SIEMENS

SIMATIC HMI

HMI devices
Unified Comfort Panels Hygienic

Compact Operating Instructions

07/2024
A5E52219907-AB

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of Siemens Aktiengesellschaft. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Ⓟ 07/2024 Subject to change

Preface

Scope of validity

These compact operating instructions apply to the following hygienic HMI devices, which are based on the following Unified Comfort Panels:

Hygienic HMI device, article number	Based on HMI device, article number
MTP700 Unified Comfort Hygienic, 6AV2128-3GB40-0AX0	MTP700 Unified Comfort, 6AV2128-3GB06-0AX1
MTP700 Unified Comfort Hygienic Neutral, 6AV2128-3GB70-0AX0	
MTP1000 Unified Comfort Hygienic, 6AV2128-3KB40-0AX0	MTP1000 Unified Comfort, 6AV2128-3KB06-0AX1
MTP1000 Unified Comfort Hygienic Neutral, 6AV2128-3KB70-0AX0	
MTP1200 Unified Comfort Hygienic, 6AV2128-3MB40-0AX0	MTP1200 Unified Comfort, 6AV2128-3MB06-0AX1
MTP1200 Unified Comfort Hygienic Neutral, 6AV2128-3MB70-0AX0	
MTP1500 Unified Comfort Hygienic, 6AV2128-3QB40-0AX0	MTP1500 Unified Comfort, 6AV2128-3QB06-0AX1
MTP1500 Unified Comfort Hygienic Neutral, 6AV2128-3QB70-0AX0	
MTP1900 Unified Comfort Hygienic, 6AV2128-3UB40-0AX0	MTP1900 Unified Comfort, 6AV2128-3UB06-0AX1
MTP1900 Unified Comfort Hygienic Neutral, 6AV2128-3UB70-0AX0	
MTP2200 Unified Comfort Hygienic, 6AV2128-3XB40-0AX0	MTP2200 Unified Comfort, 6AV2128-3XB06-0AX1
MTP2200 Unified Comfort Hygienic Neutral, 6AV2128-3XB70-0AX0	

These compact operating instructions describe the technical differences of the "SIMATIC HMI Hygienic" HMI devices from the corresponding Unified Comfort Panel.

The information in these compact operating instructions take precedence over the information in the underlying operating instructions, the release notes and the online help. You can find the underlying "Unified Comfort Panels" operating instructions on the Internet (http://support.automation.siemens.com/WW/view/en/109795870). Select the manual version that matches your HMI device image.

Unless otherwise described in this document, the information in the underlying operating instructions, especially in regard to connection and operation of the device, the operating system and the project and data transfer, applies to the "SIMATIC HMI Hygienic" HMI devices.

ID Link for the digital type plate

The ID Link is a unique identifier in accordance with IEC 61406, which you will find in future as a QR code on your product and the product packaging.

You can recognize the ID Link from the frame, which has a black corner at the bottom right. The ID Link takes you to the digital type plate of your product.

Scan the QR code on the product or on the packaging label with a smartphone camera, a bar code scanner or a Read app. Call the relevant link.

In the digital type plate, you will find product data, manuals, Declarations of Conformity, certificates and other helpful information on your product.

Keeping this documentation

NOTICE
Manual belongs to the HMI device This manual belongs to the HMI device and is also required for recommissioning. Store all supplied and supplementary documentation for the entire service life of the HMI device. Provide all stored documents to subsequent owners of the HMI device.

For digitally attached documentation:

1. After you receive your product, download the relevant documentation, at a time no later than the first assembly/commissioning. Use the following options for the download:
   - Technical Support (https://support.industry.siemens.com):
     The documentation is assigned to the product via the article number. The article number can be found on the product and on the packaging label. Products with new, incompatible functions are given a new article number and documentation.
   - ID Link:
     If your product carries an ID Link, you can recognize it as a QR code having a frame with a black corner at the bottom right. The ID Link takes you to the digital type plate of your product. Scan the QR code on the product or on the packaging label with a smartphone camera or a bar code scanner. Call the relevant ID Link.
2. Keep this version of the documentation.

Naming conventions

Term	Applies to
System	• System • Machining center • One or more machines
Device, HMI device, hygienic HMI device	• MTP700 Unified Comfort Hygienic (Neutral) • MTP1000 Unified Comfort Hygienic (Neutral) • MTP1200 Unified Comfort Hygienic (Neutral) • MTP1500 Unified Comfort Hygienic (Neutral) • MTP1900 Unified Comfort Hygienic (Neutral) • MTP2200 Unified Comfort Hygienic (Neutral)

In place of the full product name, the short product name without the suffix "Unified Comfort Hygienic" is also used, for example:

"MTP700" in place of "MTP700 Unified Comfort Hygienic"

Figures

This manual contains figures for the described devices. The figures can deviate from the particularities of the delivered device.

Elements of figures are labeled with black item numbers on a white background:
①, ②, ③, ...

Work steps within the figures are labeled according to the order in which they are to be carried out with white numbers on a black background:
❶, ❷, ❸, ...

Table of contents

Overview

1

1.1 Product description

The SIMATIC HMI Unified Comfort Panels hygienic HMI devices offer a rugged front panel for use in the food & beverage and pharmaceutical industries.

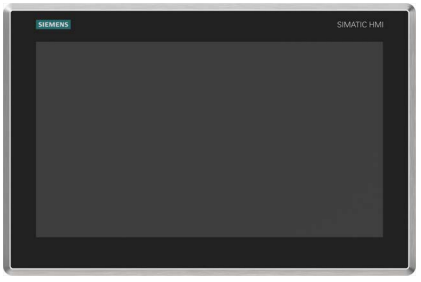
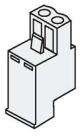
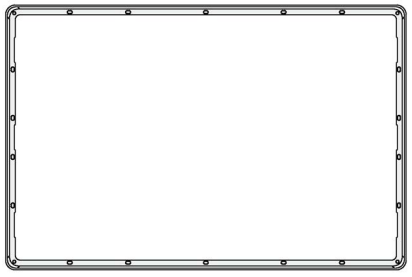
Features

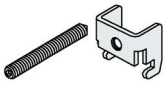
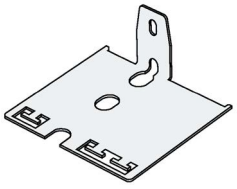
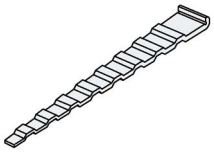
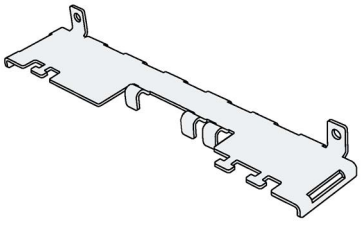
- Rugged front panel with stainless steel frame, anti-shatter film and minimized grooves and gaps in compliance with Hygienic Design Guideline DIN EN 1672-2
- Optimized frame design with minimized protrusions to the control cabinet and for automatic runoff of liquids
- Stainless steel surface polished with grain size 240
- Degree of protection, front: IP66K [1], IP69 [1] (IP69 is comparable to the former IP69K rating)
- Display and touch screen behind hardened glass with anti-shatter film
- The anti-shatter film protects against escape of glass fragments up to an impact stress of 1 x 20 J
- Chemical resistance to cleaning and disinfecting agents as described in section "Chemical Resistance (Page 43)".
- Replaceable, foodstuff-compatible mounting gasket
- Rear clamping frame for even application of pressure on the mounting gasket
- Mounting cutout, interfaces and functionality correspond to that of the standard device

[1] For use in hazardous areas of Zones 2 and 22: on the front at least IP65, see section "Information on insulation tests, protection class and degree of protection (Page 53)".

1.2 Scope of delivery

The scope of delivery of the HMI device includes the following components:

Designation	Figure	Quantity
HMI device		1
Mounting instructions		1
Power supply connector		1
Mounting gasket		1
Clamping frame		1

Designation	Figure	Quantity	
Mounting clips, stainless steel with set screw		10 (+2)	MTP700 [1]
		12	MTP1000
		14	MTP1200, MTP1500
		18	MTP1900
		20	MTP2200
Strain relief element	Strain relief 	1	MTP700 MTP1000 MTP1200
	Plastic strain relief element 	3	MTP700 MTP1000 MTP1200
	Strain relief 	1	MTP1500 MTP1900 MTP2200

[1] The MTP700 accessory kit contains two additional short set screws. These are needed for the mounting clips directly next to the power supply socket and USB ports if the material at the mounting cutout is more than 1.5 mm thick. In this case, two of the long set screws are not needed.

1.3 Layout of the devices

This section describes the design of the HMI devices, using the MTP1500 Unified Comfort Hygienic as an example.

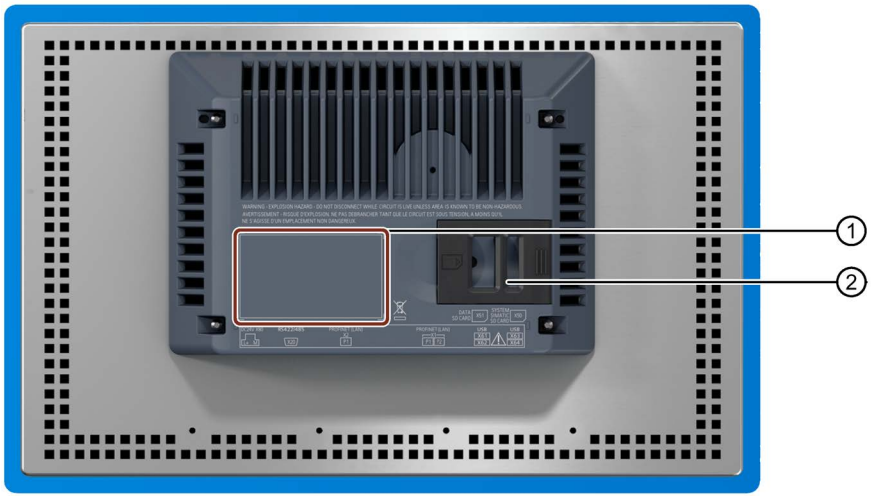
Front view and side view

① Front panel, consisting of
- Stainless steel frame
- Display with capacitive multi-touch screen and anti-shatter film

② Recesses for mounting clips

③ Mounting gasket

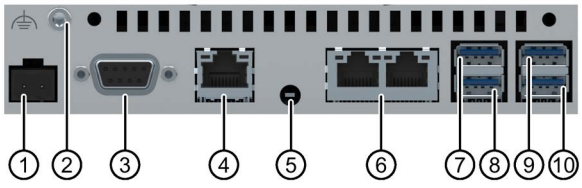
Rear view



① Position of nameplate
② Safety lock for the SD memory card slot cover
- X51: Slot for the data memory card, left
- X50: Slot for the system memory card, right

1.4 Interfaces

The figure below shows the interfaces of the HMI devices using the interface plate of devices with display diagonal ≥15" as an example.



① X80 power supply connector
② Connection for functional ground
③ X20 RS422/485 (SUB-D)
④ X2 PROFINET (LAN), 10/100/1000 Mbit
⑤ B1 button "Maintenance"
⑥ X1 PROFINET (LAN), 10/100 Mbit
⑦ X61 USB
⑧ X62 USB
⑨ X63 USB
⑩ X64 USB

For devices with display diagonal ≤12 ", there is another threaded hole above the "Maintenance" button for fixing the strain relief plate.

1.5 Accessories

An accessory kit with required accessories is included with the HMI device.

Note

This section contains a selection of accessories that is suitable for your HMI device. You can find additional variants of this selection and the complete accessories portfolio for HMI devices in the Industry Mall on the Internet (https://mall.industry.siemens.com/mall/en/WW/Catalog/Products/10144445). Details such as the delivery quantity and technical specifications of accessories can be found in the Industry Mall under the respective article numbers.

You can find an overview of the status and compatibility of the accessories portfolio in the "Cross-list" on the Internet (https://support.industry.siemens.com/cs/ww/en/view/40466415).

Service packs

The following service packs with clamping frame, mounting gasket and mounting clips are available for the hygienic HMI devices:

Designation	Article number
MTP700 Hygienic Service Pack 7”	6AV2185-4GA20-0AX0
MTP1000 Hygienic Service Pack 10”	6AV2185-4KA20-0AX0
MTP1200 Hygienic Service Pack 12”	6AV2185-4MA20-0AX0
MTP1500 Hygienic Service Pack 15”	6AV2185-4QA20-0AX0
MTP1900 Hygienic Service Pack 19”	6AV2185-4UA20-0AX0
MTP2200 Hygienic Service Pack 22”	6AV2185-4XA20-0AX0

Other accessories

Additional USB accessories can be found in the "Unified Comfort Panels (http://support.automation.siemens.com/WW/view/en/109795870)" operating instructions and on the Internet under the following entry:
FAQ 19188460 (https://support.industry.siemens.com/cs/ww/en/view/19188460).

Safety instructions 2

2.1 Intended use

The SIMATIC HMI hygienic HMI devices are designed for high-performance visualization tasks (operator control and monitoring) and ambient conditions such as those found in the food & beverage and pharmaceutical industries.

