

### Overview



- Excellent HMI functionality for demanding applications
- Widescreen TFT displays with 4", 7", 9", 12", 15", 19" and 22" diagonals (all 16 million colors) with up to 40% more visualization area as compared to the predecessor devices
- Integrated high-end functionality with archives, scripts, PDF/Word/Excel viewer, Internet Explorer, Media Player and Web Server
- Dimmable displays from 0 to 100% via PROFIenergy, via the HMI project or via a controller
- Modern industrial design, cast aluminum fronts for 7" upwards
- Upright installation for all touch devices
- Optimal selection option: seven touch and five key versions are available
- Data security in the event of a power failure for the device and for the SIMATIC HMI Memory Card
- Innovative service and commissioning concept through second SD card (automatic backup)
- Maximum performance with short screen refresh times
- Suitable for extremely harsh industrial environments thanks to extended approvals such as ATEX 2/22 and marine approvals
- Wide range of communication options: PROFIBUS and PROFINET onboard; 2 x PROFINET with integrated switch for 7" models or larger; plus 1 x PROFINET with Gigabit support for 15" models or larger
- All versions can be used as an OPC UA client or as an OPC DA server
- Key-operated devices with LED in every function key and new text input mechanism, similar to the keypads of mobile phones
- All keys have a service life of 2 million operations
- Configuring with the WinCC engineering software of the TIA Portal

#### Note:

A 7" and 15" Comfort Outdoor version will be available soon. For further information, please go to:

<http://www.siemens.com/hmi>

## Operator panels

### SIMATIC HMI Comfort Panels

#### SIMATIC HMI Comfort Panels – Standard

#### Technical specifications

Article number	<b>6AV2124-2DC01-0AX0</b> SIMATIC HMI KTP400 COMFORT	<b>6AV2124-0GC01-0AX0</b> SIMATIC HMI TP700 COMFORT	<b>6AV2124-0JC01-0AX0</b> SIMATIC HMI TP900 COMFORT	<b>6AV2124-0MC01-0AX0</b> SIMATIC HMI TP1200 COMFORT
<b>Product type designation</b>				
<b>Display</b>				
Design of display	TFT	TFT	TFT	TFT
Screen diagonal	4.3 in	7 in	9 in	12.1 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216
<b>Resolution (pixels)</b>				
• Horizontal image resolution	480 Pixel	800 Pixel	800 Pixel	1 280 Pixel
• Vertical image resolution	272 Pixel	480 Pixel	480 Pixel	800 Pixel
<b>Backlighting</b>				
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h	80 000 h
• Backlight dimmable	Yes; 0-100 %	Yes; 0-100 %	Yes; 0-100 %	Yes; 0-100 %
<b>Control elements</b>				
<b>Keyboard</b>				
• Function keys				
- Number of function keys	4	0	0	0
<b>Touch operation</b>				
• Design as touch screen	Yes	Yes	Yes	Yes
<b>Installation type/mounting</b>				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
<b>Supply voltage</b>				
Type of supply voltage	DC	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V	24 V
<b>Memory</b>				
usable memory for user data	4 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
<b>Type of output</b>				
Acoustics				
• Speaker	No	Yes	Yes	Yes
<b>Time of day</b>				
<b>Clock</b>				
• Hardware clock (real-time clock)	Yes	Yes	Yes	Yes
• battery-backed	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes
<b>Interfaces</b>				
Number of RS 485 interfaces	1; RS 422/485 combined	1; RS 422/485 combined	1; RS 422/485 combined	1; RS 422/485 combined
Number of USB interfaces	1; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of USB Mini B interfaces	1; 5-pole	1; 5-pole	1; 5-pole	1; 5-pole
Number of SD card slots	2	2	2	2
<b>Industrial Ethernet</b>				
• Number of industrial Ethernet interfaces	1	2	2	2
• Number of ports of the integrated switch	1	2	2	2
<b>Protocols</b>				
PROFINET	Yes	Yes	Yes	Yes
IRT	No	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12
MRP	No	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12
PROFIBUS	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes
<b>Degree and class of protection</b>				
IP (at the front)	IP65	IP65	IP65	IP65
Enclosure Type 4x at the front	Yes	Yes	Yes	Yes
IP (rear)	IP20	IP20	IP20	IP20
<b>Standards, approvals, certificates</b>				
CE mark	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes

### Technical specifications (continued)

Article number	6AV2124-2DC01-0AX0 SIMATIC HMI KTP400 COMFORT	6AV2124-0GC01-0AX0 SIMATIC HMI TP700 COMFORT	6AV2124-0JC01-0AX0 SIMATIC HMI TP900 COMFORT	6AV2124-0MC01-0AX0 SIMATIC HMI TP1200 COMFORT
<b>Marine approval</b>				
• Germanischer Lloyd (GL)	Yes	Yes	Yes	Yes; As of product version: 10
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes; As of product version: 10
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes; As of product version: 10
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes; As of product version: 10
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes; As of product version: 10
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes; As of product version: 10
• Polski Rejestr Statkow (PRS)	No	No	No	No
<b>Use in hazardous areas</b>				
• ATEX Zone 2	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes
• FM Class I Division 2	Yes	Yes	Yes	Yes
<b>Ambient conditions</b>				
<b>Ambient temperature during operation</b>				
• Operation (vertical installation)				
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C; (55 °C, see entry ID:64847814)	50 °C; (55 °C, see entry ID:64847814)	50 °C; (55 °C, see entry ID:64847814)
<b>Relative humidity</b>				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
<b>Configuration</b>				
<b>Configuration software</b>				
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; from V11	Yes; from V11	Yes; from V11
<b>Languages</b>				
<b>Online languages</b>				
• Number of online/runtime languages	32	32	32	32
<b>Functionality under WinCC (TIA Portal)</b>				
Applications/options				
• Web browser	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes
Task planner				
• time-controlled	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes
<b>Message system</b>				
• Bit messages				
- Number of bit messages	2 000	4 000	4 000	4 000
• Analog messages				
- Number of analog messages	50	200	200	200
• Message buffer				
- Number of entries	256	1 024	1 024	1 024
- Circulating buffer	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes
<b>Recipe administration</b>				
• Number of recipes	100	300	300	300
• Size of internal recipe memory	512 kbyte	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes

## Operator panels

### SIMATIC HMI Comfort Panels

#### SIMATIC HMI Comfort Panels – Standard

#### Technical specifications (continued)

Article number	<b>6AV2124-2DC01-0AX0</b> SIMATIC HMI KTP400 COMFORT	<b>6AV2124-0GC01-0AX0</b> SIMATIC HMI TP700 COMFORT	<b>6AV2124-0JC01-0AX0</b> SIMATIC HMI TP900 COMFORT	<b>6AV2124-0MC01-0AX0</b> SIMATIC HMI TP1200 COMFORT
<b>Variables</b>				
• Number of variables per device	1 024	2 048	2 048	2 048
• Number of variables per screen	50	400	400	400
<b>Images</b>				
• Number of configurable images	500	500	500	500
<b>Archiving</b>				
• Number of archives per device	10	50	50	50
<b>Security</b>				
• Number of user groups	50	50	50	50
• Number of users	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes
<b>Logging through printer</b>				
• Alarms	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; pdf, html	Yes; pdf, html	Yes; pdf, html	Yes; pdf, html
<b>Transfer (upload/download)</b>				
• MPI/PROFIBUS DP	Yes	Yes	Yes	Yes
• USB	Yes	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes	Yes
<b>Process coupling</b>				
• S7-1200	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes
<b>Peripherals/Options</b>				
Peripherals				
• Printer	Yes	Yes	Yes	Yes
• MultiMediaCard	Yes	Yes	Yes	Yes
• SD card	Yes	Yes	Yes	Yes
• USB memory	Yes	Yes	Yes	Yes
• Network camera	Yes	Yes	Yes	Yes
<b>Mechanics/material</b>				
Type of housing (front)				
• plastic	Yes	No	No	No
• aluminum	No	Yes	Yes	Yes
<b>Dimensions</b>				
Width of the housing front	140 mm	214 mm	274 mm	330 mm
Height of housing front	116 mm	158 mm	190 mm	241 mm
Mounting cutout, width	123 mm	197 mm	251 mm	310 mm
Mounting cutout, height	99 mm	141 mm	166 mm	221 mm
Overall depth	49 mm	63 mm	63 mm	65 mm
<b>Weights</b>				
Without packaging	0.6 kg	1.4 kg	1.9 kg	2.8 kg

### Technical specifications (continued)

Article number	6AV2124-1DC01-0AX0 SIMATIC HMI KP400 COMFORT	6AV2124-1GC01-0AX0 SIMATIC HMI KP700 COMFORT	6AV2124-1JC01-0AX0 SIMATIC HMI KP900 COMFORT	6AV2124-1MC01-0AX0 SIMATIC HMI KP1200 COMFORT	6AV2124-1QC02-0AX0 SIMATIC HMI KP1500 COMFORT
<b>Product type designation</b>					
<b>Display</b>					
Design of display	TFT	TFT	TFT	TFT	TFT
Screen diagonal	4.3 in	7 in	9 in	12.1 in	15.4 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
<b>Resolution (pixels)</b>					
• Horizontal image resolution	480 Pixel	800 Pixel	800 Pixel	1 280 Pixel	1 280 Pixel
• Vertical image resolution	272 Pixel	480 Pixel	480 Pixel	800 Pixel	800 Pixel
<b>Backlighting</b>					
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h	80 000 h	80 000 h
• Backlight dimmable	Yes; 0-100 %	Yes; 0-100 %	Yes; 0-100 %	Yes; 0-100 %	Yes; 0-100 %
<b>Control elements</b>					
<b>Keyboard</b>					
• Function keys					
- Number of function keys	8	24	26	34	36
<b>Touch operation</b>					
• Design as touch screen	No	No	No	No	No
<b>Installation type/mounting</b>					
Mounting in portrait format possible	No	No	No	No	No
<b>Supply voltage</b>					
Type of supply voltage	DC	DC	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
<b>Memory</b>					
usable memory for user data	4 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	24 Mbyte
<b>Type of output</b>					
Acoustics					
• Speaker	No	Yes	Yes	Yes	Yes
<b>Time of day</b>					
<b>Clock</b>					
• Hardware clock (real-time clock)	Yes	Yes	Yes	Yes	Yes
• battery-backed	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes
<b>Interfaces</b>					
Number of RS 485 interfaces	1; RS 422/485 combined	1; RS 422/485 combined	1; RS 422/485 combined	1; RS 422/485 combined	1; RS 422/485 combined
Number of USB interfaces	1; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of USB Mini B interfaces	1; 5-pole	1; 5-pole	1; 5-pole	1; 5-pole	1; 5-pole
Number of SD card slots	2	2	2	2	2
<b>Industrial Ethernet</b>					
• Number of industrial Ethernet interfaces	1	2	2	2	3
• Number of ports of the integrated switch	1	2	2	2	2
<b>Protocols</b>					
PROFINET	Yes	Yes	Yes	Yes	Yes
IRT	No	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12
MRP	No	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes
PROFIBUS	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes
<b>Degree and class of protection</b>					
IP (at the front)	IP65	IP65	IP65	IP65	IP65
Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes
IP (rear)	IP20	IP20	IP20	IP20	IP20
<b>Standards, approvals, certificates</b>					
CE mark	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes

## Operator panels

### SIMATIC HMI Comfort Panels

#### SIMATIC HMI Comfort Panels – Standard

#### Technical specifications (continued)

Article number	6AV2124-1DC01-0AX0 SIMATIC HMI KP400 COMFORT	6AV2124-1GC01-0AX0 SIMATIC HMI KP700 COMFORT	6AV2124-1JC01-0AX0 SIMATIC HMI KP900 COMFORT	6AV2124-1MC01-0AX0 SIMATIC HMI KP1200 COMFORT	6AV2124-1QC02-0AX0 SIMATIC HMI KP1500 COMFORT
<b>Marine approval</b>					
• Germanischer Lloyd (GL)	Yes	Yes	Yes	Yes; As of product version: 10	No
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No
<b>Use in hazardous areas</b>					
• ATEX Zone 2	Yes	Yes	Yes	Yes	No
• ATEX Zone 22	Yes	Yes	Yes	Yes	No
• IECEx Zone 2	Yes	Yes	Yes	Yes	No
• IECEx Zone 22	Yes	Yes	Yes	Yes	No
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	Yes	Yes	Yes	Yes	Yes
<b>Ambient conditions</b>					
<b>Ambient temperature during operation</b>					
• Operation (vertical installation)					
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C; (55 °C, see entry ID:64847814)	50 °C; (55 °C, see entry ID:64847814)	50 °C; (55 °C, see entry ID:64847814)	50 °C; (55 °C, see entry ID:64847814)
<b>Relative humidity</b>					
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
<b>Configuration</b>					
<b>Configuration software</b>					
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; from V11	Yes; from V11	Yes; from V11	Yes; V11 SP2 or higher
<b>Languages</b>					
<b>Online languages</b>					
• Number of online/runtime languages	32	32	32	32	32
<b>Functionality under WinCC (TIA Portal)</b>					
Applications/options					
• Web browser	Yes	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes
Task planner					
• time-controlled	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes
<b>Message system</b>					
• Bit messages					
- Number of bit messages	2 000	4 000	4 000	4 000	6 000
• Analog messages					
- Number of analog messages	50	200	200	200	200
• Message buffer					
- Number of entries	256	1 024	1 024	1 024	1 024
- Circulating buffer	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes
<b>Recipe administration</b>					
• Number of recipes	100	300	300	300	500
• Size of internal recipe memory	512 kbyte	2 Mbyte	2 Mbyte	2 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes

### Technical specifications (continued)

Article number	6AV2124-1DC01-0AX0 SIMATIC HMI KP400 COMFORT	6AV2124-1GC01-0AX0 SIMATIC HMI KP700 COMFORT	6AV2124-1JC01-0AX0 SIMATIC HMI KP900 COMFORT	6AV2124-1MC01-0AX0 SIMATIC HMI KP1200 COMFORT	6AV2124-1QC02-0AX0 SIMATIC HMI KP1500 COMFORT
<b>Variables</b>					
• Number of variables per device	1 024	2 048	2 048	2 048	4 096
• Number of variables per screen	50	400	400	400	400
<b>Images</b>					
• Number of configurable images	500	500	500	500	750
<b>Archiving</b>					
• Number of archives per device	10	50	50	50	50
<b>Security</b>					
• Number of user groups	50	50	50	50	50
• Number of users	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes
<b>Logging through printer</b>					
• Alarms	Yes	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; pdf, html	Yes; pdf, html	Yes; pdf, html	Yes; pdf, html	Yes; pdf, html
<b>Transfer (upload/download)</b>					
• MPI/PROFIBUS DP	Yes	Yes	Yes	Yes	Yes
• USB	Yes	Yes	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes
<b>Process coupling</b>					
• S7-1200	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes
<b>Peripherals/Options</b>					
Peripherals					
• Printer	Yes	Yes	Yes	Yes	Yes
• MultiMediaCard	Yes	Yes	Yes	Yes	Yes
• SD card	Yes	Yes	Yes	Yes	Yes
• USB memory	Yes	Yes	Yes	Yes	Yes
• Network camera	Yes	Yes	Yes	Yes	Yes
<b>Mechanics/material</b>					
Type of housing (front)					
• plastic	Yes	No	No	No	No
• aluminum	No	Yes	Yes	Yes	Yes
<b>Dimensions</b>					
Width of the housing front	152 mm	308 mm	362 mm	454 mm	483 mm
Height of housing front	188 mm	204 mm	230 mm	289 mm	310 mm
Mounting cutout, width	135 mm	281 mm	338 mm	434 mm	450 mm
Mounting cutout, height	171 mm	177 mm	206 mm	269 mm	291 mm
Overall depth	49 mm	63 mm	63 mm	65 mm	75 mm
<b>Weights</b>					
Without packaging	0.8 kg	2.2 kg	2.7 kg	4.4 kg	5.4 kg

