

Instruction manual

Touch-it CE OEM glass 7

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1 Identification

Target group

This document is not intended for end customers! Necessary safety instructions for the end customer must be passed on by the machine builder or system provider and adopted in the respective national language.

Intended use

This product has not been designed, developed and manufactured for use that creates fatal risks and hazards without exceptionally assured safety measures. These include death, injury, or serious physical harm or otherwise caused loss. These represent nuclear response monitoring, nuclear control systems, air traffic control, mass transportation control, medical life support systems, and weapons systems control.

Technical changes

Christ-Electronic Systems GmbH reserves the right to change the information, designs and technical data contained in this documentation without prior notice.

Copyright

No part of this documentation may be reproduced in any form or processed, duplicated or distributed using electronic systems without the prior written consent of Christ Electronic Systems GmbH. Even translation into another language requires written permission. This documentation is entrusted exclusively to the owner of the device or employees of Christ Electronic Systems GmbH for personal use.

Trademarks

Trademark and product names are trademarks or registered trademarks of their respective owners.

History

The following editions of the manual have already been published:

Version	Comment
10/2021	First edition
12/2021	Adding the name plate


Table 1: History

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Design of safety instructions


⚠ DANGER

	<p>Indicates an imminent danger Failure to follow the instructions may result in death or serious injury</p>
---	---


⚠ WARNING

	<p>Indicates a dangerous situation Failure to observe this warning may result in serious injury or major damage to property</p>
---	--

⚠ CAUTION

	<p>Indicates a possible dangerous situation Failure to observe the advice can result in injuries or property damage</p>
--	--

NOTICE

	<p>Indicates user tips and useful information Important information to avoid malfunctions</p>
---	--

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2 Product description

Every industry has its own requirements for machine and system operation. To meet all of them, there are different housing variants with industry-specific features.

Above all, special areas of application or special environmental characteristics demand the greatest possible adaptability in the design of the touch panels.

In order to meet any requirements, Christ develops so-called OEM solutions. These are equipped with special customer-specific features.

The wide variety of OEM touch panels in terms of housing design, processor characteristics, interfaces, inch size and multi-touch technology enables customised implementation of customer requirements.

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2.1 Housing Variant CE OEM glass

