8 kg	Approx. 4.1 kg	Approx. 7.6 kg
Protection class	IP 65 for the front			
Max. switch-on current:	7A (10ms)			
Power consumption (without any additional load on any of the USB ports)	20W	35W	50W	75W

* Atom™ 1.6 GHz only

** Celeron® 1.2 GHz / Core™2 Duo 2.26 GHz only

*** All external USB interfaces can be disabled by software and in High Current version with up to 1A

**** with Flash SSD, automotive hard disk or 2.5" industrial SSD only

¹ Allocation depends on software driver

² Tolerance +/- 1 mm

10 SERVICE AND SUPPORT

ads-tec and its partner companies offer your customers a comprehensive service and support, which ensures availability of a fast and competent support with respect to all upcoming questions related to ads-tec products or assemblies.

Since the devices manufactured by ads-tec are also used by associate companies, these devices might be configured in customer specific ways. Should any questions arise with respect to these specific configurations and software installations, they can only be answered by the system manufacturer.

For devices not directly purchased from ads-tec we don't deliver any support. The support is delivered by our associate companies in these cases.

10.1 ADS-TEC SUPPORT

The ads-tec support team is available for phone calls from direct clients from Monday to Friday from 8:30 AM to 5:00 PM by using the following phone number:

Phone: +49 711 45894-500

Fax: +49 711 45894-990

Email: mailbox@ads-tec.de

10.2 COMPANY ADDRESS

ads-tec
Automation Daten- und Systemtechnik GmbH
Raiffeisenstraße 14
D-70771 Leinfelden-Echterdingen
Germany

Phone: +49 711 45894-0

Fax: +49 711 45894-990

Email: mailbox@ads-tec.de

Home page: www.ads-tec.de

1 1 COMPONENT REPLACEMENT

**Warning:**

Make sure that all cable connections are removed and that all supply voltages are disconnected from the device!

**Note:**

The cover must be removed before replacing any of the SSD flash modules.



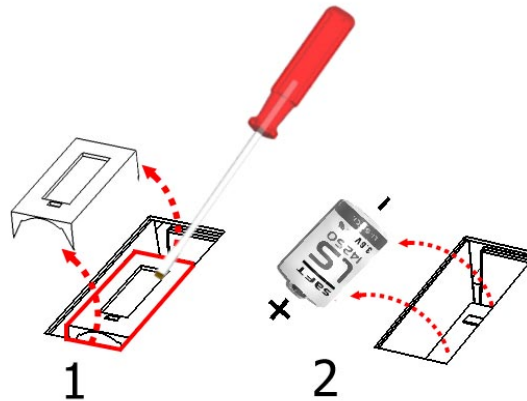
There is the opportunity of replacing the following components as well:

- 1 Lithium battery
- 2 Flash modules

11.1 1. REPLACING THE LITHIUM BATTERY

LOOSENING / REMOVING THE RETAINER CLIP

- 1) The battery is kept in place with a plugged in retainer clip. The retainer clip can be removed from the battery compartment by carefully lifting the external tabs by using a flat-bladed tool (screw driver).



INSTALLING / REPLACING THE BATTERY

- 2) Now the lithium battery can be removed. It must only be replaced by the same battery type. The type of battery to be used is:

Lithium battery 1/2AA 3V (e.g. ads-tec part number: DZ-SONS-04100-0)

Please observe the correct polarity when replacing the battery.



Warning:

There is a risk of explosion if the battery is replaced with the wrong type or with the wrong polarity. Adhere to the valid regulations for environmentally-friendly disposal of batteries if the battery has reached the end of its life cycle.

11.2 2. REPLACING THE FLASH MODULES

REMOVAL

Remove the screw(s) of the spacer bolt by using a Tx8 screw driver.



