

## Operator panels

### SIMATIC HMI Basic Panels

#### SIMATIC HMI Basic Panels (2nd Generation)

##### Overview



SIMATIC HMI Basic Panels, 2<sup>nd</sup> generation

With their fully developed HMI basic functions, 2<sup>nd</sup> generation SIMATIC HMI Basic Panels are the ideal entry level series for simple HMI applications.

The device family offers panels with 4", 7", 9" and 12" widescreen displays, as well as combined key and touch operation.

The innovative high-resolution widescreen displays with 64 000 colors are also suitable for upright installation, and they can be dimmed down to 100 %.

The innovative operator interface with improved usability opens up a diverse range of options thanks to new controls and graphics. The new USB interface enables the connection of keyboard, mouse or barcode scanner, and supports the simple archiving of data on a USB stick.

The integrated Ethernet or RS 485/422 interface (version-specific) enables simple connection to the controller.

##### Technical specifications

Article number	<b>6AV2123-2DB03-0AX0</b>	<b>6AV2123-2GB03-0AX0</b>	<b>6AV2123-2GA03-0AX0</b>
	SIMATIC HMI KTP400 BASIC	SIMATIC HMI KTP700 BASIC	SIMATIC HMI KTP700 BASIC DP
<b>Product type designation</b>			
<b>Display</b>			
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	4.3 in	7 in	7 in
Number of colors	65 536	65 536	65 536
<b>Resolution (pixels)</b>			
• Horizontal image resolution	480 Pixel	800 Pixel	800 Pixel
• Vertical image resolution	272 Pixel	480 Pixel	480 Pixel
<b>Backlighting</b>			
• MTBF backlighting (at 25 °C)	20 000 h	20 000 h	20 000 h
• Backlight dimmable	Yes	Yes	Yes
<b>Control elements</b>			
<b>Keyboard</b>			
• Function keys			
- Number of function keys	4	8	8
<b>Touch operation</b>			
• Design as touch screen	Yes	Yes	Yes
<b>Installation type/mounting</b>			
Mounting in portrait format possible	Yes	Yes	Yes
<b>Supply voltage</b>			
Type of supply voltage	DC	DC	24 V DC
Rated value (DC)	24 V	24 V	24 V
<b>Memory</b>			
usable memory for user data	10 Mbyte	10 Mbyte	10 Mbyte
<b>Type of output</b>			
<b>Acoustics</b>			
• Buzzer	Yes	Yes	Yes
<b>Time of day</b>			
<b>Clock</b>			
• Software clock	Yes	Yes	Yes
• battery-backed	Yes	Yes	Yes
• synchronizable	Yes	Yes	Yes

### Technical specifications (continued)

Article number	<b>6AV2123-2DB03-0AX0</b> SIMATIC HMI KTP400 BASIC	<b>6AV2123-2GB03-0AX0</b> SIMATIC HMI KTP700 BASIC	<b>6AV2123-2GA03-0AX0</b> SIMATIC HMI KTP700 BASIC DP
<b>Interfaces</b>			
Number of RS 485 interfaces	0	0	1
Number of USB interfaces	1; Up to 16 GB	1; Up to 16 GB	1; Up to 16 GB
Number of SD card slots	0	0	0
<b>Industrial Ethernet</b>			
• Number of industrial Ethernet interfaces	1	1	0
<b>Protocols</b>			
PROFINET	Yes	Yes	No
IRT	No	No	No
MRP	No	No	No
PROFIBUS	No	No	Yes
MPI	No	No	Yes
<b>Degree and class of protection</b>			
IP (at the front)	65	65	65
Enclosure Type 4x at the front	Yes	Yes	Yes
IP (rear)	20	20	20
<b>Standards, approvals, certificates</b>			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
<b>Use in hazardous areas</b>			
• ATEX Zone 2	No	No	No
• ATEX Zone 22	No	No	No
• IECEX Zone 2	No	No	No
• IECEX Zone 22	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No
• FM Class I Division 2	No	No	No
<b>Ambient conditions</b>			
<b>Ambient temperature during operation</b>			
• Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C
<b>Relative humidity</b>			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
<b>Configuration</b>			
<b>Configuration software</b>			
• STEP 7 Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)
• WinCC flexible Compact	No	No	No
• WinCC Basic (TIA Portal)	Yes	Yes	Yes
<b>Languages</b>			
<b>Online languages</b>			
• Number of online/runtime languages	10	10	10