## Operator panels

### SIMATIC HMI Comfort Panels

#### SIMATIC HMI Comfort Panels – Standard

#### Technical specifications (continued)

Article number	<b>6AV2124-0QC02-0AX0</b> SIMATIC HMI TP1500 COMFORT	<b>6AV2124-0UC02-0AX0</b> SIMATIC HMI TP1900 COMFORT	<b>6AV2124-0XC02-0AX0</b> SIMATIC HMI TP2200 COMFORT
<b>Product type designation</b>			
<b>Display</b>			
Design of display	TFT	TFT	TFT
Screen diagonal	15.4 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216
<b>Resolution (pixels)</b>			
• Horizontal image resolution	1 280 Pixel	1 366 Pixel	1 920 Pixel
• Vertical image resolution	800 Pixel	768 Pixel	1 080 Pixel
<b>Backlighting</b>			
• MTBF backlighting (at 25 °C)	80 000 h	50 000 h	30 000 h
• Backlight dimmable	Yes; 0-100 %	Yes; 0-100 %	Yes; 0-100 %
<b>Control elements</b>			
<b>Keyboard</b>			
• Function keys			
- Number of function keys	0	0	0
<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	DC
Rated value (DC)	24 V	24 V	24 V
<b>Memory</b>			
usable memory for user data	24 Mbyte	24 Mbyte	24 Mbyte
<b>Type of output</b>			
Acoustics			
• Speaker	Yes	Yes	Yes
<b>Time of day</b>			
<b>Clock</b>			
• Hardware clock (real-time clock)	Yes	Yes	Yes
• battery-backed	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes
<b>Interfaces</b>			
Number of RS 485 interfaces	1; RS 422/485 combined	1; RS 422/485 combined	1; RS 422/485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of USB Mini B interfaces	1; 5-pole	1; 5-pole	1; 5-pole
Number of SD card slots	2	2	2
<b>Industrial Ethernet</b>			
• Number of industrial Ethernet interfaces	3	3	3
• Number of ports of the integrated switch	2	2	2
<b>Protocols</b>			
PROFINET	Yes	Yes	Yes
IRT	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12
MRP	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes
MPI	Yes	Yes	Yes
<b>Degree and class of protection</b>			
IP (at the front)	IP65	IP65	IP65
Enclosure Type 4x at the front	Yes	Yes	Yes
IP (rear)	IP20	IP20	IP20
<b>Standards, approvals, certificates</b>			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes



### Technical specifications (continued)

Article number	6AV2124-0QC02-0AX0 SIMATIC HMI TP1500 COMFORT	6AV2124-0UC02-0AX0 SIMATIC HMI TP1900 COMFORT	6AV2124-0XC02-0AX0 SIMATIC HMI TP2200 COMFORT
<b>Marine approval</b>			
• Germanischer Lloyd (GL)	No	No	No
• American Bureau of Shipping (ABS)	No	No	No
• Bureau Veritas (BV)	No	No	No
• Det Norske Veritas (DNV)	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No
<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	Yes	Yes	Yes
• FM Class I Division 2	Yes	Yes	Yes
<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; (55 °C, see entry ID:64847814)	45 °C	45 °C
<b>Relative humidity</b>			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
<b>Configuration</b>			
<b>Configuration software</b>			
• WinCC Comfort (TIA Portal)	Yes; V11 SP2 or higher	Yes; V11 SP2 or higher	Yes; V11 SP2 or higher
<b>Languages</b>			
<b>Online languages</b>			
• Number of online/runtime languages	32	32	32
<b>Functionality under WinCC (TIA Portal)</b>			
Applications/options			
• Web browser	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner			
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
<b>Message system</b>			
• Bit messages			
- Number of bit messages	6 000	6 000	6 000
• Analog messages			
- Number of analog messages	200	200	200
• Message buffer			
- Number of entries	1 024	1 024	1 024
- Circulating buffer	Yes	Yes	Yes
- retentive	Yes	Yes	Yes
<b>Recipe administration</b>			
• Number of recipes	500	500	500
• Size of internal recipe memory	4 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
<b>Variables</b>			
• Number of variables per device	4 096	4 096	4 096
• Number of variables per screen	400	400	400
<b>Images</b>			
• Number of configurable images	750	750	750

## Operator panels

### SIMATIC HMI Comfort Panels

#### SIMATIC HMI Comfort Panels – Standard

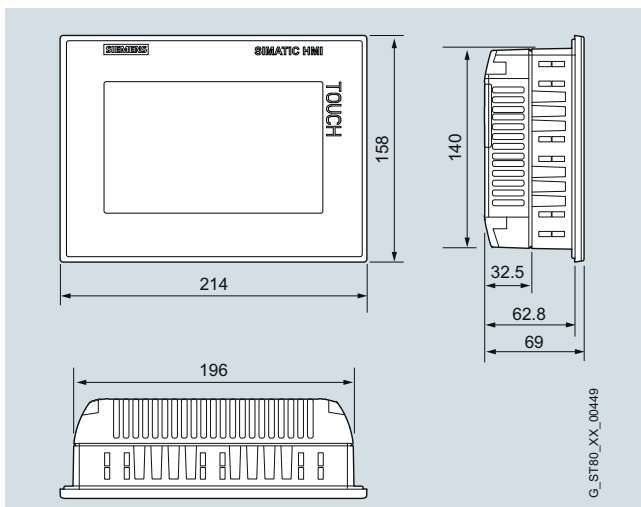
#### Technical specifications (continued)