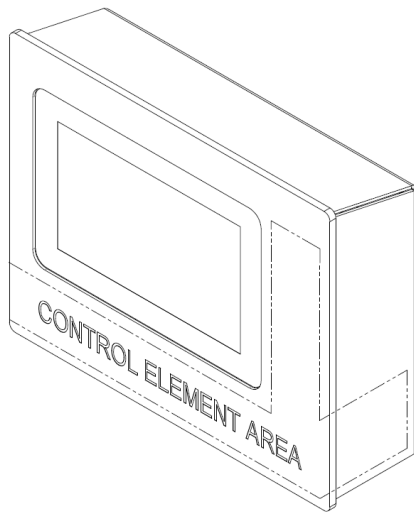


Illustration 1: CE OEM glass Front

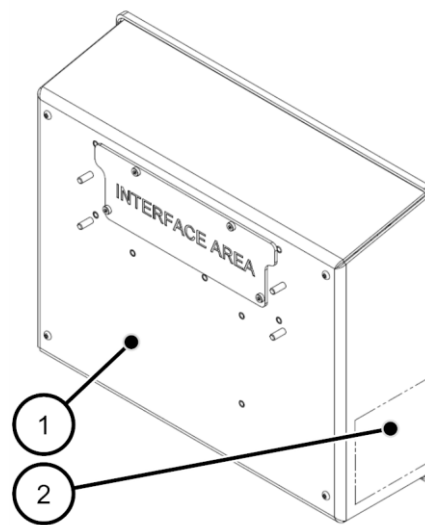


Illustration 2: CE OEM glass Rear

1	Customised Mounting
2	Control Element Area

Table 2: CE OEM glass Front and CE OEM glass Rear

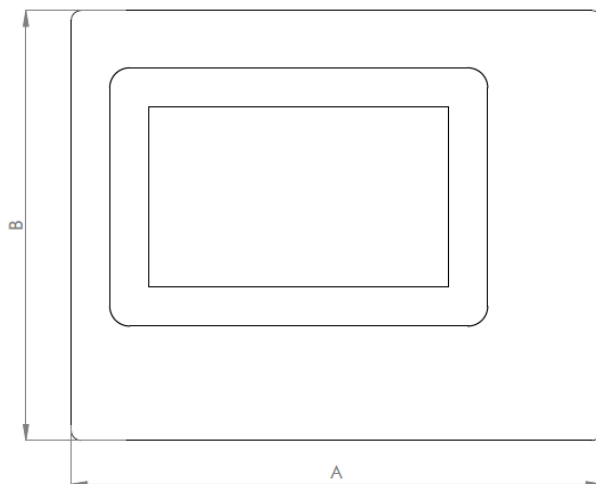
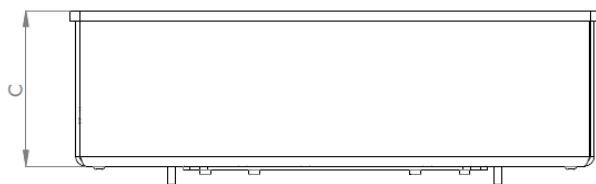


Illustration 3: Dimensions CE OEM glass

Size	A	B	C
7"	270	218.5	79*

Table 3: Dimensions CE OEM glass

* With interfaces and control elements up to 145.2 mm

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Illustration

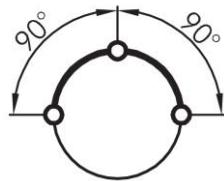
Pushbutton



Properties

Series	SHORTRON® base-plate mounting
Degree of protection	IP65
Travel	2.3 mm
Illumination	Yes, white LED
Labeling Option	Yes
Front Bezel	Silver-Coloured
Operating Temperature	-25°C ... 70°C
Contact Elements	max. 2 x NC / 2 x NO / 1 x NC + 1 x NO
Nameplate	Blue, Yellow, Green, Transparent, White

Key Switch



Zeichnung Beispielhaft

Series	SHORTRON® base-plate mounting
Degree of protection	IP65
Switching function	Maintained action
Illumination	No
Labeling Option	No
Front Bezel	Silver-Coloured
Operating Temperature	-25°C ... 70°C
Contact Elements	max. 2 x NC / 2 x NO / 1 x NC + 1 x NO

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Illustration	Properties	
Emergency Stop	Series	QUARTEX®-R
	Type	QRUV
	Degree of protection	IP65
	Illumination	No
	Labeling Option	No
	Front Bezel	Yellow
	Operating Temperature	-30°C ... 70°C
	Contact Elements	max. 5 (NC / NO)
	Switching Position Indicator	Yes
	Release	Twist right or left
	Anti-lock Collar	Yes

Table 4: Components of the Control Elements

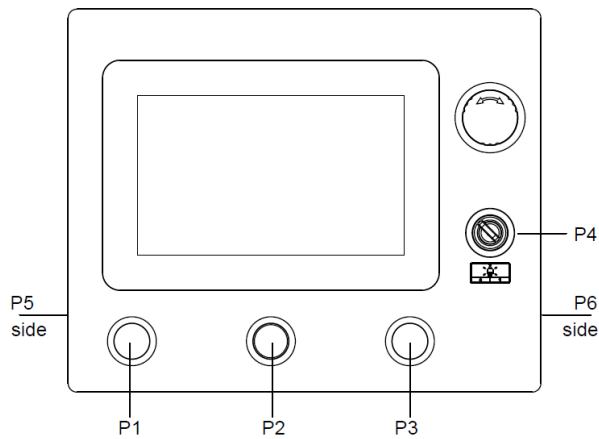


Illustration 4: Positions of the Control Elements

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P1	Push Button, non latching, normally open, C1 24 VDC, transparent lens, lighted, labelled
P2	Dummy Plug
P3	Push Button, non latching, normally open, C1 24 VDC, transparent lens, lighted, labelled
P4	Keylock Switch, latching, normally open, 1 x 90°, Shape V, 1 x key re-movable position (left)
P5	Push Button, non latching, normally open, C13, C14 and C23, C24 floating, transparent lens, lighted
P6	Dummy Plug
Emergency Stop	1 x Emergency Stop

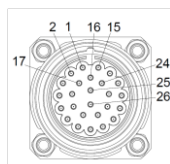
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3 Description Hardware

3.1 External Interfaces

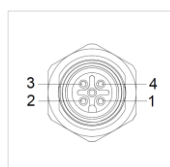
Intercontec 627 AEG A 384 MD 36 00 002K 600