## Operator panels

### SIMATIC HMI Basic Panels

#### SIMATIC HMI Basic Panels (2nd Generation)

#### Technical specifications (continued)

Article number	<b>6AV2123-2DB03-0AX0</b> SIMATIC HMI KTP400 BASIC	<b>6AV2123-2GB03-0AX0</b> SIMATIC HMI KTP700 BASIC	<b>6AV2123-2GA03-0AX0</b> SIMATIC HMI KTP700 BASIC DP
<b>Functionality under WinCC (TIA Portal)</b>			
Applications/options			
• Web browser	Yes	Yes	Yes
Number of Visual Basic Scripts	No	No	No
Task planner	Yes	Yes	Yes
• time-controlled	No	No	No
• task-controlled	Yes	Yes	Yes
<b>Message system</b>			
• Bit messages			
- Number of bit messages	1 000	1 000	1 000
• Analog messages			
- Number of analog messages	25	25	25
• S7 alarm number procedure	No	No	No
• System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
• Message buffer			
- Number of entries	256	256	256
- Circulating buffer	Yes	Yes	Yes
- retentive	Yes	Yes	Yes
<b>Recipe administration</b>			
• Number of recipes	50	50	50
• Size of internal recipe memory	256 kbyte	256 kbyte	256 kbyte
• Recipe memory expandable	No	No	No
<b>Variables</b>			
• Number of variables per device	800	800	800
• Number of variables per screen	100	100	100
<b>Images</b>			
• Number of configurable images	250	250	100
<b>Archiving</b>			
• Number of archives per device	2	2	2
• Number of entries per archive	10 000	10 000	10 000
• Message archive	Yes	Yes	Yes
• Process value archive	Yes	Yes	Yes
• Archiving methods			
- Sequential archive	Yes	Yes	Yes
- Short-term archive	Yes	Yes	Yes
• Memory location			
- Memory card	No	No	No
- USB memory	Yes	Yes	Yes
- Ethernet	No	No	No
• Data storage format			
- CSV	No	No	No
- TXT	Yes	Yes	Yes
- RDB	No	No	No
<b>Security</b>			
• Number of user groups	50	50	50
• Number of users	50	50	50
<b>Transfer (upload/download)</b>			
• MPI/PROFIBUS DP	No	No	Yes
• Ethernet	Yes	Yes	No

**Technical specifications** (continued)

Article number	<b>6AV2123-2DB03-0AX0</b> SIMATIC HMI KTP400 BASIC	<b>6AV2123-2GB03-0AX0</b> SIMATIC HMI KTP700 BASIC	<b>6AV2123-2GA03-0AX0</b> SIMATIC HMI KTP700 BASIC DP
<b>Process coupling</b>			
• S7-1200	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	No
• Allen Bradley (DF1)	No	No	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	No
• Mitsubishi (FX)	No	No	Yes
• OMRON (FINS TCP)	No	No	No
• OMRON (LINK/Multilink)	No	No	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	No
• Modicon (Modbus)	No	No	Yes
<b>Peripherals/Options</b>			
Peripherals			
• Printer	No	No	No
• MultiMediaCard	No	No	No
• SD card	No	No	No
• USB memory	Yes	Yes	Yes
<b>Mechanics/material</b>			
Type of housing (front)			
• plastic	Yes	Yes	Yes
<b>Dimensions</b>			
Width of the housing front	141 mm	214 mm	214 mm
Height of housing front	116 mm	158 mm	158 mm
Mounting cutout, width	123 mm	197 mm	197 mm
Mounting cutout, height	99 mm	141 mm	141 mm
Overall depth	33 mm	39 mm	39 mm
<b>Weights</b>			
Without packaging	360 g	780 g	800 g