Article number	<b>6AV2124-0QC02-0AX0</b> SIMATIC HMI TP1500 COMFORT	<b>6AV2124-0UC02-0AX0</b> SIMATIC HMI TP1900 COMFORT	<b>6AV2124-0XC02-0AX0</b> SIMATIC HMI TP2200 COMFORT
<b>Archiving</b>			
• Number of archives per device	50	50	50
<b>Security</b>			
• Number of user groups	50	50	50
• Number of users	50	50	50
• SIMATIC Logon	Yes	Yes	Yes
<b>Logging through printer</b>			
• Alarms	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes
• Electronic print to file	Yes; pdf, html	Yes; pdf, html	Yes; pdf, html
<b>Transfer (upload/download)</b>			
• MPI/PROFIBUS DP	Yes	Yes	Yes
• USB	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes
<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	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes
<b>Peripherals/Options</b>			
Peripherals			
• Printer	Yes	Yes	Yes
• MultiMediaCard	Yes	Yes	Yes
• SD card	Yes	Yes	Yes
• USB memory	Yes	Yes	Yes
• Network camera	Yes	Yes	Yes
<b>Mechanics/material</b>			
Type of housing (front)			
• plastic	No	No	No
• aluminum	Yes	Yes	Yes
<b>Dimensions</b>			
Width of the housing front	415 mm	483 mm	560 mm
Height of housing front	310 mm	337 mm	380 mm
Mounting cutout, width	396 mm	465 mm	542 mm
Mounting cutout, height	291 mm	319 mm	362 mm
Overall depth	75 mm	75 mm	75 mm
<b>Weights</b>			
Without packaging	5.2 kg	6.5 kg	7.1 kg

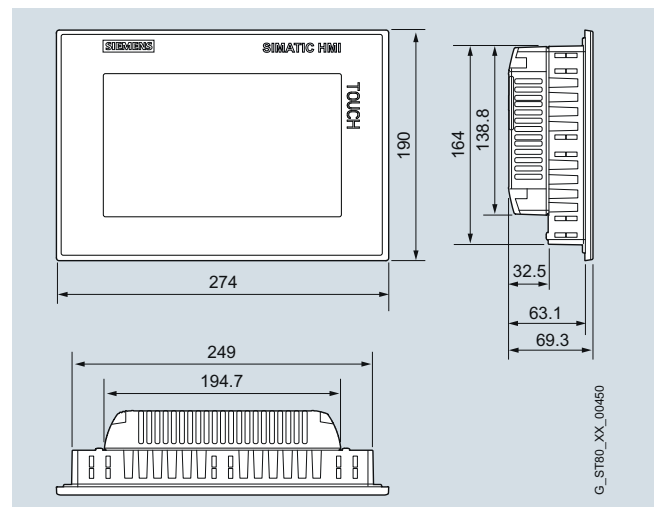
Ordering data	Article No.	Article No.	
<b>SIMATIC HMI Comfort Panels</b>			
<b>Key and touch devices</b>			
<b>SIMATIC HMI KTP400 Comfort</b> Key/touch-screen operation; 4" widescreen display	<b>6AV2124-2DC01-0AX0</b>	<b>Starter kits for SIMATIC HMI Comfort Panels</b> Consisting of: the respective SIMATIC HMI Comfort Panel, SIMATIC WinCC Comfort, Ethernet cable, 2 m; SIMATIC HMI memory card 2 GB, 10 protective films for touch screen devices  <b>Starter kit for SIMATIC HMI KTP400 Comfort, Key and Touch</b> <b>6AV2181-4DB20-0AX0</b>  <b>Starter kit for SIMATIC HMI TP700 Comfort, Touch</b> <b>6AV2181-4GB00-0AX0</b>  <b>Starter kit for SIMATIC HMI TP900 Comfort, Touch</b> <b>6AV2181-4JB00-0AX0</b>  <b>Starter kit for SIMATIC HMI TP1200 Comfort, Touch</b> <b>6AV2181-4MB00-0AX0</b>  <b>Starter kit for SIMATIC HMI TP1500 Comfort, Touch</b> <b>6AV2181-4QB00-0AX0</b>  <b>Starter kit for SIMATIC HMI TP1900 Comfort, Touch</b> <b>6AV2181-4UB00-0AX0</b>  <b>Starter kit for SIMATIC HMI TP2200 Comfort, Touch</b> <b>6AV2181-4XB00-0AX0</b>  <b>Starter kit for SIMATIC HMI KP400 Comfort, Key</b> <b>6AV2181-4DB10-0AX0</b>  <b>Starter kit for SIMATIC HMI KP700 Comfort, Key</b> <b>6AV2181-4GB10-0AX0</b>  <b>Starter kit for SIMATIC HMI KP900 Comfort, Key</b> <b>6AV2181-4JB10-0AX0</b>  <b>Starter kit for SIMATIC HMI KP1200 Comfort, Key</b> <b>6AV2181-4MB10-0AX0</b>  <b>Starter kit for SIMATIC HMI KP1500 Comfort, Key</b> <b>6AV2181-4QB10-0AX0</b>  <b>Accessories</b> See SIMATIC HMI accessories, Chap. 7	
<b>Touch devices</b>			
<b>SIMATIC HMI TP700 Comfort</b> Touch-screen operation; 7" widescreen display	<b>6AV2124-0GC01-0AX0</b>		
<b>SIMATIC HMI TP900 Comfort</b> Touch-screen operation; 9" widescreen display	<b>6AV2124-0JC01-0AX0</b>		
<b>SIMATIC HMI TP1200 Comfort</b> Touch-screen operation; 12" widescreen display	<b>6AV2124-0MC01-0AX0</b>		
<b>SIMATIC HMI TP1500 Comfort</b> Touch-screen operation; 15" widescreen display	<b>6AV2124-0QC02-0AX0</b>		
<b>SIMATIC HMI TP1900 Comfort</b> Touch-screen operation; 19" widescreen display	<b>6AV2124-0UC02-0AX0</b>		
<b>SIMATIC HMI TP2200 Comfort</b> Touch-screen operation; 22" widescreen display	<b>6AV2124-0XC02-0AX0</b>		
<b>Key devices</b>			
<b>SIMATIC HMI KP400 Comfort</b> Key operation; 4" widescreen display	<b>6AV2124-1DC01-0AX0</b>		
<b>SIMATIC HMI KP700 Comfort</b> Key operation; 7" widescreen display	<b>6AV2124-1GC01-0AX0</b>		
<b>SIMATIC HMI KP900 Comfort</b> Key operation; 9" widescreen display	<b>6AV2124-1JC01-0AX0</b>		
<b>SIMATIC HMI KP1200 Comfort</b> Key operation; 12" widescreen display	<b>6AV2124-1MC01-0AX0</b>		
<b>SIMATIC HMI KP1500 Comfort</b> Key operation; 15" widescreen display	<b>6AV2124-1QC02-0AX0</b>		