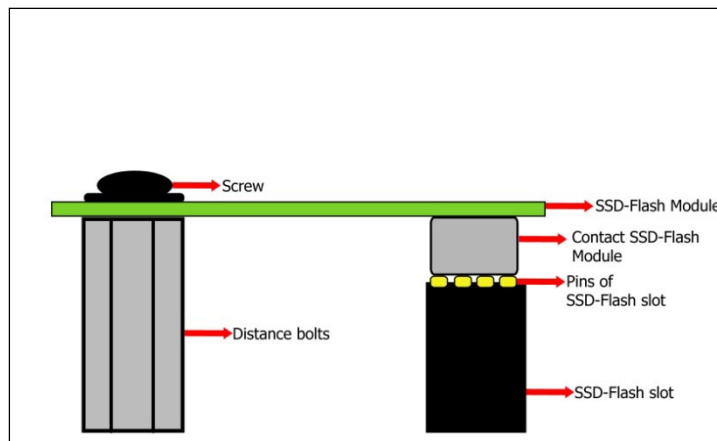
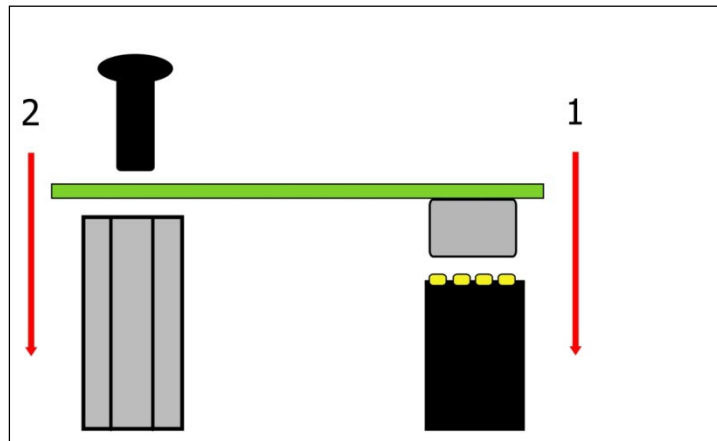
INSTALLATION

1)

Carefully place the SSD flash module on top of the SSD flash slot so that the contacts on both sides match and press it carefully down.

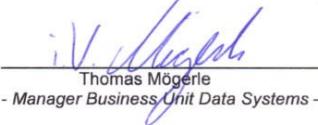
2)

Make sure that the SSD flash module is correctly put in place, and that the contacts are properly connected with the SSD flash slot contacts. Fasten the SSD flash module in position by using the previously removed screw.

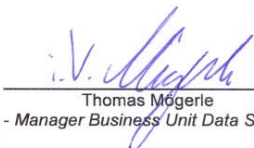


12 CE CONFORMITY DECLARATION

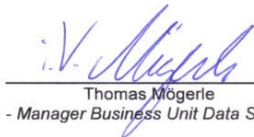
OPC7008

EG-Konformitätserklärung / EC Declaration of Conformity		
Hersteller / Adresse: Manufacturer / Address:	ads-tec GmbH Raiffeisenstr. 14 70771 Leinfelden-Echterdingen / Germany	
Produktbeschreibung: Product description:	OPC 7008 Modell / Model: DVG-OPC7008-xxx-yy	
	xxx Ist eine fortlaufende Nummer zwischen 001 bis 899 und definiert die System-Konfigurationen. <i>Is a continuous number between 001 to 899 and defines the System-configurations.</i> yy Zwei unterschiedliche Buchstaben abhängig vom Betriebssystem <i>Two varying letters depending on the Operating System</i>	
Das oben beschriebene Produkt stimmt in der von uns in Verkehr gebrachten Ausführung mit den Bestimmungen folgender Europäischer Richtlinien überein: <i>The product described above in the form as delivered is in conformity with the provisions of the following European Directives:</i>		
2004/108/EG	Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit (Anwendung trifft nur zu bei Produkten ohne WLAN-Kommunikation) <i>Directive of the European Parliament and of the Council on the approximation of the laws of the Member States relating to electromagnetic compatibility</i> <i>(Applies only for products without WLAN-Communication)</i>	
2006/95/EG	Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen (Anwendung trifft nur zu bei Produkten mit 50 – 1000V AC Eingangsspannung) <i>Directive of the European Parliament and of the Council on the approximation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits</i> <i>(Applies only for products with 50 – 1000V AC input voltage)</i>	
CE-Kennzeichnung / CE marking : 09		
1999/5/EG	Richtlinie des Europäischen Parlaments und des Rates über Funkanlagen und Telekommunikationsendeinrichtungen und die gegenseitige Anerkennung ihrer Konformität (Anwendung trifft nur zu bei Produkten mit WLAN-Kommunikation) <i>Directive of the European Parliament and of the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity</i> <i>(Applies only for products with WLAN-Communication)</i>	
Das oben beschriebene Produkt ist konform mit den Anforderungen der folgenden Dokumente: <i>The product of the declaration described above is in conformity with the requirements of the following documents:</i>		
EU harmonisierte Normen EU harmonized Standards	EN55022:2006+A1:2007 EN 61000-6-2:2005 Klasse B / Class B	
Ort, Datum Place and date of issue	Leinfelden-Echterdingen, 04/28/2009	
Name und Unterschrift Name and signature	 Elmar Bossler - Quality Manager -	 Thomas Mägerle - Manager Business Unit Data Systems -
Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, ist jedoch keine Beschaffenheits- oder Haltbarkeitsgarantie nach §443 BGB. Die Sicherheits- und Einbauhinweise der mitgelieferten Produktdokumentation sind zu beachten. <i>This declaration certifies the conformity to the specified directives but does not imply any warranty for properties. The safety and installation documentation accompanying the product shall be considered in detail.</i>		

