MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6AV2124-1JC01-0AX0

SIMATIC KP900 COMFORT PANEL

Used with the applicable PLC System configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official manufacturer documentation

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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
Variables				
• Number of variables per device	1 024	2 048	2 048	2 048
• Number of variables per screen	50	400	400	400
Images				
• Number of configurable images	500	500	500	500
Archiving				
• Number of archives per device	10	50	50	50
Security				
• Number of user groups	50	50	50	50
• Number of users	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes
Logging through printer				
• 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
Transfer (upload/download)				
• MPI/PROFIBUS DP	Yes	Yes	Yes	Yes
• USB	Yes	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes	Yes
Process coupling				
• 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
Peripherals/Options				
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
Mechanics/material				
Type of housing (front)				
• plastic	Yes	No	No	No
• aluminum	No	Yes	Yes	Yes
Dimensions				
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
Weights				
Without packaging	0.6 kg	1.4 kg	1.9 kg	2.8 kg

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Technical specifications (continued)

Article number	6AV2124-1DC01-0AX0	6AV2124-1GC01-0AX0	6AV2124-1JC01-0AX0	6AV2124-1MC01-0AX0	6AV2124-1QC02-0AX0
	SIMATIC HMI KP400 COMFORT	SIMATIC HMI KP700 COMFORT	SIMATIC HMI KP900 COMFORT	SIMATIC HMI KP1200 COMFORT	SIMATIC HMI KP1500 COMFORT
Product type designation					
Display					
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
Resolution (pixels)					
• 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
Backlighting					
• 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 %
Control elements					
Keyboard					
• Function keys					
- Number of function keys	8	24	26	34	36
Touch operation					
• Design as touch screen	No	No	No	No	No
Installation type/mounting					
Mounting in portrait format possible	No	No	No	No	No
Supply voltage					
Type of supply voltage	DC	DC	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Memory					
usable memory for user data	4 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	24 Mbyte
Type of output					
Acoustics					
• Speaker	No	Yes	Yes	Yes	Yes
Time of day					
Clock					
• 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
Interfaces					
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
Industrial Ethernet					
• Number of industrial Ethernet interfaces	1	2	2	2	3
• Number of ports of the integrated switch	1	2	2	2	2
Protocols					
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
Degree and class of protection					
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
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes

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Technical specifications (continued)

Article number	6AV2124-1DC01-0AX0	6AV2124-1GC01-0AX0	6AV2124-1JC01-0AX0	6AV2124-1MC01-0AX0	6AV2124-1QC02-0AX0
	SIMATIC HMI KP400 COMFORT	SIMATIC HMI KP700 COMFORT	SIMATIC HMI KP900 COMFORT	SIMATIC HMI KP1200 COMFORT	SIMATIC HMI KP1500 COMFORT
Marine approval					
• 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
Use in hazardous areas					
• 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
Ambient conditions					
Ambient temperature during operation					
• 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)
Relative humidity					
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration					
Configuration software					
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; from V11	Yes; from V11	Yes; from V11	Yes; V11 SP2 or higher
Languages					
Online languages					
• Number of online/runtime languages	32	32	32	32	32
Functionality under WinCC (TIA Portal)					
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
Message system					
• 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
Recipe administration					
• 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

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Technical specifications (continued)

Article number	6AV2124-1DC01-0AX0	6AV2124-1GC01-0AX0	6AV2124-1JC01-0AX0	6AV2124-1MC01-0AX0	6AV2124-1QC02-0AX0
	SIMATIC HMI KP400 COMFORT	SIMATIC HMI KP700 COMFORT	SIMATIC HMI KP900 COMFORT	SIMATIC HMI KP1200 COMFORT	SIMATIC HMI KP1500 COMFORT
Variables					
• 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
Images					
• Number of configurable images	500	500	500	500	750
Archiving					
• Number of archives per device	10	50	50	50	50
Security					
• Number of user groups	50	50	50	50	50
• Number of users	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes
Logging through printer					
• 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
Transfer (upload/download)					
• MPI/PROFIBUS DP	Yes	Yes	Yes	Yes	Yes
• USB	Yes	Yes	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes
Process coupling					
• 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
Peripherals/Options					
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
Mechanics/material					
Type of housing (front)					
• plastic	Yes	No	No	No	No
• aluminum	No	Yes	Yes	Yes	Yes
Dimensions					
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
Weights					
Without packaging	0.8 kg	2.2 kg	2.7 kg	4.4 kg	5.4 kg