### Dimensional drawings

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



TP700 Comfort



TP900 Comfort

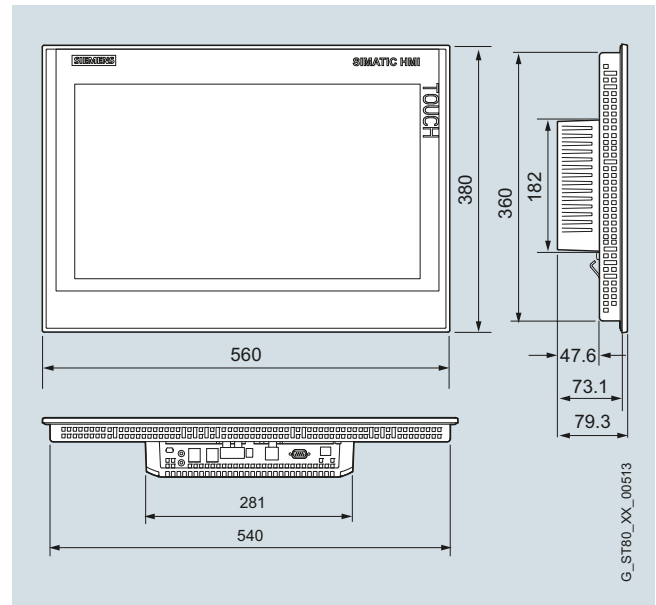
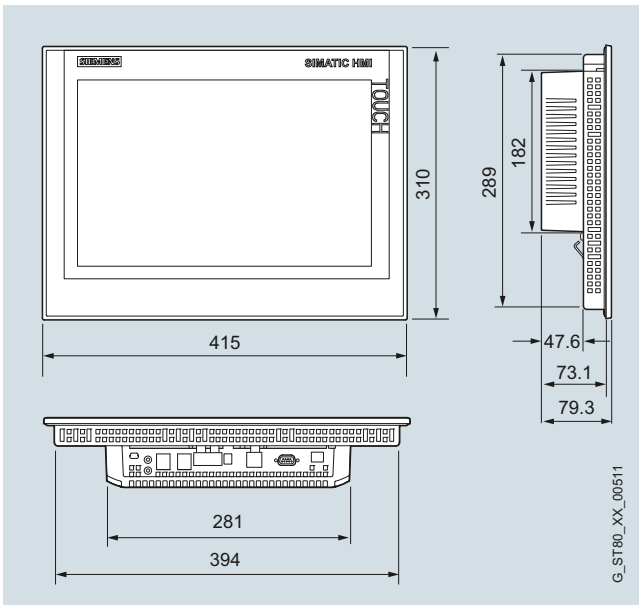
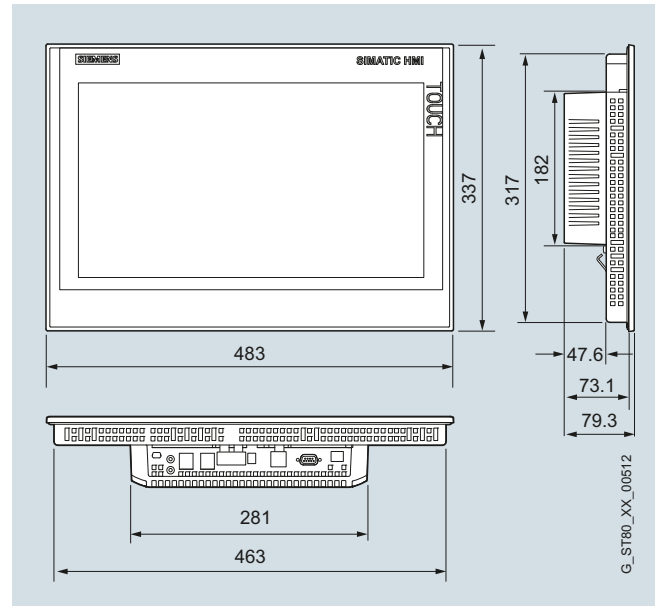
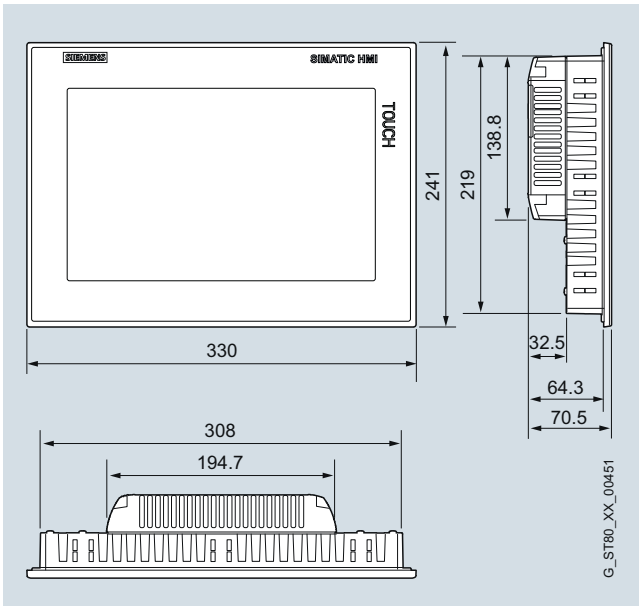
# Operator panels