## Operator panels

### SIMATIC HMI Basic Panels

#### SIMATIC HMI Basic Panels (2nd Generation)

##### Technical specifications (continued)

Article number	<b>6AV2123-2JB03-0AX0</b> SIMATIC HMI KTP900 BASIC	<b>6AV2123-2MB03-0AX0</b> SIMATIC HMI KTP1200 BASIC	<b>6AV2123-2MA03-0AX0</b> SIMATIC HMI KTP1200 BASIC DP
<b>Product type designation</b>			
<b>Display</b>			
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	9 in	12 in	12 in
Number of colors	65 536	65 536	65 536
<b>Resolution (pixels)</b>			
• Horizontal image resolution	800 Pixel	1 280 Pixel	1 280 Pixel
• Vertical image resolution	480 Pixel	800 Pixel	800 Pixel
<b>Backlighting</b>			
• MTBF backlighting (at 25 °C)	20 000 h	20 000 h	20 000 h
• Backlight dimmable	Yes	Yes	Yes
<b>Control elements</b>			
<b>Keyboard</b>			
• Function keys			
- Number of function keys	8	10	10
<b>Touch operation</b>			
• Design as touch screen	Yes	Yes	Yes
<b>Installation type/mounting</b>			
Mounting in portrait format possible	Yes	Yes	Yes
<b>Supply voltage</b>			
Type of supply voltage	DC	24 V DC	24 V DC
Rated value (DC)	24 V	24 V	24 V
<b>Memory</b>			
usable memory for user data	10 Mbyte		10 Mbyte
<b>Type of output</b>			
Acoustics			
• Buzzer	Yes	Yes	Yes
<b>Time of day</b>			
<b>Clock</b>			
• Software clock	Yes	Yes	Yes
• battery-backed	Yes	Yes	Yes
• synchronizable	Yes	Yes	Yes
<b>Interfaces</b>			
Number of RS 485 interfaces	0	0	1
Number of USB interfaces	1; Up to 16 GB	1; Up to 16 GB	1; Up to 16 GB
Number of SD card slots	0	0	0
<b>Industrial Ethernet</b>			
• Number of industrial Ethernet interfaces	1	1	0
<b>Protocols</b>			
PROFINET	Yes	Yes	No
IRT	No	No	No
MRP	No	No	No
PROFIBUS	No	No	Yes
MPI	No	No	Yes
<b>Degree and class of protection</b>			
IP (at the front)	65	65	65
Enclosure Type 4x at the front	Yes	Yes	Yes
IP (rear)	20	20	20

### Technical specifications (continued)

Article number	<b>6AV2123-2JB03-0AX0</b> SIMATIC HMI KTP900 BASIC	<b>6AV2123-2MB03-0AX0</b> SIMATIC HMI KTP1200 BASIC	<b>6AV2123-2MA03-0AX0</b> SIMATIC HMI KTP1200 BASIC DP
<b>Standards, approvals, certificates</b>			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
<b>Use in hazardous areas</b>			
• ATEX Zone 2	No	No	No
• ATEX Zone 22	No	No	No
• IECEx Zone 2	No	No	No
• IECEx Zone 22	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No
• FM Class I Division 2	No	No	No
<b>Ambient conditions</b>			
<b>Ambient temperature during operation</b>			
• Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C
<b>Relative humidity</b>			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
<b>Configuration</b>			
<b>Configuration software</b>			
• STEP 7 Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)
• WinCC flexible Compact	No	No	No
• WinCC Basic (TIA Portal)	Yes	Yes	Yes
<b>Languages</b>			
<b>Online languages</b>			
• Number of online/runtime languages	10	10	10
<b>Functionality under WinCC (TIA Portal)</b>			
Applications/options			
• Web browser	Yes		
Number of Visual Basic Scripts	No	No	No
Task planner	Yes	Yes	Yes
• time-controlled	No	No	No
• task-controlled	Yes	Yes	Yes
<b>Message system</b>			
• Bit messages			
- Number of bit messages	1 000	1 000	1 000
• Analog messages			
- Number of analog messages	25	25	25
• S7 alarm number procedure	No	No	No
• System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
• Message buffer			
- Number of entries	256	256	256
- Circulating buffer	Yes	Yes	Yes
- retentive	Yes	Yes	Yes
<b>Recipe administration</b>			
• Number of recipes	50	50	50
• Size of internal recipe memory	256 kbyte	256 kbyte	256 kbyte
• Recipe memory expandable	No	No	No
<b>Variables</b>			
• Number of variables per device	800	800	800
• Number of variables per screen	100	100	100
<b>Images</b>			
• Number of configurable images	250	100	100