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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
Product type designation			
Display			
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
Resolution (pixels)			
• Horizontal image resolution	1 280 Pixel	1 366 Pixel	1 920 Pixel
• Vertical image resolution	800 Pixel	768 Pixel	1 080 Pixel
Backlighting			
• 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 %
Control elements			
Keyboard			
• Function keys			
- Number of function keys	0	0	0
Touch operation			
• Design as touch screen	Yes	Yes	Yes
Installation type/mounting			
Mounting in portrait format possible	Yes	Yes	Yes
Supply voltage			
Type of supply voltage	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V
Memory			
usable memory for user data	24 Mbyte	24 Mbyte	24 Mbyte
Type of output			
Acoustics			
• Speaker	Yes	Yes	Yes
Time of day			
Clock			
• 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
Interfaces			
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
Industrial Ethernet			
• Number of industrial Ethernet interfaces	3	3	3
• Number of ports of the integrated switch	2	2	2
Protocols			
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
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
Enclosure Type 4x at the front	Yes	Yes	Yes
IP (rear)	IP20	IP20	IP20
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes

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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
Archiving			
• Number of archives per device	50	50	50
Security			
• Number of user groups	50	50	50
• Number of users	50	50	50
• SIMATIC Logon	Yes	Yes	Yes
Logging through printer			
• 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
Transfer (upload/download)			
• MPI/PROFIBUS DP	Yes	Yes	Yes
• USB	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes
Process coupling			
• 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
Peripherals/Options			
Peripherals			
• Printer	Yes	Yes	Yes
• MultiMediaCard	Yes	Yes	Yes
• SD card	Yes	Yes	Yes
• USB memory	Yes	Yes	Yes
• Network camera	Yes	Yes	Yes
Mechanics/material			
Type of housing (front)			
• plastic	No	No	No
• aluminum	Yes	Yes	Yes
Dimensions			
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
Weights			
Without packaging	5.2 kg	6.5 kg	7.1 kg

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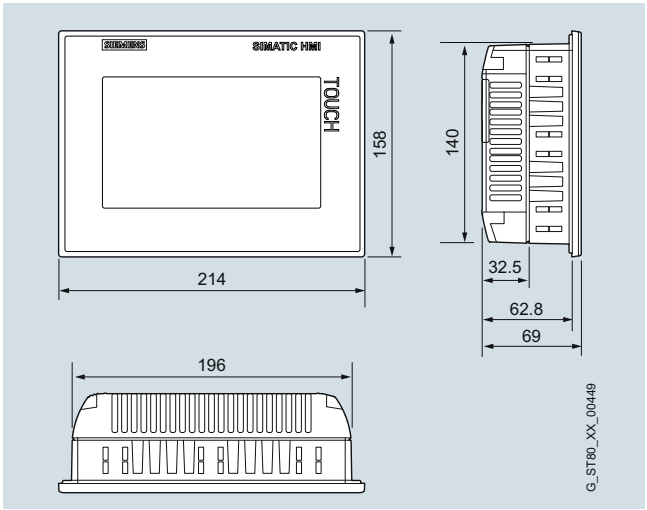
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	Article No.
SIMATIC HMI Comfort Panels	
Key and touch devices	
SIMATIC HMI KTP400 Comfort Key/touch-screen operation; 4" widescreen display	**6AV2124-2DC01-0AX0**
Touch devices	
SIMATIC HMI TP700 Comfort Touch-screen operation; 7" widescreen display	**6AV2124-0GC01-0AX0**
SIMATIC HMI TP900 Comfort Touch-screen operation; 9" widescreen display	**6AV2124-0JC01-0AX0**
SIMATIC HMI TP1200 Comfort Touch-screen operation; 12" widescreen display	**6AV2124-0MC01-0AX0**
SIMATIC HMI TP1500 Comfort Touch-screen operation; 15" widescreen display	**6AV2124-0QC02-0AX0**
SIMATIC HMI TP1900 Comfort Touch-screen operation; 19" widescreen display	**6AV2124-0UC02-0AX0**
SIMATIC HMI TP2200 Comfort Touch-screen operation; 22" widescreen display	**6AV2124-0XC02-0AX0**
Key devices	
SIMATIC HMI KP400 Comfort Key operation; 4" widescreen display	**6AV2124-1DC01-0AX0**
SIMATIC HMI KP700 Comfort Key operation; 7" widescreen display	**6AV2124-1GC01-0AX0**
SIMATIC HMI KP900 Comfort Key operation; 9" widescreen display	**6AV2124-1JC01-0AX0**
SIMATIC HMI KP1200 Comfort Key operation; 12" widescreen display	**6AV2124-1MC01-0AX0**
SIMATIC HMI KP1500 Comfort Key operation; 15" widescreen display	**6AV2124-1QC02-0AX0**