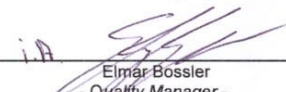
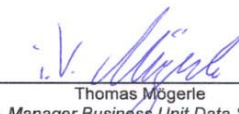
OPC7013

EG-Konformitätserklärung / EC Declaration of Conformity		adstec
Hersteller / Adresse: Manufacturer / Address:	ads-tec GmbH Raiffeisenstr. 14 70771 Leinfelden-Echterdingen / Germany	
Produktbeschreibung: Product description:	OPC 7013 Modell / Model: DVG-OPC7013-xxx-yy xxx Ist eine fortlaufende Nummer zwischen 001 bis 899 und definiert die System-Konfigurationen. Is a continuous number between 001 to 899 and defines the System-configurations. yy Zwei unterschiedliche Buchstaben abhängig vom Betriebssystem Two varying letters depending on the Operating System	
Das oben beschriebene Produkt stimmt in der von uns in Verkehr gebrachten Ausführung mit den Bestimmungen folgender Europäischer Richtlinien überein: The product described above in the form as delivered is in conformity with the provisions of the following European Directives:		
2004/108/EG	Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit (Anwendung trifft nur zu bei Produkten ohne WLAN-Kommunikation) Directive of the European Parliament and of the Council on the approximation of the laws of the Member States relating to electromagnetic compatibility (Applies only for products without WLAN-Communication)	
2006/95/EG	Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen (Anwendung trifft nur zu bei Produkten mit 50 – 1000V AC Eingangsspannung) Directive of the European Parliament and of the Council on the approximation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (Applies only for products with 50 – 1000V AC input voltage)	
CE-Kennzeichnung / CE marking : 09		
1999/5/EG	Richtlinie des Europäischen Parlaments und des Rates über Funkanlagen und Telekommunikationsendeinrichtungen und die gegenseitige Anerkennung ihrer Konformität (Anwendung trifft nur zu bei Produkten mit WLAN-Kommunikation) Directive of the European Parliament and of the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (Applies only for products with WLAN-Communication)	
Das oben beschriebene Produkt ist konform mit den Anforderungen der folgenden Dokumente: The product of the declaration described above is in conformity with the requirements of the following documents:		
EU harmonisierte Normen EU harmonized Standards	EN55022:2006+A1:2007 EN 61000-6-2:2005 Klasse B / Class B	
Ort, Datum Place and date of issue	Leinfelden-Echterdingen, 04/28/2010	
Name und Unterschrift Name and signature	 Elmar Bossler - Quality Manager -	 Thomas Magerle - Manager Business Unit Data Systems -
Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, ist jedoch keine Beschaffenheits- oder Haltbarkeitsgarantie nach §443 BGB. Die Sicherheits- und Einbauhinweise der mitgelieferten Produktdokumentation sind zu beachten. This declaration certifies the conformity to the specified directives but does not imply any warranty for properties. The safety and installation documentation accompanying the product shall be considered in detail.		