The devices are generally designed for use near open processes (according to DIN EN 1672-2) and are intended primarily for use in splash zones.

Any use that deviates from this intended use is prohibited. Also see the information in the section "Cleaning the device front (Page 40)".

Special attention was given in the design of the HMI devices to ensuring that the front panel is easy to clean and, if necessary, disinfect. The devices were therefore developed based on EN 1672-2 "Food processing machinery - Hygiene and cleanability requirements".

2.2 General safety instructions

Observe the safety and accident prevention instructions applicable to your application in addition to the safety information given in the device documentation.

Open equipment

⚠ WARNING

The device constitutes open equipment on the back side

The device constitutes open equipment on the back side. This means that you must integrate the device in an enclosure or cabinet where the device is operated via its front side. The enclosure or cabinet must provide protection against electric shock and the spread of fire. The enclosure or cabinet must meet the requirements for mechanical strength and the degree of protection for the relevant application.

Access to the enclosure or cabinet in which the device is installed should only be possible by means of a key or tool and for trained and qualified personnel.

⚠ WARNING

Electrocution risk when control cabinet is open

When you open the control cabinet, there may be a dangerous voltage at certain areas or components.

Touching these areas or components can cause electrocution.

De-energize the cabinet before opening it. Do **not** install or remove plant components during operation.

Observe the safety and accident prevention instructions applicable to your application in addition to the safety instructions given in the device documentation.

Safety of the plant or system

NOTICE
Safety is the responsibility of the assembler
The safety of the plant or system in which the device is integrated is the responsibility of the assembler of the plant or system.

ESD

Electrostatically sensitive components include almost all electrical, electronic, optoelectronic and electromechanical components. These components are sensitive to overvoltage for technical reasons and their function may be impaired or destroyed by electrostatic discharge. Observe the regulations governing the handling of ESD components.

Cybersecurity information

Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines, and networks.

In order to protect plants, systems, machines, and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial cybersecurity measures that may be implemented, please visit (https://www.siemens.com/cybersecurity-industry).

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under (https://www.siemens.com/cert).

Disclaimer for third-party software updates

This product includes third-party software. Siemens Aktiengesellschaft only provides a warranty for updates/patches of the third-party software if these have been distributed as part of a Siemens Software Update Service contract or officially released by Siemens Aktiengesellschaft. Otherwise, updates/patches are undertaken at your own risk. You can find more information about our Software Update Service offer on the Internet at Software Update Service (https://support.industry.siemens.com/cs/ww/en/view/109759444).

Notes on protecting administrator accounts

A user with administrator privileges has extensive access and manipulation options in the system.

Therefore, ensure there are adequate safeguards for protecting the administrator accounts to prevent unauthorized changes. To do this, use secure passwords and a standard user account for normal operation. Other measures, such as the use of security policies, should be applied as needed.

2.3 Security management for HMI devices

Data security

Data from external sources

The HMI device has external interfaces and can be connected to the Internet. Edge management allows you to install apps from any source.

Data from untrusted sources represents a significant security risk.

Customers are responsible for transferring only data from trusted sources to the HMI device and only opening trusted files and web pages on the HMI device.

Entering passwords

If you enter passwords via an external keyboard, they can be logged and passed on unnoticed via a keylogger.

Use only the screen keyboard of the HMI device to input passwords.

Data backup to external data storage media

Data from the HMI device can be saved on USB or SD storage media via the external interfaces.

Customers are responsible for protecting HMI device data stored on external storage media against unauthorized access. For example, use a suitable encryption or password protection for external storage media. Store the external storage media in a safe place.

Additional information

You can find additional information on security management of HMI devices on the Internet at the following address:

Panel Security Guidelines (https://support.industry.siemens.com/cs/de/en/view/109481300)

2.4 Data protection

Siemens observes the data protection guidelines, especially the requirements regarding data minimization (privacy by design). This means the following for this SIMATIC product: The product does not process / save any personal information, but only technical functional data (e.g. time stamps). If the user links this data to other data (e.g. shift plans) or if the user saves personal information on the same medium (e.g. hard disk) and therefore creates a personal reference in the process, the user has to ensure meeting the guidelines regarding data protection.

2.5 Notes about usage

NOTICE
The HMI device is approved for indoor use only.
The HMI device may be damaged if it is operated outdoors.
Operate the HMI device indoors only.

Note

Operate the device only in a normal atmospheric environment

The technical characteristics of the device described in the operating instructions are guaranteed if you operate the device in normal ambient air conditions with usual air composition.

Note

The device is intended for operation in an SELV/PELV circuit according to IEC/EN 61131 or IEC/EN 61010-2-201 in a dry environment, which means a dry environment on the rear of the device.

Additional information is available in the section "Operating Conditions (Page 53)".

Industrial applications

The HMI device is designed for industrial applications. It conforms to the following standards:

- Requirements for interference emissions EN IEC 61000-6-4:2019
- Requirements for interference immunity EN IEC 61000-6-2:2019

Use in mixed-use zone

Under certain circumstances you can use the HMI device in a mixed-use zone. A mixed-use zone is used for housing and commercial operations that do not have a significant impact on residents.

When you use the HMI device in a mixed-use zone, you must ensure that the limits of the generic standard EN 61000-6-3 regarding emission of radio frequency interference are observed. Suitable measures for achieving these limits for use in a mixed-use zone include:

- Installation of the HMI device in grounded control cabinets
- Use of filters in electrical supply lines

Individual acceptance is required.

Use in residential areas

Note

HMI device not intended for use in residential area

The HMI device is not intended for use in residential areas. Operation of an HMI device in residential areas can have a negative influence on radio or TV reception.

Use with additional measures

The HMI device should not be used at the following locations unless additional measures are taken:

- In locations with a high degree of ionizing radiation
- In locations with severe operating conditions, for example, due to:
  - Corrosive vapors, gases, oils or chemicals
  - Strong electrical or magnetic fields of high intensity
- At locations that require special monitoring, e.g. in:
  - Elevators
  - Highly hazardous areas

TFT displays

NOTICE

Burn-in effect

A permanently displayed two-color or multi-color picture can cause a burn-in effect, i.e. the picture remains dimly visible for a certain period of time. The longer the image is burned in, the longer the image will last. In extreme cases, the image is permanently displayed.

The image outline usually disappears on its own when the screen remains switched off for some time. Screensavers that use active black when the backlight is on reduce the burn-in effect.

Note

Backlight

The brightness of the backlight decreases incrementally during operational life. You can extend the service life of the display and backlight by taking the following measures:

- Reduce the backlight.
- Observe the operating hours of the backlight, see section "Technical specifications (Page 61)".

2.6 Use in hazardous areas

The following warnings apply to operating a device with Ex approval in hazardous areas.

⚠ WARNING

Explosion Hazard

Do not disconnect while circuit is live unless area is known to be non-hazardous. Substitution of components may impair suitability for Class I, Division 2 or Zone 2.

Risque d'Explosion

Ne pas déconnecter pendant que le circuit est sous tension, sauf si la zone est non-dangereuse. Le remplacement de composants peut compromettre leur capacité à satisfaire à la Classe I, Division 2 ou Zone 2.

⚠ WARNING

Do not plug or pull connectors in potentially explosive atmospheres

When you plug or pull the plug-in connector during operation, there is a risk of an arcover. An explosion can be triggered in the hazardous area due to sparkover, and death or serious bodily injury can occur.

Pulling or plugging of plug-in connectors, for example, a 24 V DC power supply connector as well as the memory card is **prohibited** in the hazardous area.

Plug or pull a plug-in connector only when one of the following two requirements is met: The area is no longer hazardous or the device and its plug-in connections are de-energized.

To switch off the device, close all open programs or the current project, and switch off the power to the device.

Also observe the enclosed documentation on use in hazardous areas and the information on Ex approval in section "Labels, certificates and approvals (Page 45)".

2.7 Important notes on touch screen

You operate the capacitive multi-touch screen with one finger or with two-finger gestures.

⚠ WARNING

Explosion hazard in hazardous areas, personal injury or property damage due to defective touch screen

Massive force applied to the front of the device is not intended use of the device and can destroy the front panel. In hazardous areas, there is then a risk of explosion, injury and food contamination with further consequential and health damages.

Make sure that excessive force cannot be applied to the front panel.

If the touch screen of the device is defective, follow these steps:

- Stop production.
- Immediately shut down the affected machine and label it accordingly.
- Handle any potentially contaminated product in accordance with legal regulations.
- Replace the device immediately.
- Clean the machine before re-commissioning it.

⚠ WARNING

Personal injury or property damage due to no earth connection

An inadequate ground connection or the lack of one will cause malfunction of the capacitive multi-touch screen. Functions may not work properly. This can result in personal injury or property damage.

- Always connect the HMI device to a ground conductor.
- The ground conductor from the HMI device must be connected directly to ground with low impedance (short connection, minimum conductor cross-section 4 mm^2).

You can find additional information on connecting the ground conductor in section "Equipotential bonding" of the "Unified Comfort Panels (http://support.automation.siemens.com/WW/view/en/109795870)" operating instructions.

⚠ WARNING

Personal injury or property damage due to maloperation

Incorrect operation of touch devices cannot be ruled out. This can result in personal injury or property damage.

Take the following precautions:

- Configure the plant so that safety-related functions are not operated with the touch screen.
- Only carry out an operator action if a plant screen is shown on the HMI device screen.
- Switch off the HMI device for cleaning and maintenance.

NOTICE

Damage to the touch screen

The following operation significantly reduces the service life of the touch screen and can lead to total failure:

- Touching with pointed or sharp objects
- Shock contact with hard objects.

Only touch the touch screen with a finger or a touch pen.

⚠ WARNING

Danger of malfunctions due to incorrect execution of gestures on the touch screen

If gestures are executed incorrectly on the touch screen with multi-touch function, these gestures may not be recognized or could be recognized incorrectly. The entries made are then not implemented by the touch device or are implemented incorrectly or in an unintended manner.

Incorrect execution of multi-touch functions can lead to errors in the operation of the plant and thus to physical injury.

Observe when operating the capacitive multi-touch screen:

- The touch screen reacts to contact on its surface, not to pressure.
- When using a touch pen: Operate the touch screen only with a touch pen for capacitive touch.
- Avoid unintended multiple touches, for example, with your knuckles.

Before using the HMI device, familiarize yourself with the supported multi-touch functions of the operating system and the applications. Ensure that the gestures which the user executes on the multi-touch screen are recognized by the application. It is possible that certain gestures need to be trained beforehand.

Notes on operation

Note

Do not touch the capacitive multi-touch screen during startup

The HMI device automatically calibrates the capacitive multi-touch screen during startup. The touch screen is locked during calibration.

Do **not** touch the touch screen during startup. Make sure that you do **not** rest on the touch screen with the palm of your hand during startup.

Make sure that there are **no** conductive liquids on the touch screen during startup.

Note when operating the capacitive multi-touch screen:

- Surface contact with a diameter of about 5 to 20 mm is required for an operator action to be detected.
- An operation with gloves with a material thickness of < 2 mm is detected in most cases. However, check the usefulness of the gloves you are using.
- To avoid incorrect operation, certain inputs are ignored and blocked from further entry:
  - Simultaneous operation with more than 5 fingers.
  - Surface contact with a diameter of > 3 cm, for example, resting the palm of the hand on the touch screen
  - As soon as the touch screen is no longer touched, input is possible again.

Functions of the capacitive multi-touch screen

General functions

- Detection of up to 5 finger touches at a time.
- Recognition of the gestures supported by the operating system and the runtime software.
- You do not need to calibrate the capacitive multi-touch screen.

Security functions in an industrial environment

The capacitive multi-touch screen is locked for security reasons when the following disturbances occur:

- There is a conductive liquid on the touch screen with ground contact via the enclosure or the operator, for example.
- An electromagnetic disturbance that exceeds the specification in the technical data of the device exerts an influence, see section "Electromagnetic compatibility (Page 49)".

Once the interference is over, the capacitive multi-touch screen is no longer locked.

Installing and connecting the device

3

3.1 Preparing for installation

3.1.1 Checking the delivery

Check the package content for visible signs of transport damage and for completeness.

Note

Damaged parts

A damaged part will cause the HMI device to malfunction.

Do not install parts damaged during shipment. In the case of damaged parts, contact your Siemens representative.

Check the scope of delivery of the HMI device, see section "Scope of delivery (Page 9)".

Additional documents may be included in the scope of delivery.

The documentation is part of the HMI device and is required for subsequent commissioning. Keep all enclosed documentation for the entire service life of the HMI device. You must pass along the enclosed documentation to any subsequent owner or user of the HMI device. Make sure that every supplement to the documentation that you receive is stored together with the operating instructions.