PIN	Function	Description	PIN	Function	Description
1	GND	Ground	14	E_C3	Emergency Stop Contact 3
2	+ 24 V	+ 24 VDC	15	E_C6	Emergency Stop Contact 6
3	Foot Switch C24	Foot Switch Contact 24	16	E_C5	Emergency Stop Contact 5
4	Digital Input 1	Digital Input 1	17	E_C8	Emergency Stop Contact 8
5	Digital Output 1	Digital Output 1	18	E_C7	Emergency Stop Contact 7
6	Digital Input 2	Digital Input 2	19	P5_C13	Position 5 Contact 13
7	P3_C2	Position 3 Contact 2	20	P5_C14	Position 5 Contact 14
8	P3_LED	Position 3 LED	21	P5_C23	Position 5 Contact 23
9	P1_C2	Position 1 Contact 2	22	P5_C24	Position 5 Contact 24
10	P1_LED	Position 1 LED	23	P4_C13	Position 4 Contact 13
11	E_C2	Emergency Stop Contact 2	24	P4_C14	Position 4 Contact 14
12	E_C1	Emergency Stop Contact 1	25	NC	Not Connected
13	E_C4	Emergency Stop Contact 4	26	FE	Functional Earth

Table 5: Pinout Intercontec 627 AEG A 384 MD 36 00 002K 600

Binder 86 0632 1000 00004



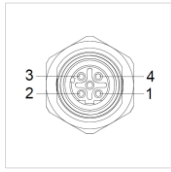
PIN	Function	Description
1	+ 24 V	+ 24 VDC
2	+ 24 V	+ 24 VDC
3	GND	Ground
4	Foot Switch C24	Foot Switch Contact 24

Table 6: Pinout Binder 86 0632 1000 00004

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Binder 09 3732 90 04



PIN	Function	Description
1	TX +	Transmit Data +
2	RX +	Receive Data +
3	TX -	Transmit Data -
4	RX -	Receive Data -

Table 7: Pinout Binder 09 3732 90 04

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4 Environmental Conditions

⚠ WARNING	
	<p>Insufficient air supply to the device</p> <p>Overheating</p> <ul style="list-style-type: none"> ➤ Never cover the device completely or operate it in a small, unventilated housing

4.1 IP Protection Class

The protection class only can be guaranteed under the following conditions:



- The device is installed correctly
- All components and covers of the interfaces are assembled
- Compliance with all environmental conditions

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5 Assembly and Commissioning

This chapter describes all the steps for assembly. The following warnings are safety instructions that must be applied throughout the assembly chapter and in every other life cycle of the device.

⚠ DANGER	
	<p>Danger from electric shock, explosion or electric arc Serious injury or death</p> <ul style="list-style-type: none"> ➤ Pull out the mains plug and do not open the covers
⚠ WARNING	
	<p>Dropping a device Injuries and bruises to the legs and / or feet</p> <ul style="list-style-type: none"> ➤ Wear safety shoes

Note for the installation site

This device is not designed for outdoor use.

Make sure that the ambient temperature and humidity are within the ranges which are specified under [Environmental Conditions](#).

Do not install the device directly in the sunlight.

Make sure that the device is installed so that is accessible for the operator.

Installation instructions

Check the package contents for any visible damage and for completeness.

In case of damage, do not install the device and contact the [Christ Service](#).

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5.1 Mounting CE OEM glass

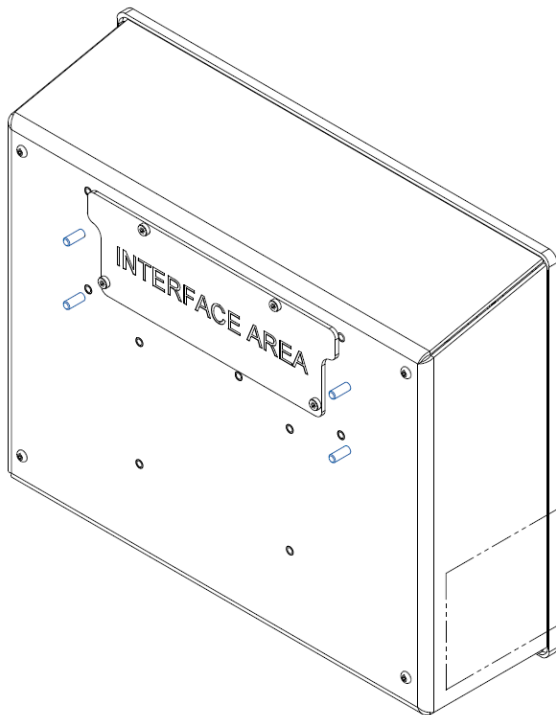


Illustration 5: Mounting CE OEM glass

The unit is mounted on the marked threaded bolts. The customer determines the fastening utensils and the tightening torque. Christ accepts no liability for damage caused by this fastening.