## SIMATIC HMI Comfort Panels

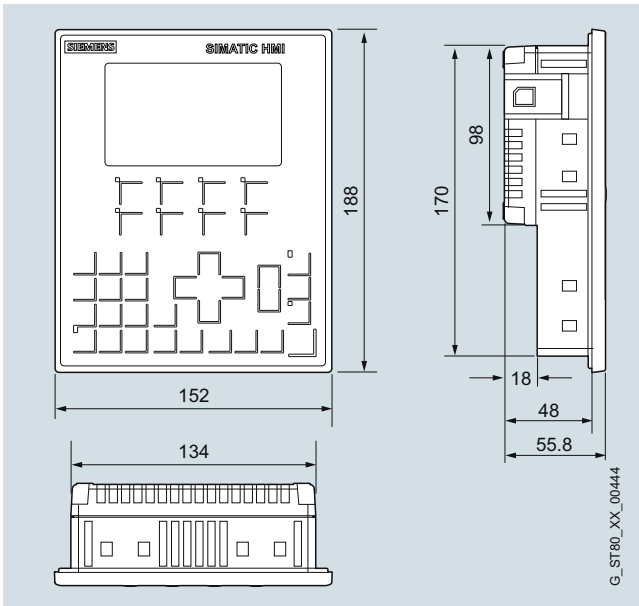
### SIMATIC HMI Comfort Panels – Standard