3.1.2 Checking the operating conditions

Note the following aspects before installing the device:

1. Familiarize yourself with the standards, approvals, EMC parameters and technical specifications for operation of the device. This information is available in the following chapters:
   - Labels, certificates and approvals (Page 45)
   - Electromagnetic compatibility (Page 49)
   - Technical specifications (Page 45)
2. Check the mechanical and climatic ambient conditions for operation of the HMI device in the following sections:
   - Mechanical ambient conditions (Page 51)
   - Climatic ambient conditions (Page 52)
3. Observe the notes on local use of the HMI device in section "Notes about usage (Page 17)".
4. Observe the permissible rated voltage: +24 V DC

3.1.3 Permitted mounting positions

The HMI device is suitable for installation in:

- Mounting cabinets
- Control cabinets
- Switchboards
- Consoles

In the following, all of these mounting options are referred to by the general term "cabinet".

The device is self-ventilated and approved for inclined mounting at angles up to +/-35° from the vertical.

NOTICE
Damage due to overheating An inclined installation reduces the convection by the HMI device and therefore the maximum permitted ambient temperature for operation. If there is sufficient convection from forced ventilation, the HMI device can also be operated in the inclined mounting position up to the maximum permitted ambient temperature for vertical mounting. The HMI device may otherwise be damaged and its certifications and warranty will be void. The working temperature ranges listed in this section apply to the rear and the front of the HMI device.

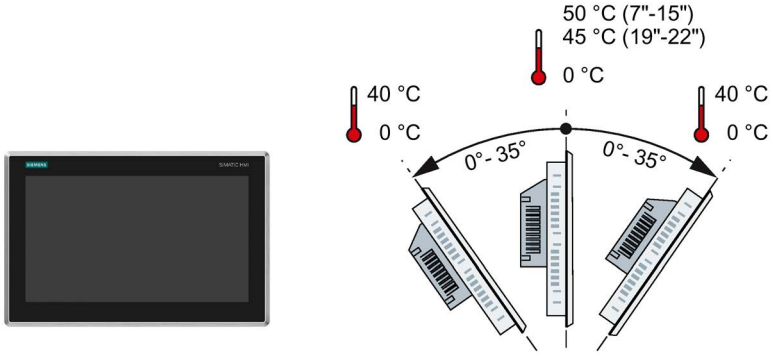
For detailed information regarding the permitted ambient temperatures, refer to section "Climatic ambient conditions (Page 52)".

Mounting position

Choose one of the following permissible mounting positions for your HMI device. The permissible mounting positions together with their operating temperatures are described in the following sections using the MTP1500 Unified Comfort Hygienic HMI device as an example.

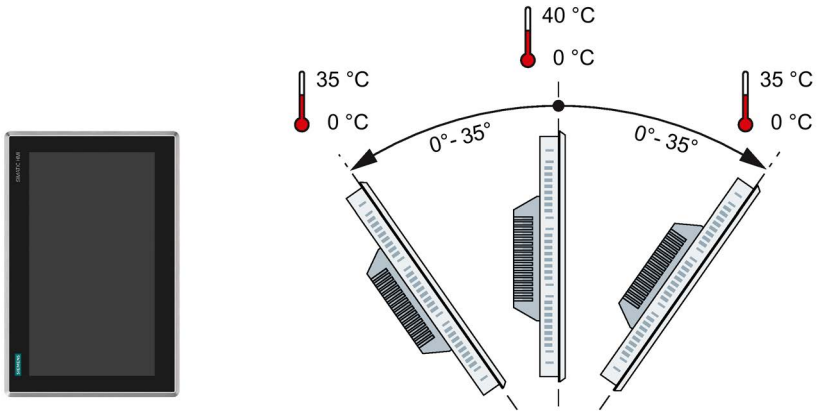
Mounting in landscape format

All Unified hygienic HMI devices are suitable for mounting in landscape format.



Mounting in portrait format

All hygienic HMI devices are suitable for mounting in portrait format. Select the appropriate screen format during configuration.

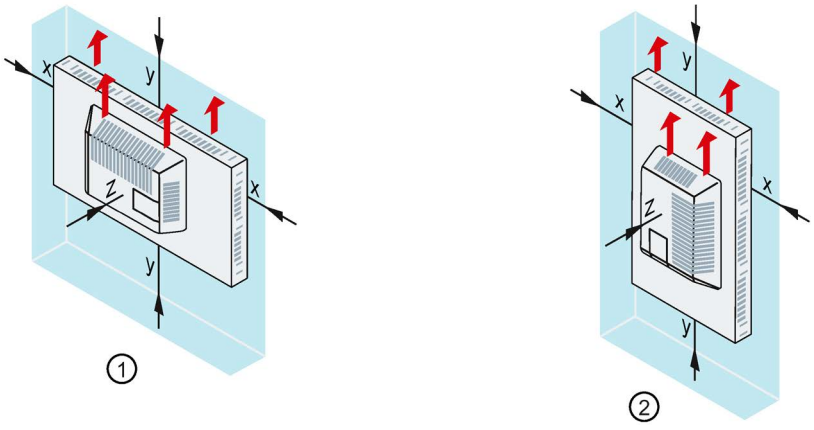


3.1.4 Checking clearances

The following clearances are required around the HMI device to ensure sufficient self-ventilation:

- At least 15 mm to both the right and left of the mounting cutout (in x direction) to allow for insertion of the mounting clips during installation
- At least 50 mm above and 50 mm below the mounting cutout (in y direction) for ventilation
- At least 10 mm behind the rear panel of the HMI device (in z direction)

The following figure shows the clearances for mounting the HMI devices in landscape format and portrait format using MTP1500 Unified Comfort Hygienic as an example:



① Clearance for installation in landscape format
② Clearance for installation in portrait format
x At least 15 mm clearance
y At least 50 mm clearance
z At least 10 mm clearance

Note

Ensure that the maximum ambient temperature is not exceeded when mounting the device in a cabinet and especially in a closed enclosure.

Clearances on the front side for cleaning

Cleaning of the device must not be hindered by other plant components, such as switches or signaling devices.

- Install the device in such a way that it is easily accessible for cleaning and cleaning tools.
- There should be a clearance of at least 20 mm between the front panel and other components.

3.1.5 Preparing the mounting cutout

Note

Stability of the mounting cutout

The material in the area of the mounting cutout must provide sufficient strength to guarantee lasting and safe mounting of the HMI device.

To achieve the degrees of protection described below, it must be ensured that deformation of the material cannot occur due to the force of the mounting clips or operation of the device.

Degrees of protection and installation area

Correct installation and the degrees of protection of the HMI device (Page 53) are only guaranteed if the following requirements are met:

- Material thickness at the mounting cutout: 1 mm to 5 mm
- Permissible deviation from plane at the mounting cutout: ≤ 0.5 mm
  This condition must also be fulfilled for the mounted HMI device.
- Surface roughness of the surface coming in contact with the device gasket: Ra ≤ 3.2 µm and Rz ≤ 12 µm

  For hygiene reasons, we recommend mounting the device on polished, brushed or smooth surfaces with a roughness value Ra < 0.8 µm and Rz < 6.3 µm (polish with 240 grain or finer). Only then can antimicrobial cleaning of the device and its environment be guaranteed.
- The installation area is dry and free from contamination, such as dust or lubricant.

Compatibility of the mounting cutout to other HMI devices

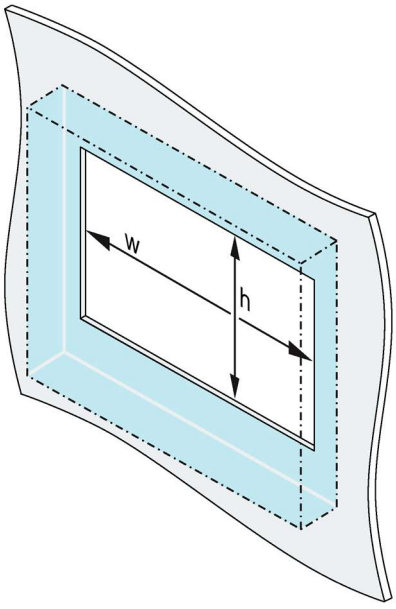
The hygienic HMI devices are mounting-compatible with standard SIMATIC Unified Comfort Panels, Industrial PCs, Industrial Flat Panels and Industrial Thin Clients with identical display diagonals.

Note that although the dimensions for the mounting cutout are the same, the device depth and the front dimensions of the hygienic HMI devices may differ from the compatible devices.

In addition, the following installation compatibility with the predecessor devices applies:

HMI device	Mounting cutout compatible with
MTP700 Unified Comfort Hygienic	TP700 Comfort, TP700 Comfort INOX / INOX PCT
MTP1200 Unified Comfort Hygienic	TP1200 Comfort, TP1200 Comfort INOX / INOX PCT

Dimensions of the mounting cutout



	w^{+1}_{0}		h^{+1}_{0}
MTP700	197	x	141 mm
MTP1000	264	x	189 mm
MTP1200	310	x	221 mm
MTP1500	382	x	241 mm
MTP1900	448	x	278 mm
MTP2200	513	x	315 mm

Width and height should be reversed accordingly when mounting in portrait format.

3.2 Mounting the device

3.2.1 Notes on installation

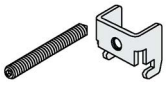
Before installing the device, please ensure that the installation location complies with the following:

NOTICE
Use according to IEC 61010-2-201 requires an appropriate enclosure The rear of the built-in device is classified as "Open Equipment" according to IEC 61010-2-201 for use in industrial control equipment. For approval and operation according to IEC 61010-2-201, the device must be installed in an enclosure or integrated in a cabinet. The enclosure or the cabinet must provide protection against electric shock and the spread of fire. The enclosure or the cabinet must meet the requirements for mechanical strength and the degree of protection for the relevant application.

- Position the device so that it is not exposed to direct sunlight.
- Position the device so that it is easily accessible for the operator. Choose a suitable installation height.
- Ensure that the air vents of the device are not covered as a result of installation.
- Observe the permitted mounting positions (Page 24).

3.2.2 Positions of the mounting clips

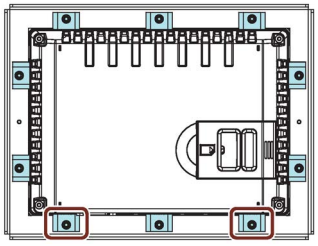
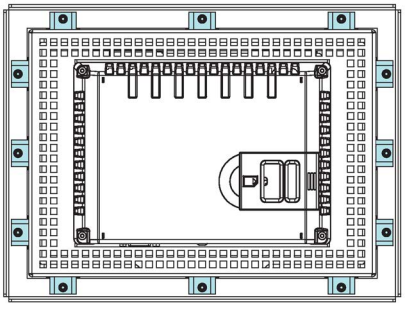
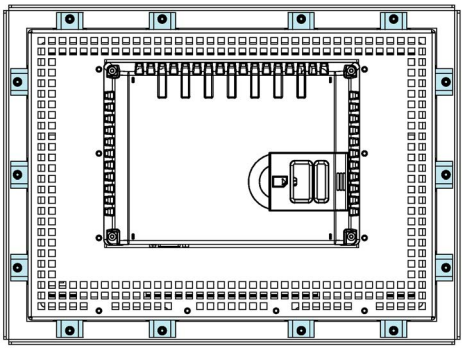
You fasten the devices with the mounting clips from the accessory kit.

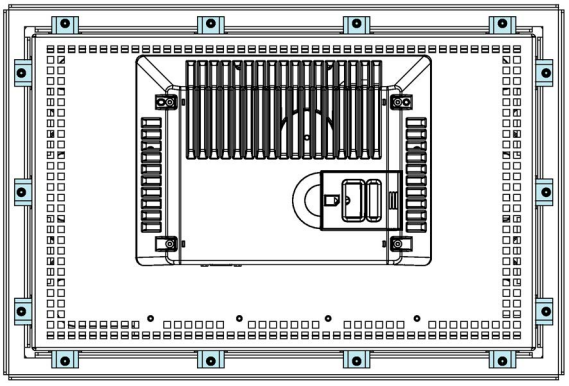
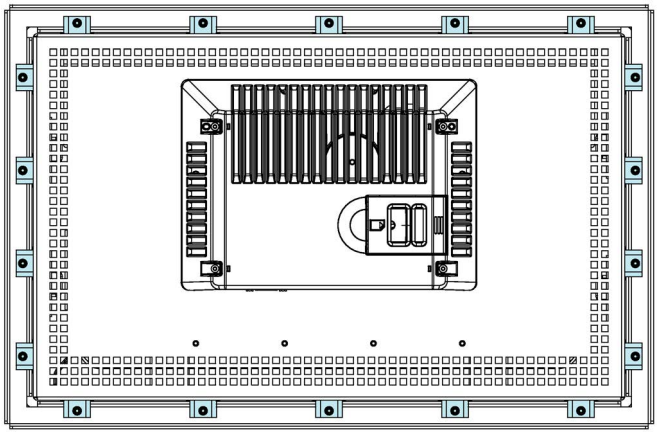
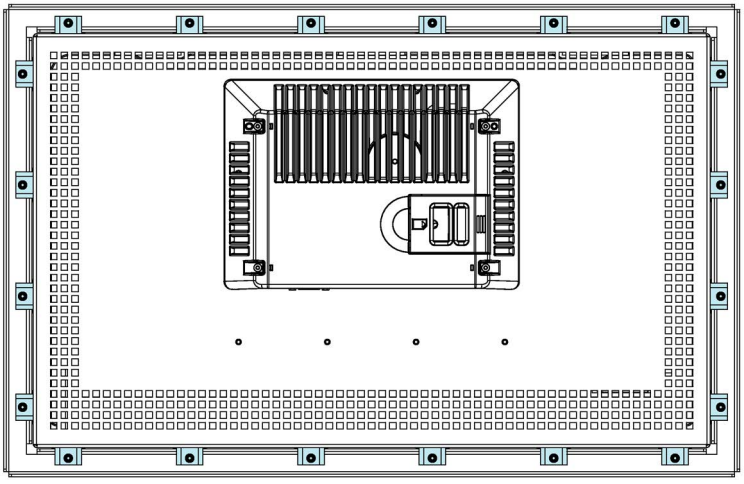


All hygienic devices with display diagonals ≥10" have two recesses for a mounting clip at each required position.