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6 Maintenance

The following chapter describes maintenance measures that can be performed by a qualified end user.

6.1 Cleaning

⚠ DANGER	
	<p>Triggering unintended functions Loss of control of the plant / machine / device</p> <ul style="list-style-type: none"> ➤ The unit may only be cleaned when it is switched off or unplugged.

To clean the device, use a soft cloth moistened with detergent solution or screen cleaner.

The cleaning agent must not be applied directly to the device. Under no circumstances may aggressive solvents, chemicals or scouring agents be used.

6.2 Maintenance

It does not require any maintenance on the part of the user.

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7 Technical Data

7.1 Mechanical Specifications

Housing	Aluminium / Silver, Black
Weight	max. 1.5 kg
Dimensions	See Table Dimensions
Mounting	Customised Mounting
Cooling	Passive

Table 8: Mechanical Specifications

7.2 Electromagnetic Compatibility

Emitted Interference	EN55032 Class A
Immunity of supply line DC	± 2 kV according to IEC 61000-4-4; EFT $\pm 0,5$ kV according to IEC 61000-4-5; Surge asymmetrical
Immunity of signal lines	± 1 kV according to IEC 61000-4-4; EFT
ESD	± 4 kV Contact discharge according to EN61000-4-2 ± 8 kV Air discharge according to EN 61000-4-2
Immunity of conducted emission	3 V 150 kHz – 80 MHz, 80% AM nach IEC 61000-4-6
Immunity of high-frequency radiation	3 V/m 80 MHz – 1 GHz, 80% AM nach IEC 61000-4-3 3 V/m 1 GHz – 6 GHz, 80% AM nach IEC 61000-4-3

Table 9: Electromagnetic Compatibility

7.3 Environmental Conditions

Operating Temperature	0 ~ 50 °C
Storage Temperature	-10 ~ 70 °C
Humidity	5 ~ 80 % (non condensing)
Protection Class	IP65 (IP20 rear)
Transportation and Storage	Suitable packing increases shock resistance
max. Installation Altitude	2000 m
Cooling	Natural Air Convection

Table 10: Environmental Conditions


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7.4 Display Specifications

Color Depth	8 bit
Lifetime	min. 50,000 h
Viewing Angle (right/left/up/down)	min. 85°/85°/85°/85°
Backlight	LED
Touch Technology	PCAP

Table 11: Display Specifications

NOTICE	
	<p>Pixel Errors</p> <p>Due to the manufacturing process, displays may contain faulty pixels (pixel errors), which do not constitute a claim or warranty.</p>

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The international standard ISO 9241-307:2009 defines, on an international level, the maximum possible pixel errors in an LC-display. This standard describes different error types, in consideration of different pixel error classes.

There are the following pixel error classes, each with three different error types:

Maximum acceptable errors per 1 Mio. pixels according to ISO 9241-307:2009				
error class	error type 1 pixel constantly illuminated	error type 2 pixel constantly dark	error type 3 subpixel constantly illuminated	error type 4 subpixel constantly dark
0	0	0	0	0
I	1	1	n = 0 to 2 2 - n	2 x n + 1
II	2	2	n = 0 to 5 5 - n	2 x n
III	5	15	max. 50	max. 50
IV	50	150	max. 150	max. 150

Why this classification of errors?

Each pixel of a display contains three subpixels which have the basic colors red, green and blue. The combination makes it possible to show a wide spectrum of colors.

Considering for example the display solution of 1280 x 800 pixels, thereof a total of 1,024,000 pixels or 3,072,000 subpixels are embedded in the display area. This means, the display holds 3,072,000 single transistors at an area of 261.1 mm by 163.2 mm.


These figures make it clear that it is not possible to specifically produce defect-free displays even by today's manufacturing standards.

Christ Electronic Systems GmbH therefore adapts to the corresponding requirements of most international manufacturers. The displays must always comply with error class II. If the permissible number of errors of the pixel error class II is not exceeded, there is also no complaintable "failure" of the display.