#### Dimensional drawings (continued)

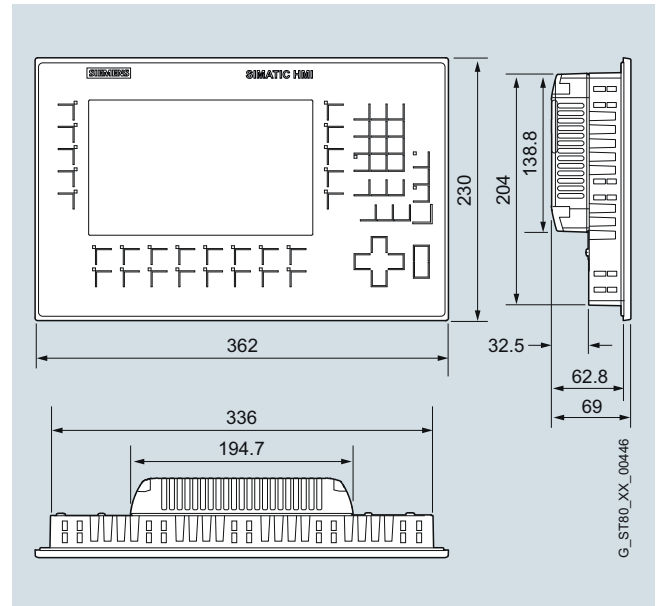
2



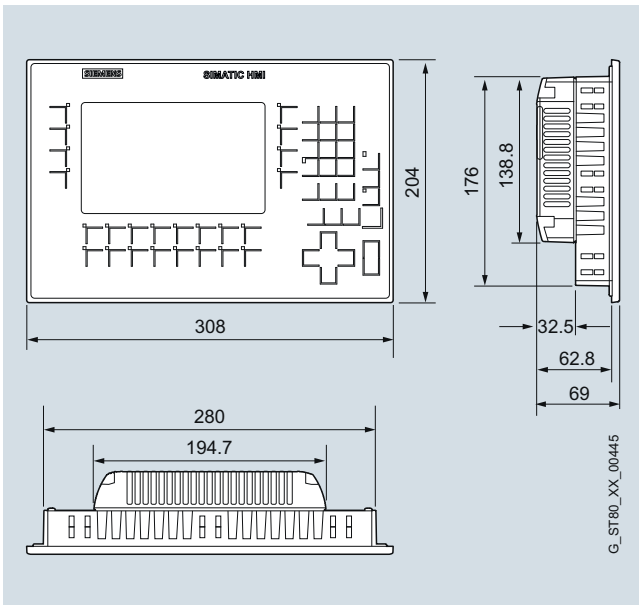
**Dimensional drawings** (continued)



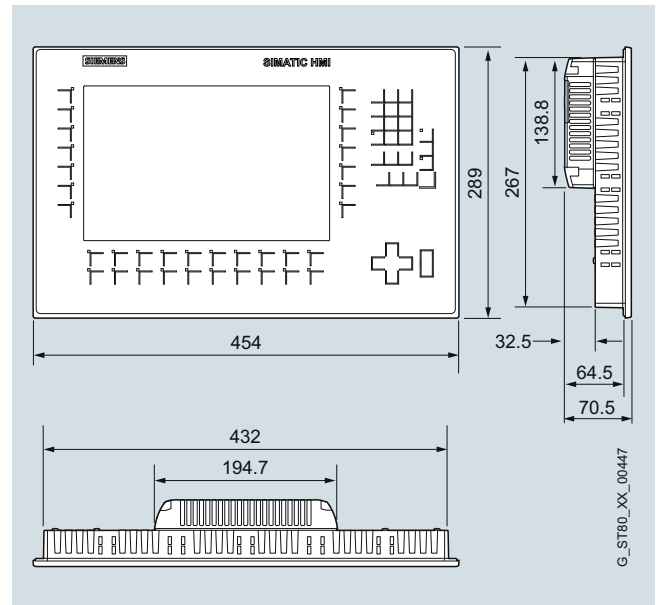
KP400 Comfort



KP900 Comfort



KP700 Comfort



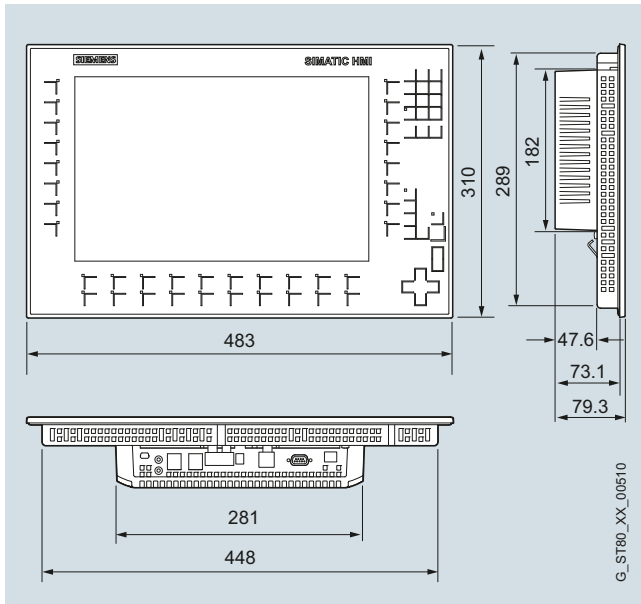
KP1200 Comfort

## Operator panels

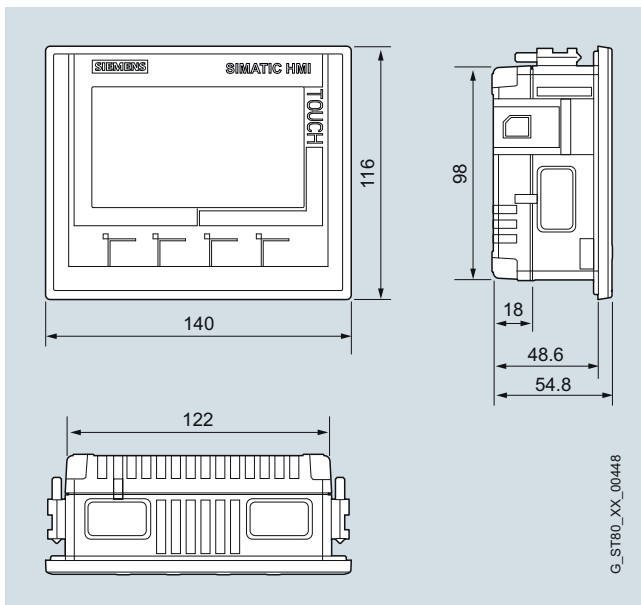
### SIMATIC HMI Comfort Panels

#### SIMATIC HMI Comfort Panels – Standard

##### Dimensional drawings (continued)



KP1500 Comfort



KTP400 Comfort

##### More information

Additional information is available on the Internet at:

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

You can find an overview of approved printers, supply sources and printer settings on the Internet at:

<http://support.automation.siemens.com/WW/view/en/11376409>

##### Note:

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