The 7" device with cast aluminum frame has a different frame geometry. Ensure the correct positioning of the mounting clips for this device.

To achieve degree of protection IP69 for the respective device, the mounting clips must be fitted at the positions shown below.

Device	Positions of the mounting clips
MTP700 Unified Comfort Hygienic The scope of delivery includes two short set screws. These are needed if the material at the mounting cutout is more than 1.5 mm thick. In this case, use one mounting clip each with the short set screw at the "bottom left" and "bottom right" positions marked in red in the adjacent figure.	
MTP1000 Unified Comfort Hygienic	
MTP1200 Unified Comfort Hygienic	

Device	Positions of the mounting clips
MTP1500 Unified Comfort Hygienic	
MTP1900 Unified Comfort Hygienic	
MTP2200 Unified Comfort Hygienic	

3.2.3 Inserting the mounting seal

Note

Use a new mounting gasket for each installation, because the promised degree of protection cannot be guaranteed otherwise.

Requirement

- Before mounting, remove all packaging components.

Procedure

1. Place the device face down on a soft surface.
2. Insert the mounting gasket on the back of the stainless steel frame. Make sure that the nubs of the gasket are facing downward as shown in the example figure below.

3. Carefully press the first nub on one corner of the gasket into the associated hole on the front.
4. Starting from the corner, successively attach all the remaining nubs into their holes.

Note

Devices with display diagonals 15" and higher

Devices with display diagonals ≥15" have holes at the corners and elongated holes in the middle edge area. The nubs of the gaskets have been stamped in a similar way.

Thus, you can compensate for possible warping of the gasket between two corners.

5. Check the correct fit of the mounting gasket.

   The mounting gasket is inserted correctly when the following conditions are met:

   - All nubs are seated in the respective holes.
   - The mounting gasket lies fully flat against the back of the stainless steel frame.
   - The edge of the mounting gasket is flush with the edge of the stainless steel frame all around.

3.2.4 Mounting the device with clamping frame and mounting clips

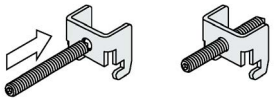
This section describes the design of the hygienic HMI devices using the MTP1500 Unified Comfort Hygienic as an example.

Requirement

For mounting you need:

- The supplied clamping frame
- A torque screwdriver with 2.5 mm hex socket insert
- The mounting clips and set screws from the accessory kit

  Screw the set screws into the mounting clips before mounting.



Note

Two short set screws for MTP700

The MTP700 accessory kit contains two additional short set screws. These are needed if the material at the mounting cutout is more than 1.5 mm thick. In this case two of the long set screws are not needed and can serve as spares.

Procedure

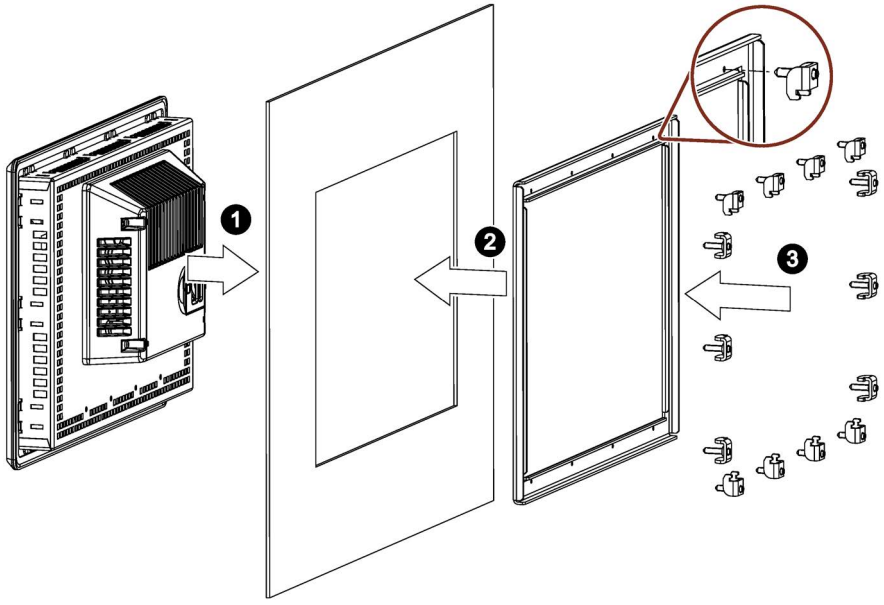
⚠ CAUTION

Risk of injury when device falls

An unsecured device may fall. This can result in damage to persons, machines and the device.

Secure the device against dropping during the entire installation. If necessary, work in pairs when installing the device.

1. Insert the device with inserted mounting gasket into the mounting cutout.
2. Place the clamping frame on the rear of the device.



3. Insert the mounting clips one after the other at the designated positions and carefully tighten the set screws until the gasket of the HMI device lies flat on the mounting cutout.

   The tip of the set screws must reach into the respective center hole of the clamping frame as shown.

   Note

   Use two short set screws for MTP700 if the material thickness is >1.5 mm

   The following applies when mounting the MTP700 in a mounting cutout with a material thickness >1.5 mm: Use two mounting clips with short set screws at the "bottom left" position (next to the power supply socket) and "bottom right" position (next to the USB ports).

4. Tighten the set screws of the mounting clips in a criss-cross pattern starting from the corners using the torque screwdriver and tightening torque 1.5 Nm.

   Due to the setting behavior of the clamping frame and gasket, we recommend repeating the completed tightening action a second time.

5. Check that the mounting gasket of the front panel is fully seated inside the mounting area and is pressed firmly against it.
6. Check the correct fit of the mounting gasket.
   - The edge of the mounting gasket must be flush with the front panel all around.
   - The edge may protrude by about 0.1 to 0.75 mm.

3.2.5 Mounting the strain relief plate

Mount the strain relief plate included in the scope of delivery in the same way as described in the "Unified Comfort Panels (http://support.automation.siemens.com/WW/view/en/109795870)" operating instructions.

3.3 Connecting the device

The information in the "Unified Comfort Panels (http://support.automation.siemens.com/WW/view/en/109795870)" operating instructions applies to the connection of the device.

3.4 Removing the device

The HMI device is generally removed in the reverse order used for installing and connecting.

Procedure

Proceed as follows:

1. If a project is running on the HMI device, close the project with the HMI device configured for this purpose. Wait until the Control Panel is displayed.
2. Switch off power to the HMI device.
3. When you use the HMI device in a hazardous area, make sure that one of the two following requirements is met: The area is no longer hazardous or the device and its plug-in connections are de-energized.
4. Remove all cable ties on the HMI device used for strain relief.
5. Remove all plug-in connectors and the equipotential bonding cable from the HMI device.
6. Secure the HMI device so that it cannot fall out of the mounting cutout.
7. Loosen the screws of the mounting clips and remove all mounting clips.
8. Remove the clamping frame.
9. Take the HMI device out of the mounting cutout.

See also

Connecting the device (Page 34)

Mounting the device with clamping frame and mounting clips (Page 32)

3.5 Securing cables for use in hazardous areas

When devices with Ex approval are used in hazardous areas, note that the connectors must be secured in a captive manner at the interfaces.

⚠ WARNING

Explosion hazard from sparks when connectors come loose

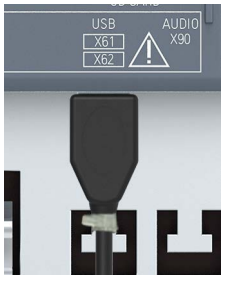
If a plug connector comes loose from the associated device interface during operation in a hazardous area, a spark over at the interface may cause an explosion. Death or serious physical injury as well as property damage may result.

For use in hazardous areas, it must be ensured that the plug connectors of the cables are fully connected to the respective interface and cannot come loose from the interfaces in any case. For SIMATIC HMI Unified Comfort hygienic devices, this risk exists only at the USB ports.

Secure all connected USB cables directly at the transition between connector and cable to the nearest mounting element using a cable tie. Tighten up all cable ties in such a way that they fully wrap around the respective cable but do not damage the cable.

For securing the connected USB cables, use the appropriate mounting elements, as described in the previous chapter.

The following figure shows an example of how to secure a USB connector in a captive manner.



Configuring the device

4

Software required

Use only the software SIMATIC WinCC Unified V17 or higher to configure the Unified Comfort hygienic HMI devices.

Compatibility

Use the article number of the corresponding Unified Comfort HMI device for configuring a Unified Comfort hygienic HMI device.

Hygienic HMI device	Article number	Based on HMI device, article number for configuration
MTP700 Unified Comfort Hygienic	6AV2128-3GB40-0AX0	MTP700 Unified Comfort, 6AV2128-3GB06-0AX1
MTP700 Unified Comfort Hygienic Neutral	6AV2128-3GB70-0AX0	
MTP1000 Unified Comfort Hygienic	6AV2128-3KB40-0AX0	MTP1000 Unified Comfort, 6AV2128-3KB06-0AX1
MTP1000 Unified Comfort Hygienic Neutral	6AV2128-3KB70-0AX0	
MTP1200 Unified Comfort Hygienic	6AV2128-3MB40-0AX0	MTP1200 Unified Comfort, 6AV2128-3MB06-0AX1
MTP1200 Unified Comfort Hygienic Neutral	6AV2128-3MB70-0AX0	
MTP1500 Unified Comfort Hygienic	6AV2128-3QB40-0AX0	MTP1500 Unified Comfort, 6AV2128-3QB06-0AX1
MTP1500 Unified Comfort Hygienic Neutral	6AV2128-3QB70-0AX0	
MTP1900 Unified Comfort Hygienic	6AV2128-3UB40-0AX0	MTP1900 Unified Comfort, 6AV2128-3UB06-0AX1
MTP1900 Unified Comfort Hygienic Neutral	6AV2128-3UB70-0AX0	
MTP2200 Unified Comfort Hygienic	6AV2128-3XB40-0AX0	MTP2200 Unified Comfort, 6AV2128-3XB06-0AX1
MTP2200 Unified Comfort Hygienic Neutral	6AV2128-3XB70-0AX0	

Projects of the corresponding HMI devices are compatible, which means you can use the configuration of a Unified Comfort HMI device for a Unified Comfort hygienic HMI device.

Note

"Backup", "Restore" and "Automatic Backup"

The "Backup", "Restore" and "Automatic Backup" functions are compatible for HMI devices with the same article number. This means you can do the following:

- Restore the backup of a Unified Comfort HMI device on a Unified Comfort hygienic HMI device, and vice versa.
- Use the system memory card of a Unified Comfort HMI device in a Unified Comfort hygienic HMI device, and vice versa.

Maintenance and repairs

5

5.1 General information on maintenance and servicing

Observe the following when servicing and repairing protective equipment such as ground circuits or overvoltage protection components:

- Observe the maintenance and replacement intervals specified by the manufacturer.
- Replace plant components, including external cables, fuses and batteries only with equivalent components approved by the respective manufacturer.

Scope of maintenance

The HMI device is designed for maintenance-free operation.

Proper handling and regular cleaning extend the service life of the front panel. The front panel consists of:

- Stainless steel frame
- Display with capacitive multi-touch screen and anti-shatter film
- Mounting gasket

Regularly check the mounting gasket and anti-shatter film for damage. Replace a damaged gasket or a device with damaged anti-shatter film before commissioning the plant.

The components on the front panel have different resistances to chemical and mechanical influences. Be sure to observe the information and instructions for cleaning the device in the next section.

5.2 Cleaning and caring for the device

The HMI device is designed for low-maintenance operation.

If the HMI device is installed properly, it is typically only necessary to clean the glass front of the HMI device.

Note

Cleaning the rear of the device

If the rear of the device needs to be cleaned after it has been installed correctly, observe the following instructions:

- To clean the rear of the device, the enclosure or the cabinet in which the HMI device is integrated must be opened. The enclosure or cabinet may only be opened if the following requirements are met:
  - If you use the HMI device in a hazardous area, make sure that no potentially explosive atmosphere is present.
  - Before you open the control cabinet, disconnect it from the power supply. Observe the five safety rules for working in and on electrical systems.
- Use dry ESD cleaning cloths to clean the rear of the device.
- Observe the ESD protective measures.