## Operator panels

### SIMATIC HMI Basic Panels

#### SIMATIC HMI Basic Panels (2nd Generation)

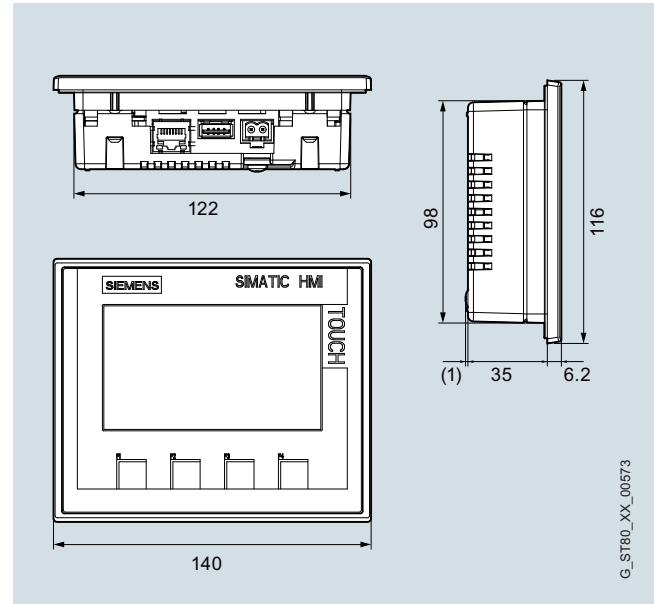
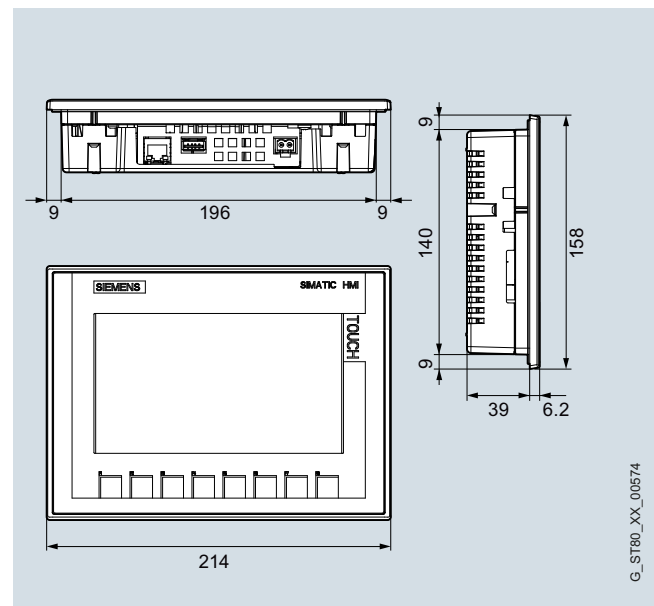
##### Technical specifications (continued)