Referring to the calculation, the following errors can occur in the display:

- Max. 2 constantly illuminated and 2 constantly dark pixels
- Max. 5 constantly illuminated or 10 constantly dark subpixel

Avoid burn-in on displays

NOTICE	
	<p>Images that do not change</p> <p>"Image shadows", "ghost images" arise</p> <p>➤ Changing displayed images, screen saver, energy-saving mode</p>

With LC displays, so-called "ghost images" or "image shadows" can occur under certain circumstances. These are images that remain from the previous image and are felt to be "burnt into" the display. These do not remain forever. If "image shadows" occur, the device should be switched off for a longer period of time so that the burnt-in image disappears.

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To avoid "ghost images" or "image shadows", the following behaviour is recommended:

- Do not display still images over an extended period of time
- Change standing images at short intervals
- Switch off the unit or use the energy-saving mode when you do not need it
- Use the screen saver function

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8 Standards and Approvals

8.1 CE Marking



The device has been tested in accordance with the applicable EU directives and the associated harmonized standards.

NOTICE	
	<p>Declaration of Conformity</p> <p>The declaration of Conformity can be downloaded from the Christ Electronic Systems Homepage.</p>

8.2 RoHS



The device complies with the requirement of the EU Directive RoHS 2011/65/EU.

8.3 Electromagnetic Compatibility

The device complies with the requirements of the EU Electromagnetic Compatibility Directive 2014/30/EU with the harmonized standards listed below:

EN 55032: 2015 Class A	Electromagnetic compatibility of multimedia equipment - Emission Requirements
EN 55035: 2017	Electromagnetic compatibility of multimedia equipment - Immunity requirements

8.4 FCC Approval



The device meets the requirements of FCC for approval in the USA and Canada. This has been tested and confirmed by SGS.

FCC (Federal Communications Commission)

The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause any harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operations.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits of Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to

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cause harmful interference in which case the user will be required to correct the interference at his own expense.

Validity

Touch-it CE OEM glass 7, Prod. ID: PA10006882

Touch-it CE OEM glass 7, Prod. ID: PA10xxxxxx

Where "xxxxxx" in the ID Number may be any numeric characters. These models are variants of the Touch-it CE OEM glass 7 and are different regarding the interface connectors and the pushbuttons. These variants are subset of the ID: PA100006882.

Name Plate

Christ Alpenstraße 34
 ELECTRONIC SYSTEMS 87700 Memmingen
 www.christ-es.com

SGS 710331 UKCA CE

Touch-it CE OEM glass 7
 Prod. ID: PA10006882 Rev. 1
 Serial no.: 0216031-000-001 10.2021
 Input: = 24V
 MAC: 12:34:56:78:90:ab 12:34:56:78:90:ac
 12:34:56:78:90:ad
FCC ID: 2AVB6-PA10006882

SW-Bundle Test123
 Rev.: -1
 Serial no.

Illustration 6: Name Plate

8.5 Environmentally Appropriate Disposal

The device must not be disposed of with domestic waste.



The appliance complies with the requirement of the EU Directive WEEE 2012/19/EU, which is symbolised by the symbol with the crossed-out dustbin.

In order to enable environmentally friendly recycling, the various materials must be separated from one another.

Disposal must be carried out in accordance with the applicable legal regulations.

Component parts	Disposal
Enclosure	Metal Recycling
Electronic	Electronics Recycling
Paper / cardboard packaging	Paper / Cardboard boxes Recycling
Plastic packing materials	Plastics Recycling

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9 Technical Support

Despite the highest quality standards and detailed function tests of all our products, daily use of our devices can always lead to damage or failure of a wearing part. The failure of a machine in production costs a lot of money. That is why the Christ company processes complaints as quickly as possible.

You can send the device to us without prior notice. All you need to do is fill out the [cover letter for the repair](#) and enclose it with the touch panel or IPC so that the service department can start the repair quickly. When the device arrives, it goes through a defined process that clearly documents all processes and makes the respective status traceable. As soon as your panel or IPC is registered in our system, you will receive a confirmation of receipt so that you can also get a precise overview.

Technical Support can be contacted as follows:

Service, Repair and Technical Support

Phone: +49 8331 8371-500

Fax: +49 8331 8371-497

E-Mail: service@christ-es.de

Or directly via the Homepage.

[Christ Service](#)

9.1 Device Seal

A device seal is affixed to every Christ device in order to prove whether the device has been opened by a third party. In case of a defect, please do not open the device, but contact our service department. They will discuss the further procedure with you.

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