5.2.1 General information on cleaning

The front panel is protected against the ingress of liquids according to the degree of protection. In particular, the following degrees of protection apply:

- IP69 degree of protection on the front according to EN 60529
- IP66K degree of protection on front according to ISO 20653

You can find more information in section "Information on insulation tests, protection class and degree of protection (Page 53)".

Just as you foam and disinfect your machine and rinse away product residues with a steam jet and high-pressure cleaner, you can also clean the front panel of the mounted device. Observe the following notes for this.

WARNING

Danger of explosion when cleaning in hazardous areas

If you use a dry cloth to clean the front panel in a hazardous area, static electricity may be discharged. This can trigger an explosion resulting in injuries and machine damage.

- Do not use a dry cloth to clean the front panel.
- Use a well moistened cloth or a suitable anti-static cleaning device.

NOTICE

Permissible and non-permissible cleaning agents and cleaning tools

Impermissible and unsuitable cleaning agents and cleaning tools can damage the HMI device.

Not permitted:

- Do not clean the HMI device using aggressive solvents, cleaning agents or disinfectants, greasing or abrasive detergents, concentrated acids or caustic solutions.

  Do not use chlorine or chlorides, e.g. active chlorine, to clean the stainless steel frame.

  You can find detailed information in section "Chemical Resistance (Page 43)".
- Do not use a laser beam, ultrasound or dry ice to clean any part of the front panel.
- Do not clean protein-containing product residues with temperatures above 60 °C. Otherwise, the protein will curdle and stick to the surface.
- Do not clean the surface with pointed, sharp or scratching tools such as knives, brushes or coarse cloths.

Permitted:

- Use commercially available glass or plastic cleaners for cleaning the front panel.

NOTICE

Permissible and non-permissible cleaning methods

Impermissible and unsuitable cleaning methods can damage the HMI device.

Not permitted:

- Thermal disinfection, e.g. with hot steam, damages the front panel, especially the touch sensor.
- Cleaning with steam cleaners.

Permitted:

- Spraying with detergents or disinfectants and rinsing afterwards.
- Rinsing off, especially when removing adhering residues of cleaning agents or disinfectants.
- Cleaning with a powerful water jet under increased pressure in accordance with DIN EN 60529:2014-09.
- Cleaning with a high-pressure cleaner in accordance with DIN EN 60529:2014-09. Observe section "Working with pressure washers (Page 41)".
- Wiping along the edges (stainless steel frame).

Note

Prevent unintended reactions during cleaning

If you clean the front panel while it is switched on, you can trigger inadvertent operations on the touch screen.

Switch off the HMI device during cleaning.

5.2.2 Cleaning the device front

Cleaning interval

We recommend cleaning the HMI device at regular intervals, depending on the cleanliness requirements of the user:

- After no more than 8 hours of continuous use, but no later than when the device becomes visibly dirty.
- After an extended interruption of operation, clean the device before re-commissioning it.
- We also recommend cleaning the device at the start of an extended interruption to prevent deposits from drying on the surface.

Procedure

1. If a project is running on the HMI device, close the project.
2. Switch off the HMI device.
3. Roughly clean the front of the appliance with water.
4. Apply detergents or disinfectants according to the manufacturer's instructions.
5. Allow the detergents or disinfectants to act as specified by the manufacturer.
6. Rinse with drinking water.

Procedure in case of cross-contamination

If there is a possibility of cross-contamination (e.g. hand contact with products) during operation, follow the procedure below:

- Remove visible buildup immediately.
- Avoid direct contact of foodstuff with the anti-shatter film.
- Prevent foodstuff removed from the device from getting back into the production process.

5.2.3 Working with pressure washers

The HMI device can be used on machines that are cleaned with high pressure.

NOTICE
Damage caused by steam cleaners Hot steam can damage the HMI device. Do not clean the HMI device with steam cleaners. **Risk of contamination by high-pressure cleaner** When high-pressure cleaners are used, areas that have already been cleaned can be contaminated again: • Due to particles of dirt or aerosols swirling up • Due to draining wastewater This is why high-pressure cleaners are generally not recommended for machine and plant cleaning in the hygiene sector.

Notes on high-pressure cleaning

If possible, do not clean the HMI device directly and repeatedly with the high-pressure cleaner.

- Use only clean water.
- Cover sensitive areas beforehand.

When cleaning with a high-pressure cleaner, it must be guaranteed that you can manually regulate the pressure. The high-pressure cleaner must be set in such a way that the HMI device is not damaged.

- Avoid pressures > 100 bar
- The front panel can be cleaned with up to 80 °C water for a maximum of 3 minutes and must then cool down again. Avoid temperatures > 80°C
- Use only nozzles suitable for the device and the objects to be cleaned, for example, the machine, container or floor and that are suitable for this purpose.

  A fan nozzle is suitable for the machine, for example, a spot jet nozzle is unsuitable. Refer to the manufacturer's documentation.
- If necessary, use a flat jet nozzle and keep a distance of at least 50 cm.

NOTICE
Observe the ambient conditions During cleaning work, adhere to the permissible ambient conditions, especially the operating temperature, see section "Operating Conditions (Page 53)".

We recommend the following temperature settings for the high-pressure cleaner:

- For light soiling: 30 - 50 °C
- For protein-containing soiling: Maximum 60 °C

The HMI device may be damaged if the pressure is too high or is concentrated at a single point. Avoid damage from excessive pressure when handling the high-pressure cleaner.

- Always keep the high-pressure jet in motion and work the surfaces quickly.
- Always aim the high-pressure jet at the object to be cleaned from a greater distance at first.
- Do not aim the high-pressure cleaner directly at the device or the cleaning jet at a single point.
- Maintain a minimum distance of 50 cm from the device.

5.2.4 Working with stainless steel surfaces

Cleaning guidelines

Further information on stainless steel surfaces:

- The surface should be properly ventilated.
- Keep the surface clean. Remove cleaning agents and foodstuff residues immediately. Ensure that foodstuff splatters are not returned back in the production process.
- If mechanical cleaning is necessary, do not use any metallic cleaning devices or aids for this.
  - Clean with brushes made of plastic or natural bristles or with microfiber pads.
  - Use plenty of water to clean the surface.
- Make sure surface is not damaged: Do not damage the device during operation, or by cleaning or repairing it using hard tools, in particular tools made of corrodible materials.
- Ensure that the surface does not come into contact with parts that can rust.

  This includes water pipes, filings, residue from wire brushes or steel wool. These can cause rust film and/or rust spots on stainless steel surfaces.
  - Remove any stains or rust immediately.
  - Remove new rust spots with a mild abrasive detergent in order to prevent any further corrosion.
  - Rinse thoroughly with clean water after each cleaning.
- Ensure that the cleaning agent is completely removed without any residue.

5.2.5 Chemical Resistance

ECOLAB test

The front panel has been tested for resistance to the following chemicals.

Cleaning agent	Type	Concentration
Topactive 200	Alkaline foam cleaning agent (thin film cleaner)	5%
Topaz MD5	Alkaline foam cleaning agent	5%
Topax 66	Alkaline chlorine-containing foam cleaning and disinfecting agent	5%
Topaz AC3	Acid foam cleaning agent (phosphoric acid-based)	5%
Topaz AC4	Acid foam cleaning agent (organic acid-based; phosphate-free)	5%
Topax 91	Neutral foam disinfecting agent (QAV-based)	3%
Topax 990	Neutral foam disinfecting agent (amino acetate-based)	3%
Topactive DES	Acid foam disinfecting agent (peracetic acid-based)	3%
Topactive OKTO	Acid foam disinfecting agent (per octanoic acid-based, peracetic acid-based)	3%
Topax 960	Alkaline foam cleaning and disinfection agent (amines)	5%
Alcodes	Neutral surface disinfecting agent (alcohol-based)	100%
Water		100%

The front panel exhibits good resistance to the tested cleaning agents under normal cleaning conditions.

NOTICE

Damage to front panel caused by excessive concentration of cleaning agents

Only use the application concentration specified by the cleaning agent manufacturer or the concentration given in the table to clean the device.

Cleaning with a combination of substances may lead to different consequences.

If you clean the plant with untested substances, substances not suitable for the device or substances suitable for the device but in concentrations higher than those specified, we recommend taking the following measures:

- Cover the device during cleaning of the plant.
- Clean the device separately using a suitable procedure.

Stainless steel frame

Information on the resistance of stainless steel:

- The stainless steel surface is not fully resistant against the chemicals listed below:
  - Hydrochloric acid
  - Sulphuric acid
  - Sodium hydroxide
  - Chlorine
  - Chlorides

  Do not clean the stainless steel surface with these chemicals or with similar acids or caustic solutions.
- Acid steam develops, for example, when tiles are cleaned with hydrochloric acid, and is also harmful to the stainless steel. If the stainless steel parts are unintentionally contaminated with hydrochloric acid, rinse these off immediately with plenty of water.
- Clean the stainless steel surface with a cleansing agent without active chlorine.

5.3 Spare parts and repairs

Repairs

Contact your Siemens representative (https://www.siemens.com/aspa). Filter by expertise, product and region.

Your contact person will let you know if a product can be repaired and how to return it.

Contact your representative before returning a product, including when you would like to request prioritized handling of your repair, a cost estimate, a repair report or an examination report.

The representative can also provide information about spare parts, if available.

Spare parts

Spare parts and accessories for the HMI device can be found in section "Accessories (Page 13)".

5.4 Recycling and disposal

Due to the low levels of pollutants in the HMI devices described in these operating instructions, they can be recycled.

Contact a certified disposal service company for electronic scrap for environmentally sustainable recycling and disposal of your old devices and dispose of the device according to the relevant regulations in your country.

Technical specifications

6

6.1 Software license agreements

Open Source Software

Observe the software license agreements for open source software on the supplied "Open Source Software License Conditions" data storage medium.

6.2 Labels, certificates and approvals

Note

Approvals on the rating plate

The following overview shows possible approvals.

Only the approvals specified on the rating plate apply to the device.

CE marking

CE

The devices meet the general and safety-related requirements of the following EU directives and conform with the harmonized European standards (EN) published in the official gazettes of the European Union and confirmed in the EU Declarations of Conformity:

- 2014/30/EU "Electromagnetic Compatibility Directive" (EMC Directive)
- 2011/65/EU "Directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment" (RoHS Directive)

When the device has Ex approval, the following also applies:

- 2014/34/EU "Equipment and protective systems intended for use in potentially explosive atmospheres" (Directive for Explosion Protection)

EU Declarations of Conformity

The EU Declarations of Conformity are available to the relevant authorities at the following address:

Siemens Aktiengesellschaft
Gleiwitzer Straße 555
DE-90475 Nürnberg

You can also download these on the Internet using the keyword "Declaration of Conformity" at the following address: Unified Comfort Panels Hygienic certificates (https://support.industry.siemens.com/cs/ww/en/ps/29586/cert)

Enter the article number of your HMI device in the "Product" field.

UKCA marking

The devices fulfil the general and safety-related requirements of the following regulations and related amendments, and complies with the designated British standards (BS) published in the official consolidated list of the British Government.

- Electromagnetic Compatibility Regulations 2016 (EMC)
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS)

When the device has Ex approval, the following also applies:

- Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Explosion Protection)

UK Declarations of Conformity

The UK Declarations of Conformity are available to the relevant authorities at the following address:

Siemens plc
Princess Road
Manchester
M20 2UR
United Kingdom

You can also download these on the Internet using the keyword "Declaration of Conformity" at the following address: Unified Comfort Panels Hygienic certificates (https://support.industry.siemens.com/cs/ww/en/ps/29586/cert)

Enter the article number of your HMI device in the "Product" field.

UL approval

Observe the following notes:

- The device shall be supplied from an isolating source.
- Only for use in LAN, not for connection to telecommunication circuits.

Underwriters Laboratories Inc. (E120869) in accordance with

- UL 61010-1 and UL 61010-2-201
- CAN/CSA C22.2 No. 61010-1 and 61010-2-201

or

Underwriters Laboratories Inc. (E239877) in accordance with

- UL 61010-1 and UL 61010-2-201
- CAN/CSA C22.2 No. 61010-1 and 61010-2-201
- UL 121201 (Hazardous Location)
- CAN/CSA C22.2 No. 213 (Hazardous Location)

Approved for use in

- Class I, II, III, Division 2, Group A, B, C, D, E, F, G; T4
- Class I, Zone 2, Group IIC T4
- non-hazardous locations

ATEX/UKEX/IECEx approval

Notes on use in hazardous areas

Observe the following FAQ regarding the use of an HMI device in hazardous areas: FAQ 291285 (https://support.industry.siemens.com/cs/ww/en/view/291285)

When using the device in hazardous areas, ensure that all plugs connected to the device are secured in a captive manner, see section "Securing cables for use in hazardous areas (Page 35)".

You can find more information about explosion protection, EU/UK Declarations of Conformity and other certificates on the Internet at the following address:

Unified Comfort Panels Hygienic certificates (https://support.industry.siemens.com/cs/ww/en/ps/29586/cert)

ATEX/UKEX approval

For an HMI device with "Ex" marking, the following approvals apply according to the following standards.