Article number	<b>6AV2123-2JB03-0AX0</b> SIMATIC HMI KTP900 BASIC	<b>6AV2123-2MB03-0AX0</b> SIMATIC HMI KTP1200 BASIC	<b>6AV2123-2MA03-0AX0</b> SIMATIC HMI KTP1200 BASIC DP
<b>Archiving</b>			
• Number of archives per device	2	2	2
• Number of entries per archive	10 000	10 000	10 000
• Message archive	Yes	Yes	Yes
• Process value archive	Yes	Yes	Yes
• Archiving methods			
- Sequential archive	Yes	Yes	Yes
- Short-term archive	Yes	Yes	Yes
• Memory location			
- Memory card	No	No	No
- USB memory	Yes	Yes	Yes
- Ethernet	No	No	No
• Data storage format			
- CSV	No	Yes	Yes
- TXT	Yes	No	No
- RDB	No	No	No
<b>Security</b>			
• Number of user groups	50	50	50
• Number of users	50	50	50
<b>Transfer (upload/download)</b>			
• MPI/PROFIBUS DP	No	No	Yes
• Ethernet	Yes	Yes	No
<b>Process coupling</b>			
• S7-1200	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	No
• Allen Bradley (DF1)	No	No	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	No
• Mitsubishi (FX)	No	No	Yes
• OMRON (FINS TCP)	No	No	No
• OMRON (LINK/Multilink)	No	No	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	No
• Modicon (Modbus)	No	No	Yes
<b>Peripherals/Options</b>			
Peripherals			
• Printer	No	No	No
• MultiMediaCard	No	No	No
• SD card	No	No	No
• USB memory	Yes	Yes	Yes
<b>Mechanics/material</b>			
Type of housing (front)			
• plastic	Yes	Yes	Yes
<b>Dimensions</b>			
Width of the housing front	267 mm	330 mm	330 mm
Height of housing front	182 mm	245 mm	245 mm
Mounting cutout, width	251 mm	310 mm	310 mm
Mounting cutout, height	166 mm	221 mm	221 mm
Overall depth	55 mm	60 mm	60 mm
<b>Weights</b>			
Without packaging	1 130 g	1 710 g	1 710 g

Ordering data	Article No.
<b>SIMATIC HMI Basic Panels, Key and Touch</b>	
<b>SIMATIC HMI KTP400 Basic</b> Key/touch-screen operation; 4" TFT widescreen display, 65 536 colors, PROFINET interface	<b>6AV2123-2DB03-0AX0</b>
<b>SIMATIC HMI KTP700 Basic</b> Key/touch-screen operation; 7" TFT display, 65 536 colors, PROFINET interface	<b>6AV2123-2GB03-0AX0</b>
<b>SIMATIC HMI KTP700 Basic DP</b> Key/touch-screen operation; 7" TFT display, 65 536 colors, PROFIBUS interface	<b>6AV2123-2GA03-0AX0</b>
<b>SIMATIC HMI KTP900 Basic</b> Key/touch-screen operation; 9" TFT display, 65 536 colors, PROFINET interface	<b>6AV2123-2JB03-0AX0</b>
<b>SIMATIC HMI KTP1200 Basic</b> Key/touch-screen operation; 12" TFT display, 65 536 colors, PROFINET interface	<b>6AV2123-2MB03-0AX0</b>
<b>SIMATIC HMI KTP1200 Basic DP</b> Key/touch-screen operation; 12" TFT display, 65 536 colors, PROFIBUS interface	<b>6AV2123-2MA03-0AX0</b>
<b>Starter kits</b>	
<b>Starter kit SIMATIC S7-1200 + KP300 Basic mono PN</b>	<b>6AV6651-7HA01-3AA4</b>
<b>Starter Kit SIMATIC S7-1200 + KTP400 Basic</b>	<b>6AV6651-7KA01-3AA4</b>
<b>Starter Kit SIMATIC S7-1200 + KTP700 Basic</b> Starter kits with an S7-1200 consist of:	<b>6AV6651-7DA01-3AA4</b>
<ul style="list-style-type: none"> <li>the respective SIMATIC HMI Basic Panel</li> <li>SIMATIC HMI KP300 Basic mono PN</li> <li>SIMATIC HMI KTP400 Basic</li> <li>SIMATIC HMI KTP700 Basic</li> <li>SIMATIC S7-1200 CPU 1212C AC/DC/Rly</li> <li>SIMATIC S7-1200 Simulator Module SIM 12</li> <li>SIMATIC STEP 7 BASIC CD</li> <li>SIMATIC S7-1200 HMI Manual Collection CD</li> <li>Ethernet CAT5 cable, 2 m</li> </ul>	
<b>Starter kit LOGO! + KP300 Basic mono PN</b>	<b>6AV2132-0HA00-0AA1</b>
<b>Starter kit LOGO! + KTP400 Basic</b>	<b>6AV2132-0KA00-0AA1</b>
<b>Starter kit LOGO! + KTP700 Basic</b> Starter kits with a LOGO! consist of:	<b>6AV2132-3GB00-0AA1</b>
<ul style="list-style-type: none"> <li>the respective SIMATIC HMI Basic Panel</li> <li>SIMATIC HMI KP300 Basic mono PN</li> <li>SIMATIC HMI KTP400 Basic</li> <li>SIMATIC HMI KTP700 Basic</li> <li>LOGO! 12/24 RCE</li> <li>LOGO! POWER 24 V 1.3 A</li> <li>LOGO! SOFT COMFORT V7</li> <li>WINCC BASIC (TIA Portal)</li> <li>Ethernet CAT5 cable, 2 m</li> </ul>	
<b>Documentation</b>	
You can find the manual for the Basic Panels on the Internet at:	<a href="http://support.automation.siemens.com">http://support.automation.siemens.com</a>
<b>Accessories</b>	See SIMATIC HMI accessories, chapter 7