OPC7015

EG-Konformitätserklärung / EC Declaration of Conformity		adstec
Hersteller / Adresse: Manufacturer / Address:	ads-tec GmbH Raiffeisenstr. 14 70771 Leinfelden-Echterdingen / Germany	
Produktbeschreibung: Product description:	OPC 7015 Modell / Model: DVG-OPC7015-xxx-yy xxx Ist eine fortlaufende Nummer zwischen 001 bis 899 und definiert die System-Konfigurationen. Is a continuous number between 001 to 899 and defines the System-configurations. yy Zwei unterschiedliche Buchstaben abhängig vom Betriebssystem Two varying letters depending on the Operating System	
Das oben beschriebene Produkt stimmt in der von uns in Verkehr gebrachten Ausführung mit den Bestimmungen folgender Europäischer Richtlinien überein: The product described above in the form as delivered is in conformity with the provisions of the following European Directives:		
2004/108/EG	Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit (Anwendung trifft nur zu bei Produkten ohne WLAN-Kommunikation) Directive of the European Parliament and of the Council on the approximation of the laws of the Member States relating to electromagnetic compatibility (Applies only for products without WLAN-Communication)	
2006/95/EG	Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen (Anwendung trifft nur zu bei Produkten mit 50 – 1000V AC Eingangsspannung) Directive of the European Parliament and of the Council on the approximation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (Applies only for products with 50 – 1000V AC input voltage)	
CE-Kennzeichnung / CE marking : 09		
1999/5/EG	Richtlinie des Europäischen Parlaments und des Rates über Funkanlagen und Telekommunikationsendeinrichtungen und die gegenseitige Anerkennung ihrer Konformität (Anwendung trifft nur zu bei Produkten mit WLAN-Kommunikation) Directive of the European Parliament and of the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (Applies only for products with WLAN-Communication)	
Das oben beschriebene Produkt ist konform mit den Anforderungen der folgenden Dokumente: The product of the declaration described above is in conformity with the requirements of the following documents:		
EU harmonisierte Normen EU harmonized Standards	EN55022:2006+A1:2007 EN 61000-6-2:2005 Klasse B / Class B	
Ort, Datum Place and date of issue	Leinfelden-Echterdingen, 04/28/2010	
Name und Unterschrift Name and signature	 Elmar Bossler Quality Manager  Thomas Mögerle - Manager Business Unit Data Systems -	
Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, ist jedoch keine Beschaffenheits- oder Haltbarkeitsgarantie nach §443 BGB. Die Sicherheits- und Einbauhinweise der mitgelieferten Produktdokumentation sind zu beachten. This declaration certifies the conformity to the specified directives but does not imply any warranty for properties. The safety and installation documentation accompanying the product shall be considered in detail.		

OPC7022

EG-Konformitätserklärung / EC Declaration of Conformity		adstec
Hersteller / Adresse: Manufacturer / Address:	ads-tec GmbH Raiffeisenstr. 14 70771 Leinfelden-Echterdingen / Germany	
Produktbeschreibung: Product description:	OPC 7022 Modell / Model: DVG-OPC7022-xxx-yy	
	xxx Ist eine fortlaufende Nummer zwischen 001 bis 899 und definiert die System-Konfigurationen. <i>Is a continuous number between 001 to 899 and defines the System-configurations.</i> yy Zwei unterschiedliche Buchstaben abhängig vom Betriebssystem <i>Two varying letters depending on the Operating System</i>	
Das oben beschriebene Produkt stimmt in der von uns in Verkehr gebrachten Ausführung mit den Bestimmungen folgender Europäischer Richtlinien überein: <i>The product described above in the form as delivered is in conformity with the provisions of the following European Directives:</i>		
2004/108/EG	Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit (Anwendung trifft nur zu bei Produkten ohne WLAN-Kommunikation) <i>Directive of the European Parliament and of the Council on the approximation of the laws of the Member States relating to electromagnetic compatibility</i> <i>(Applies only for products without WLAN-Communication)</i>	
2006/95/EG	Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen (Anwendung trifft nur zu bei Produkten mit 50 – 1000V AC Eingangsspannung) <i>Directive of the European Parliament and of the Council on the approximation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits</i> <i>(Applies only for products with 50 – 1000V AC input voltage)</i>	
CE-Kennzeichnung / CE marking : 09		
1999/5/EG	Richtlinie des Europäischen Parlaments und des Rates über Funkanlagen und Telekommunikationsendeinrichtungen und die gegenseitige Anerkennung ihrer Konformität (Anwendung trifft nur zu bei Produkten mit WLAN-Kommunikation) <i>Directive of the European Parliament and of the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity</i> <i>(Applies only for products with WLAN-Communication)</i>	
Das oben beschriebene Produkt ist konform mit den Anforderungen der folgenden Dokumente: <i>The product of the declaration described above is in conformity with the requirements of the following documents:</i>		
EU harmonisierte Normen EU harmonized Standards	EN55022:2006+A1:2007* EN 61000-6-2:2005 Klasse A / Class A	
Ort, Datum Place and date of issue	Leinfelden-Echterdingen, 04/28/2009	
Name und Unterschrift Name and signature	 Elmar Bossler - Quality Manager -  Thomas Mogerle - Manager Business Unit Data Systems -	
* Warnung! – Dies ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen. In diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen. * Warning! – This is a Class A device. In a domestic environment this device may cause radio frequency (RF) interference, in which case the user may be required to take adequate measures.		
Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, ist jedoch keine Beschaffenheits- oder Haltbarkeitsgarantie nach §443 BGB. Die Sicherheits- und Einbauhinweise der mitgelieferten Produktdokumentation sind zu beachten. <i>This declaration certifies the conformity to the specified directives but does not imply any warranty for properties. The safety and installation documentation accompanying the product shall be considered in detail.</i>		