- Standards:
  - EN IEC 60079-0
  - EN IEC 60079-7
  - EN 60079-31
- Approvals:

	II 3 G	Ex ec IIC T4 Gc
	II 3 D	Ex tc IIIC Dc

IECEx approval

For an HMI device with "IECEx" marking, the following approvals apply according to the following standards.

- Standards:
  - IEC 60079-0
  - IEC 60079-7
  - IEC 60079-31
- Approvals:

	Ex ec IIC T4 Gc
	Ex tc IIIC Dc

CCCEx approval

The following approvals according to the following standards are valid for a device with the "CCC" marking.

- Standards:
  - GB/T 3836.1 (Explosive atmospheres - Part 1: Equipment - General requirements)
  - GB/T 3836.3 (Explosive atmospheres - Part 3: Equipment protection by increased safety "e")
  - GB/T 3836.31 (Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t")
- Approvals:
  - Ex ec IIC T4 Gc
  - Ex tc IIIC Dc

Special conditions of use

- The front of the HMI device provides a degree of protection of at least IP65.

  The front of the HMI device must be installed in a certified enclosure which offers a degree of protection of at least IP54 in accordance with GB/T 3836.1 for Group II, IP54 in accordance with GB/T 3836.1 for Group IIIA and IIIB and IP6X in accordance with GB/T 3836.1 for Group IIIC.

  During use, make allowances for the ambient conditions.
- The devices must be installed in such a way that the risk of mechanical danger is low.
- To avoid an electrostatic charge, wipe the enclosure surface with a damp cloth only.
- When installed in accordance with the operating temperature specified in Table 1 of the prototype test certificate, a maximum temperature classification of T70 °C can be specified.
- When used in an area requiring the use of equipment with EPL Gc, the following additional conditions apply:
  - The equipment shall only be used in an area of not more than pollution degree 2, as defined in GB/T 16935.1.
  - Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119 V.

IEC 61010-2-201

The devices meet the requirements and criteria of the IEC 61010 standard, Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-201: Special requirements for control equipment.

IEC 61131

The devices meet the requirements and criteria of IEC 61131-2, Programmable Logic Controllers, Part 2: Operating resource requirements and tests.

RCM AUSTRALIA/NEW ZEALAND

This product meets the requirements of EN 61000-6-4 Generic standards – Emission standard for industrial environments.

KOREA

This product satisfies the requirement of the Korean Certification (KC Mark).

이 기기는 업무용(A급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

Note that this device conforms to Limit Class A for emission of radio interference. This device can be used in all areas except the residential area.

Identification for Eurasion Customs Union

EAC (Eurasian Conformity)

- Customs union of Russia, Belarus and Kazakhstan
- Declaration of conformity according to Technical Regulations of the Customs Union (TR CU)

6.3 Electromagnetic compatibility

The device fulfills, amongst others, the requirements of the EMC directive applicable to the European domestic market.

Installing the device according to EMC directive

EMC-compliant mounting of the device and the use of interference-proof cables provide the basis for interference-free operation.

Observe the following manuals in addition to these operating instructions:

- Designing interference-free controllers (https://support.industry.siemens.com/cs/ww/en/view/59193566)
- Industrial Ethernet/PROFINET – Passive network components (https://support.industry.siemens.com/cs/ww/en/view/84922825)

Pulse-shaped disturbance

The following table shows the electromagnetic compatibility of the modules with regard to pulse-shaped interference. The precondition for electromagnetic compatibility is that the device meets the specifications and guidelines for electrical installation.

Pulse-shaped interference	Tested with	Corresponds to Test level
Electrostatic discharge in accordance with IEC 61000-4-2	Air discharge: 8 KV	3
	Contact discharge: 6 kV (front)	
	Contact discharge: 4 kV (rear)	2
Bursts (high-speed transient interference) in accordance with IEC 61000-4-4	2 kV supply cable 1 kV signal line, < 30 m	3
	2 kV signal line, > 30 m	4
High-energy single pulse (surge) according to IEC 61000-4-5 Coupling process: 42 Ω, 0.5 µF [1]	Asymmetrical coupling (line to ground):	
	• 1 kV supply line, DC voltage	2
	• 1 kV signal line/data cable, > 30 m	
	Symmetrical coupling (line to line):	
	• 0.5 kV power cable, DC voltage	2
	• 1 kV signal line, > 30 m,	3

[1] Basically, you must connect the HMI device to your own distribution system (or batteries) via an upstream local power supply unit. If you connect the HMI device directly to your own distribution system, you must provide additional protective measures against overvoltage.

Sinusoidal interference

The following table shows the EMC behavior of the modules with respect to sinusoidal interference. This requires the device to meet the specifications and directives for electrical installation.

Sinusoidal interference	Test values
HF radiation (electromagnetic fields) according to IEC 61000-4-3	80% amplitude modulation at 1 kHz • to 10 V/m from 80 MHz to 1 GHz • to 3 V/m from 1.4 GHz to 6 GHz
HF current feed on cables and cable shields according to IEC 61000-4-6	Test voltage 10 V, with 80% amplitude modulation of 1 kHz in the 150 kHz to 80 MHz range
Magnetic field strength according to IEC 61000-4-8	50/60 Hz; 30 A/m rms

Emission of radio interference

The following table shows the interference emission from electromagnetic fields according to EN 61000-6-4, measured at the following distance.

Radiated emission (emitted interference)

Frequency range	Measuring distance	Interference emission
30 MHz to 230 MHz	10 m	< 40 dB (µV/m) quasi-peak
230 MHz to 1000 MHz	10 m	< 47 dB (µV/m) quasi-peak
1 GHz to 3 GHz	3 m	< 76 dB peak and < 56 dB average
3 GHz to 6 GHz	3 m	< 80 dB peak and < 60 dB average

Emission of radio interference voltages

Frequency range	Interference emission
0.150 MHz to 0.5 MHz	< 79 dB quasi-peak and < 66 dB average
0.5 MHz to 30 MHz	< 73 dB quasi-peak and < 60 dB average

See also

EMC information in section "Notes about usage (Page 17)".

6.4 Mechanical ambient conditions

6.4.1 Storage conditions

The following information is for a device that is transported and stored in its original packaging.

The device was tested according to IEC 60721-3-2:2018 Class 2M4 with the following amendments and limitations:

Type of condition	Permitted range
Free fall	≤ 0.3 m
Vibration according to IEC 60068-2-6	5 .. 8.4 Hz, deflection 3.5 mm 8.4 ... 500 Hz, acceleration 1 g
Shock according to IEC 60068-2-27	250 m/s^2, 6 ms, 1000 shocks

6.4.2 Operating conditions

The following information applies to a device installed according to the specifications in these operating instructions.

The device was tested based on IEC 60721-3-3:2002 Class 3M3 with the following amendments and limitations:

Type of condition	Permitted range
Vibration according to IEC 60068-2-6	5 ... 8.4 Hz, deflection 3.5 mm 8.4 ... 200 Hz, acceleration 1 g
Shock according to IEC 60068-2-27	150 m/s^2, 11 ms, 3 shocks

Shock pulses within the specified range can be transferred to the display but do not impact the functionality of the device.

6.5 Climatic ambient conditions

6.5.1 Long-term storage

The following information applies to a device that is stored in its original packaging for longer than two weeks.

The device meets the requirements of IEC 60721-3-1:2018 Class 1K21.

6.5.2 Transport and short-term storage

The following information applies to a device that is transported in the original packaging and weather-proof packaging, and stored from some time.

The device was tested according to IEC 60721-3-2:2018 Class 2K11 with the following amendments and limitations:

Type of condition	Permitted range
Temperature	–20 ... 60 °C
Atmospheric pressure	1140 ... 660 hPa, corresponds to an elevation of -1000 to 3500 m
Relative humidity	10 ... 90 %
Pollutant concentration	In accordance with ANSI/ISA-71.04-2013 severity level G3

Note

If dewing has developed, wait until the HMI device has dried completely before switching it on.

Do not expose the HMI device to direct radiation from a heater.

6.5.3 Operating Conditions

The following information applies to a device installed according to the specifications in these operating instructions.

The HMI device is intended for weatherproof and stationary operation according to IEC 60721-3-3.

The device was tested according to IEC 60721-3-3:2019 Class 3K22 with the following amendments and limitations:

Type of condition	Mounting position	MTP700-1500	MTP1900-2200
Temperature,	Vertical	0 °C to 50 °C	0 ... 45 °C
Mounting in landscape format	Inclined, maximum inclination 35°	0 °C to 40 °C	
Temperature,	Vertical	0 °C to 40 °C	
Mounting in portrait format	Inclined, maximum inclination 35°	0 °C to 35 °C	
Atmospheric pressure [1], operation elevation	1140 hPa to 795 hPa, corresponds to an elevation of -1000 m to 2000 m		
Relative humidity	From 10% to 90%, no condensation on the rear panel of the device		
Pollutant concentration	In accordance with ANSI/ISA-71.04-2013 severity level G3		

[1] No pressure difference inside and outside of the enclosure/control cabinet permitted

Observe the Notes on use (Page 17) and section "Permitted mounting positions (Page 24)".

Note

The system components connected to the HMI device, the power supply for example, must also be suited to the respective operating conditions.

6.6 Information on insulation tests, protection class and degree of protection

Insulation test

The dielectric strength is demonstrated in the type test with the following test voltages in accordance with IEC 61010-2-201:

Circuit	Insulation tested with (type test)
Rated voltage U_e 24 V	707 V DC to other circuits / to ground
Ethernet connector	1500 V AC

Degree of pollution and overvoltage category

The device meets the following requirements according to IEC 61010-2-201:

Degree of pollution	3 (front) 1 (rear)
Overvoltage category	II

Protection against foreign objects and water

The device meets the following requirements according to the following standards.

Characteristic	Standard	Classification
Protection class	EN 61131-2	Protection class III
Degree of protection on the front, in mounted state	• EN 60529 • ISO 20653 • NEMA Enclosure Type	• IP69 • IP66K • Front face only: Type 4X indoor use only (Watertight), Type 12
Shock resistance, front display glass with anti-shatter film	Based on IEC62262	1 x 20 J
Degree of protection, on the front, for operation in hazardous areas of Zones 2 and 22	See section "Labels, certificates and approvals (Page 45)", "ATEX/IECEx approval" paragraph.	MTP700/1000/1200/1500: IP65, IP66, IP66K, IP69 MTP1900/2200: IP65, IP66, IP66K
Degree of protection, rear	EN 60529	IP20 Protection against contact with standard probes. There is no protection against the ingress of water, dust and noxious gas.

Note that the IP degree of protection and the enclosure type are only guaranteed if the following is observed:

- The mounting gasket fits completely to the mounting cut-out, see section "Inserting the mounting seal (Page 31)".
- The conditions for the mounting cut-out. Read the corresponding information in section "Preparing the mounting cutout (Page 27)".
- The device has been installed according to the information provided in this document.

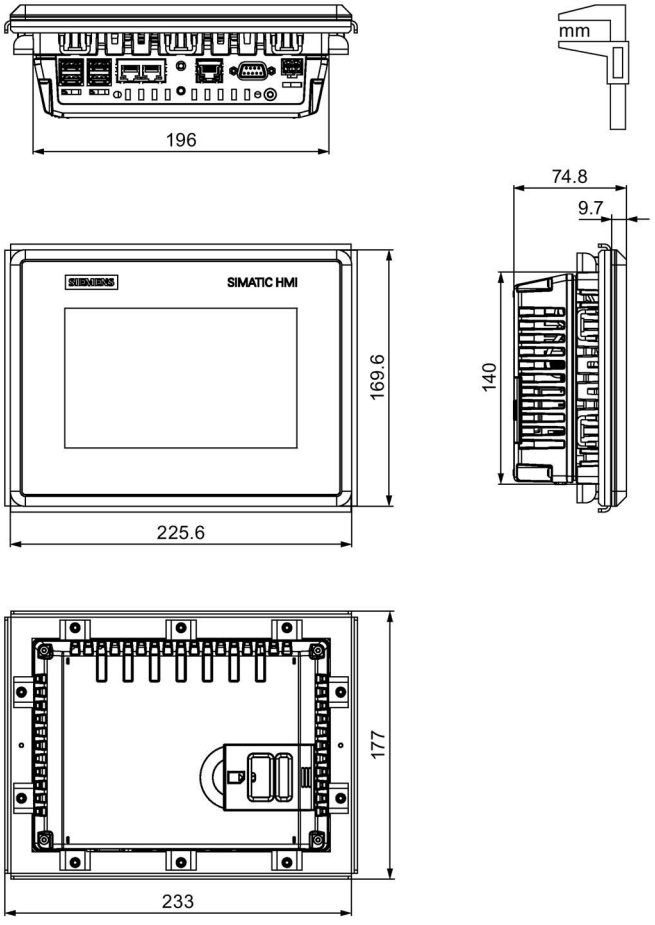
Note

The IP degrees of protection were not tested by UL.