**Dimensional drawings**

All dimensions in mm. For installation cutout, see technical specifications.

KTP400 Basic, Basic Panel 2<sup>nd</sup> generationKTP700 Basic, Basic Panel 2<sup>nd</sup> Generation



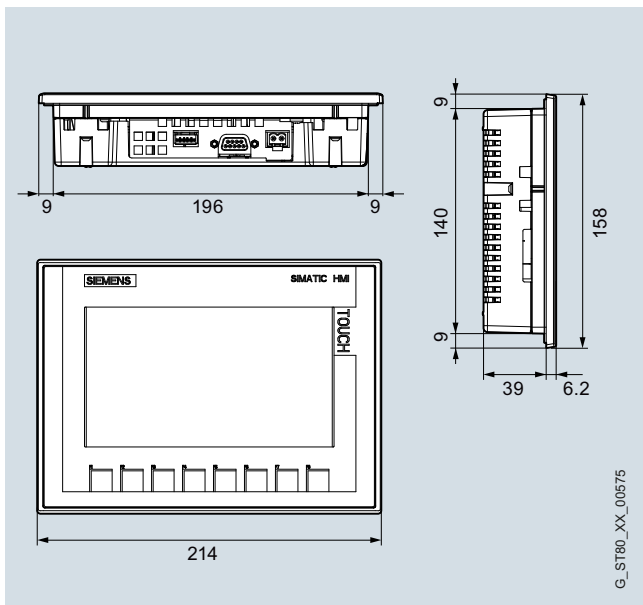
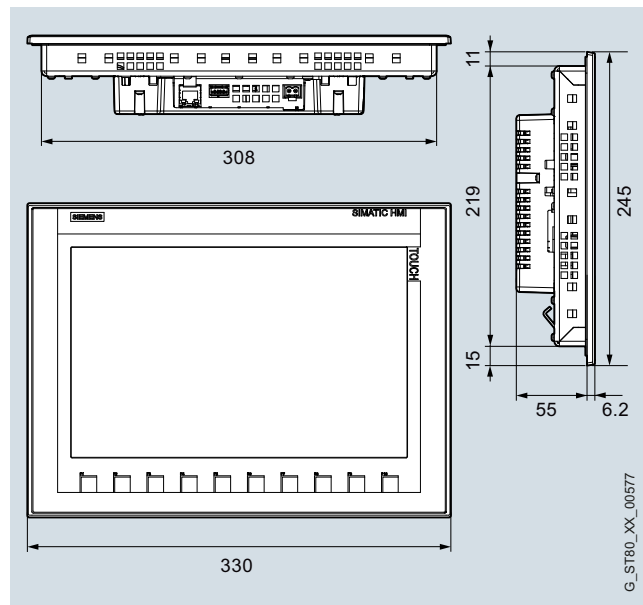
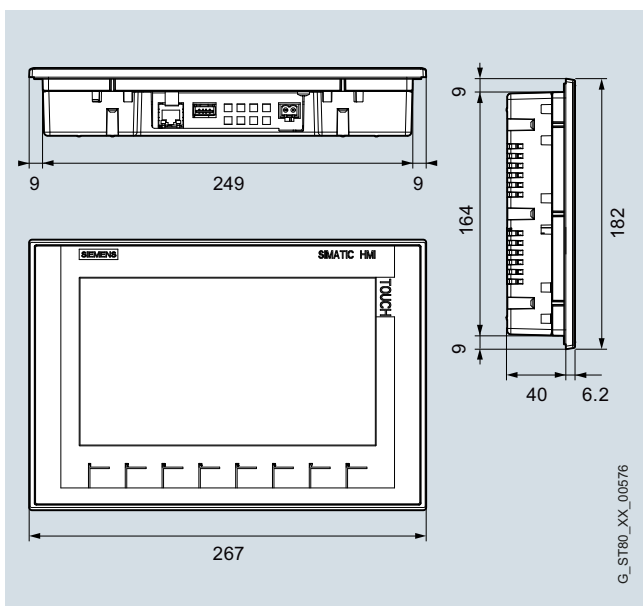
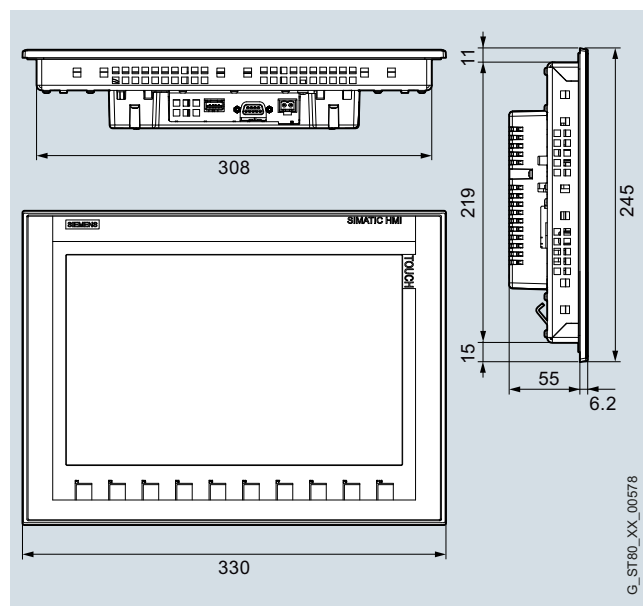
## Operator panels

### SIMATIC HMI Basic Panels

#### SIMATIC HMI Basic Panels (2nd Generation)

##### Dimensional drawings (continued)

2

KTP700 Basic DP, Basic Panel 2<sup>nd</sup> GenerationKTP1200 Basic, Basic Panel 2<sup>nd</sup> GenerationKTP900 Basic, Basic Panel 2<sup>nd</sup> GenerationKTP1200 Basic DP, Basic Panel 2<sup>nd</sup> Generation

##### More information

Additional information is available on the Internet at:

<http://www.siemens.com/simatic-basic-panels>

##### Note:

Do you need a specific modification or extension to the products described here? Then look up "Customized products". There you will find information about additional and generally available sector-specific products as well as options for customer-specific modification and adaptation.