6.7 Dimension drawings

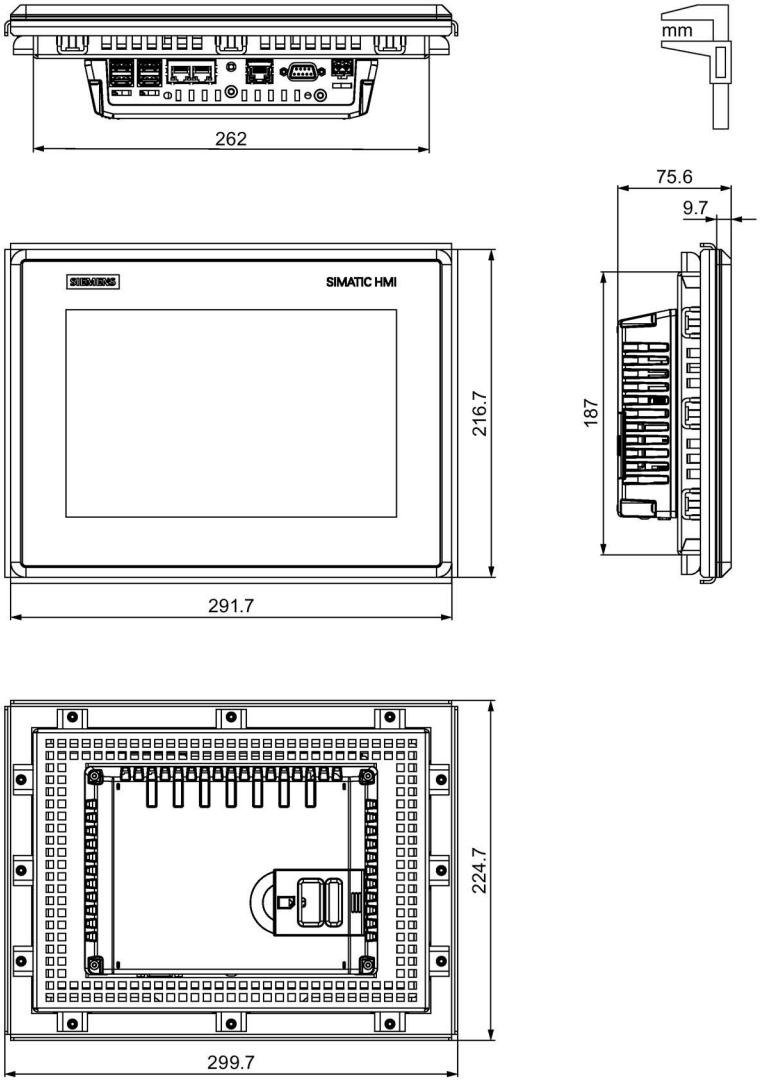
6.7.1 MTP700 Unified Comfort Hygienic

The following dimension drawings show the HMI device with mounting clips and clamping frame. The figure at the bottom contains the correct positions of the mounting clips.



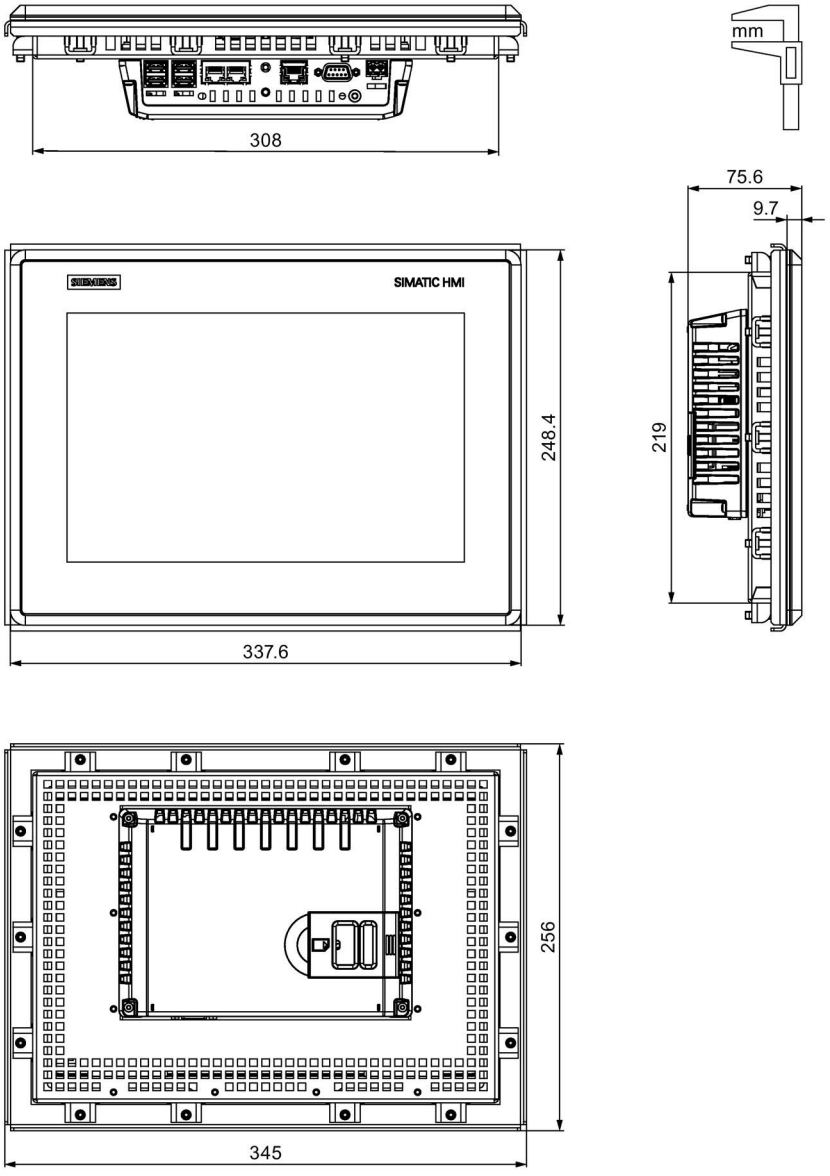
6.7.2 MTP1000 Unified Comfort Hygienic

The following dimension drawings show the HMI device with mounting clips and clamping frame. The figure at the bottom contains the correct positions of the mounting clips.



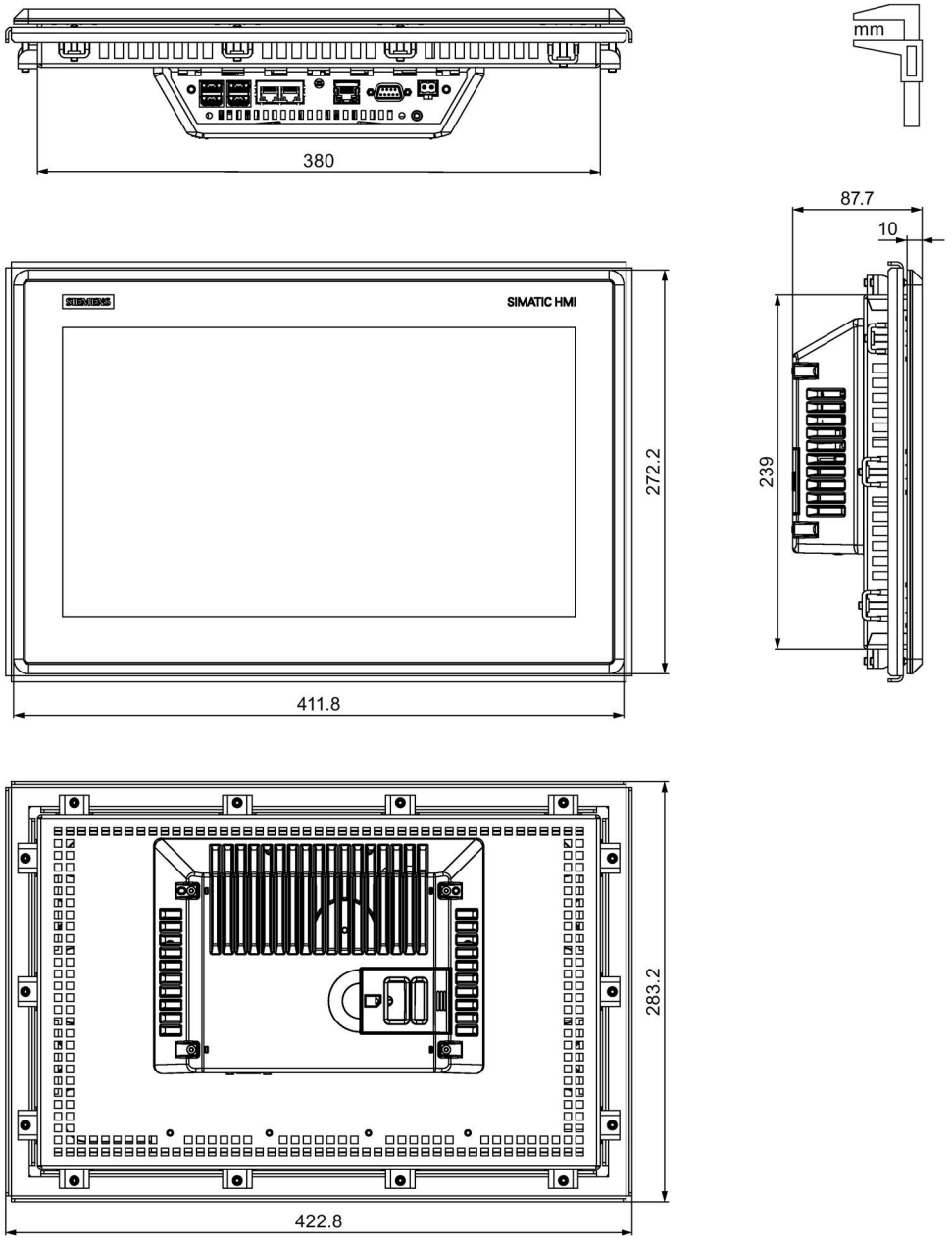
6.7.3 MTP1200 Unified Comfort Hygienic

The following dimension drawings show the HMI device with mounting clips and clamping frame. The figure at the bottom contains the correct positions of the mounting clips.



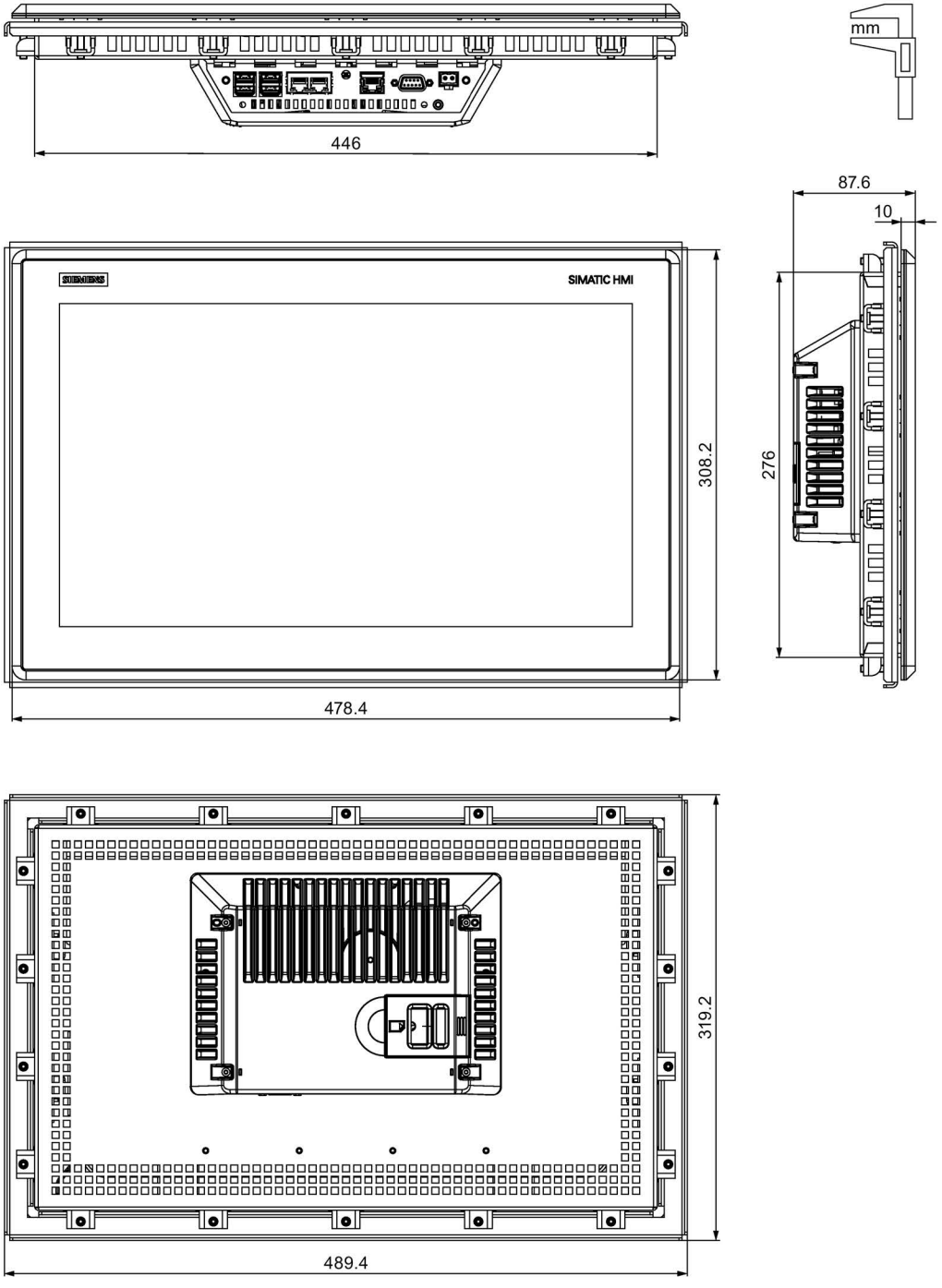
6.7.4 MTP1500 Unified Comfort Hygienic

The following dimension drawings show the HMI device with mounting clips and clamping frame. The figure at the bottom contains the correct positions of the mounting clips.



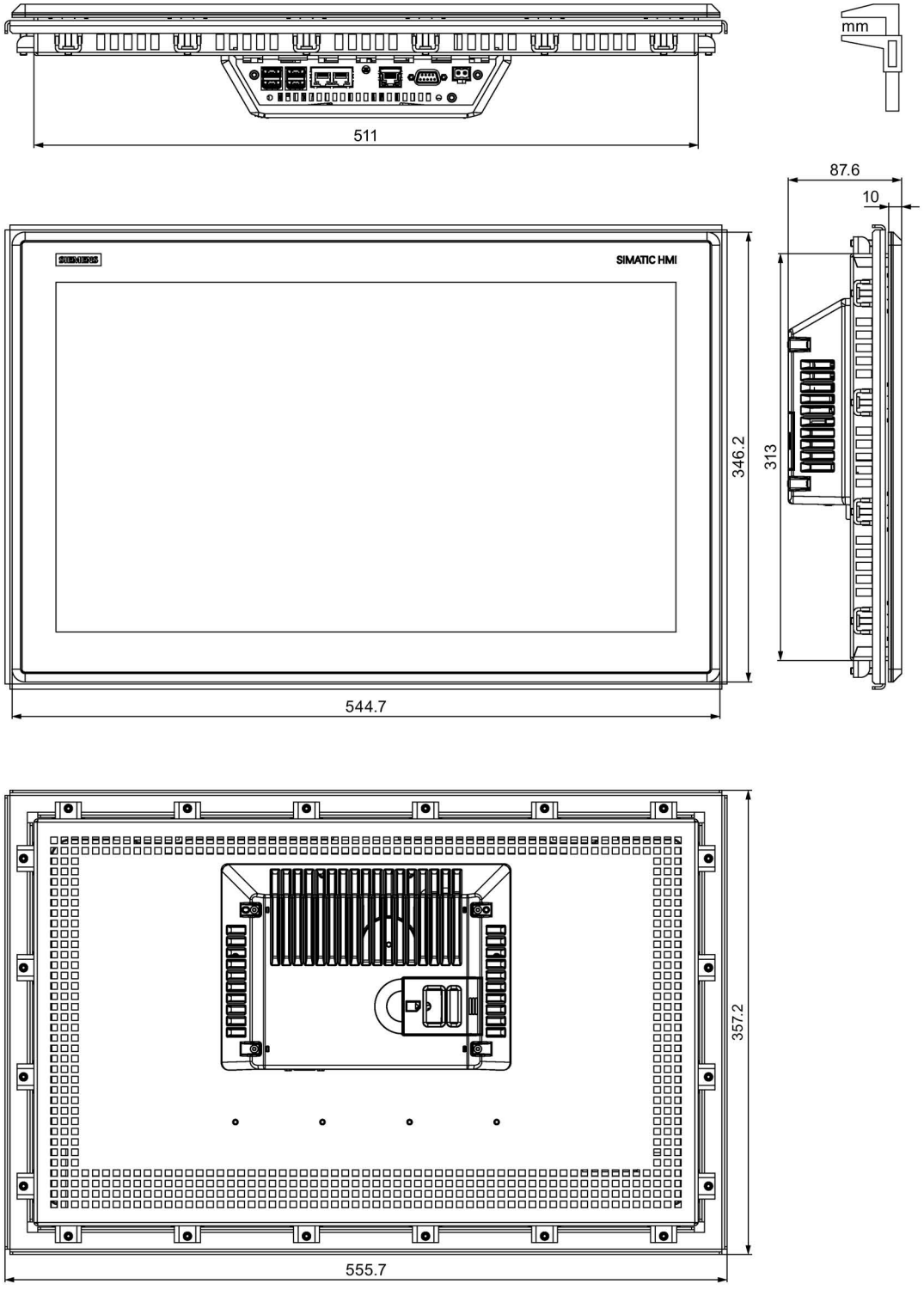
6.7.5 MTP1900 Unified Comfort Hygienic

The following dimension drawings show the HMI device with mounting clips and clamping frame. The figure at the bottom contains the correct positions of the mounting clips.



6.7.6 MTP2200 Unified Comfort Hygienic

The following dimension drawings show the HMI device with mounting clips and clamping frame. The figure at the bottom contains the correct positions of the mounting clips.



6.8 Technical specifications

Material

Component	Material
Front frame	Stainless steel 4301-304-00-I (X5CrNi18-10/ 1.4301/ V2A) according to ISO 15510
Front display glass	Float glass, chemically toughened
Anti-shatter film	Transparent plastic film, prevents escape of glass fragments
Mounting gasket	Silicone, 70 Shore-A, blue

6.8.1 MTP700, MTP1000, MTP1200 Unified Comfort Hygienic

Weight

Unified Comfort Hygienic HMI device	MTP700	MTP1000	MTP1200
Weight including gasket, clamping frame and mounting clips, without packaging	1.93 kg	2.65 kg	3.43 kg

Display

Unified Comfort Hygienic HMI device	MTP700	MTP1000	MTP1200
Type	LCD TFT		
Display diagonal	7.0"	10.1 "	12.1"
Active display area	152 x 91 mm	217 x 136 mm	261 x 163 mm
Resolution/pixels	800 x 480	1280 x 800	
Possible colors	Up to 16.7 million		
Brightness control via Control Panel, value range	5 ... 100 %		
Brightness control via WinCC, value range	0 ... 100 %, values below 5% are set to 5%		
Backlight	LED		
Half Brightness Life Time (MTBF [1])	50000 h		
Pixel error class in accordance with ISO 9241-307	I		

[1] MTBF: Operating hours after which the maximum brightness is reduced by half compared to the original value. MTBF is increased by using the integrated dimming function, for example, time-controlled via screensaver or centrally via PROFIenergy.

Power supply

Unified Comfort Hygienic HMI device	MTP700	MTP1000	MTP1200
Rated voltage	24 V DC		
Permitted voltage range	+19.2 V ... +28.8 V		
Mains and voltage buffering time	20 ms, corresponds to PS2 according to IEC 61131-2		
Rated current at 24 V DC, without loads	0.45 A	0.5 A	0.6 A
Rated current (min. ... max.), load-dependent	0.45 ... 1.0 A	0.52 ... 1.1 A	0.6 ... 1.3 A
Power consumption, without loads [1]	10.8 W	12.5 W	14.5 W
Inrush current I^2t	0.5 A^2s		
Maximum permitted transient	35 V (500 ms)		
Minimum time between two transients	50 s		

Unified Comfort Hygienic HMI device	MTP700	MTP1000	MTP1200
Internal protection	Yes		

[1] The power loss generally corresponds to the specified value for power consumption.

The current and power specifications apply without a high permanent processor load by apps.

6.8.2 MTP1500, MTP1900, MTP2200 Unified Comfort Hygienic

Weight

Unified Comfort Hygienic HMI device	MTP1500	MTP1900	MTP2200
Weight including gasket, clamping frame and mounting clips, without packaging	5.36 kg	6.63 kg	8.15 kg

Display

Unified Comfort Hygienic HMI device	MTP1500	MTP1900	MTP2200
Type	LCD TFT		
Display diagonal	15.6"	18.5"	21.5"
Active display area	344 x 193 mm	409 x 230 mm	476 x 268 mm
Resolution/pixels	1366 x 768	1920 x 1080	
Possible colors	Up to 16.7 million		
Brightness control via Control Panel, value range	10 ... 100%		
Brightness control via WinCC, value range	0 ... 100 %, values below 10% are set to 10%		
Backlight	LED		
Half Brightness Life Time (MTBF [1])	50000 h		30000 h
Pixel error class in accordance with ISO 9241-307	I		

[1] MTBF: Operating hours after which the maximum brightness is reduced by half compared to the original value. MTBF is increased by using the integrated dimming function, for example, time-controlled via screensaver or centrally via PROFIenergy.

Power supply

Unified Comfort Hygienic HMI device	MTP1500	MTP1900	MTP2200
Rated voltage	24 V DC		
Permitted voltage range	+19.2 V ... +28.8 V		
Mains and voltage buffering time	20 ms, corresponds to PS2 according to IEC 61131-2		
Rated current at 24 V DC, without loads	0.7 A	1.2 A	1.0 A
Rated current (min. ... max.), load-dependent	0.7 ... 1.3 A	1.2 A ... 1.7 A	1.0 ... 1.5 A
Power consumption, without loads [1]	16.8 W	28.8 W	24.0 W
Inrush current I^2t	0.5 A^2s		
Maximum permitted transient	35 V (500 ms)		
Minimum time between two transients	50 s		
Internal protection	Yes		

[1] The power loss generally corresponds to the specified value for power consumption.

The current and power specifications apply without a high permanent processor load by apps.

Technical Support

A

A.1 Service and support

You can find additional information and support for the products described on the Internet at the following addresses:

- Technical support (https://support.industry.siemens.com)
- Support request form (https://www.siemens.com/supportrequest)
- After Sales Information System SIMATIC IPC/PG (https://www.siemens.com/asis)
- SIMATIC Documentation Collection (https://www.siemens.com/simatic-tech-doku-portal)
- Your local representative (https://www.automation.siemens.com/aspa_app)
- Training center (https://siemens.com/sitrain)
- Industry Mall (https://mall.industry.siemens.com)
- TIA Selection Tool (https://www.siemens.com/tia-selection-tool)

When contacting your local representative or Technical Support, please have the following information at hand:

- MLFB of the device
- BIOS version for industrial PC or image version of the device
- Other installed hardware
- Other installed software

Firmware and software

Firmware and software for your HMI device are constantly being further developed. Check regularly whether software updates or patches are available for your HMI device and install the latest versions.

You can find the latest updates and patches for your HMI device on the Internet at the following addresses:

- HMI Panel Firmware (https://support.industry.siemens.com/cs/ww/en/view/109746530)
- WinCC (TIA Portal) Downloads (https://support.industry.siemens.com/cs/ww/en/ps/24212/dl)

Current documentation

Always use the current documentation available for your product. You can find the latest edition of this manual and other important documents by entering the article number of your device on the Internet (https://support.industry.siemens.com). If necessary, filter the entries by entry type "Manual".

A.2 Troubleshooting

This section contains information on localizing and rectifying possible faults.

Error message	Possible cause	Remedy
"Reset system memory card failed" "Start automatic backup failed"	System memory card is defective or wrong system memory card is inserted.	Replace the defective system memory card with a new SIMATIC SD memory card ≥ 32 GB.
"System card error"	The system memory card from a device of a different type has been inserted.	Replace the system memory card with the system memory card of a device of the same type.
		You can use the system memory card with the device without using the data of the system memory card. In this case, all the data in the "\System Card\SIMATIC.HMI\Active" folder will be deleted.

A.3 Application examples and FAQs

Application examples

You can find application examples on the Internet at the following address:
Application Examples Unified Comfort Panels
(https://support.industry.siemens.com/cs/ww/en/ps/26032/ae).

FAQs

Frequently asked questions on Unified Comfort Panels are available on the Internet at the following address: FAQs Unified Comfort Panels
(https://support.industry.siemens.com/cs/ww/en/ps/26032/faq)

A.4 System alarms

System alarms on the HMI device provide information about internal states of the HMI device and the controller.

Note

System alarms are only displayed if an alarm window was configured. System alarms are output in the language currently set on your HMI device.

System alarm parameters

System alarms may contain encrypted parameters which are relevant to troubleshooting because they provide a reference to the source code of the runtime software. These parameters are output after the text "Error code:".

Description of the system alarms

You can find a list of system events for your HMI device in the TIA Portal information system.

A.5 Information about the manufacturer

Siemens AG is the manufacturer of the HMI devices described in this document.

The manufacturer address is:

Siemens AG
Digital Industries
Postfach 48 48
90026 NÜRNBERG
GERMANY

List of abbreviations

B

B.1 Abbreviations

DC	Direct Current
ESD	Components and modules endangered by electrostatic discharge
EMC	Electromagnetic Compatibility
EN	European standard
FDA	Food and Drug Administration
GND	Ground
HF	High Frequency
IEC	International Electronic Commission
IP	Ingress protection
LED	Light Emitting Diode
TFT	Thin Film Transistor
UL	Underwriter's Laboratory
USB	Universal Serial Bus