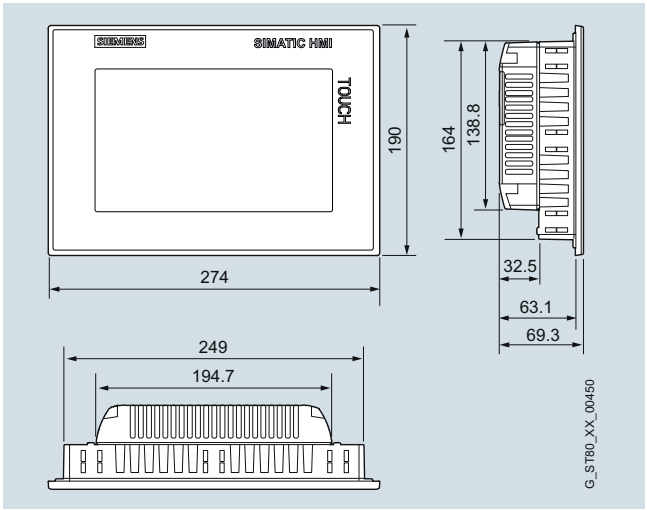
	Article No.
Starter kits for SIMATIC HMI Comfort Panels Consisting of: the respective SIMATIC HMI Comfort Panel, SIMATIC WinCC Comfort, Ethernet cable, 2 m; SIMATIC HMI memory card 2 GB, 10 protective films for touch screen devices	
Starter kit for SIMATIC HMI KTP400 Comfort, Key and Touch	**6AV2181-4DB20-0AX0**
Starter kit for SIMATIC HMI TP700 Comfort, Touch	**6AV2181-4GB00-0AX0**
Starter kit for SIMATIC HMI TP900 Comfort, Touch	**6AV2181-4JB00-0AX0**
Starter kit for SIMATIC HMI TP1200 Comfort, Touch	**6AV2181-4MB00-0AX0**
Starter kit for SIMATIC HMI TP1500 Comfort, Touch	**6AV2181-4QB00-0AX0**
Starter kit for SIMATIC HMI TP1900 Comfort, Touch	**6AV2181-4UB00-0AX0**
Starter kit for SIMATIC HMI TP2200 Comfort, Touch	**6AV2181-4XB00-0AX0**
Starter kit for SIMATIC HMI KP400 Comfort, Key	**6AV2181-4DB10-0AX0**
Starter kit for SIMATIC HMI KP700 Comfort, Key	**6AV2181-4GB10-0AX0**
Starter kit for SIMATIC HMI KP900 Comfort, Key	**6AV2181-4JB10-0AX0**
Starter kit for SIMATIC HMI KP1200 Comfort, Key	**6AV2181-4MB10-0AX0**
Starter kit for SIMATIC HMI KP1500 Comfort, Key	**6AV2181-4QB10-0AX0**
Accessories	See SIMATIC HMI accessories, Chap. 7

Dimensional drawings

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



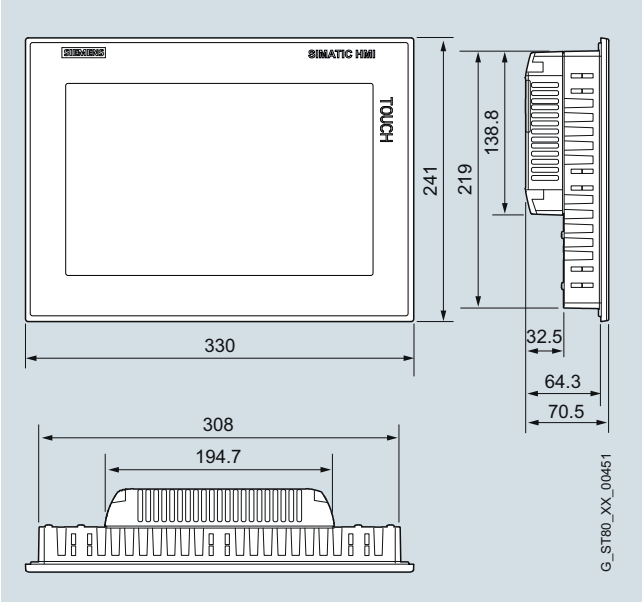
TP700 Comfort



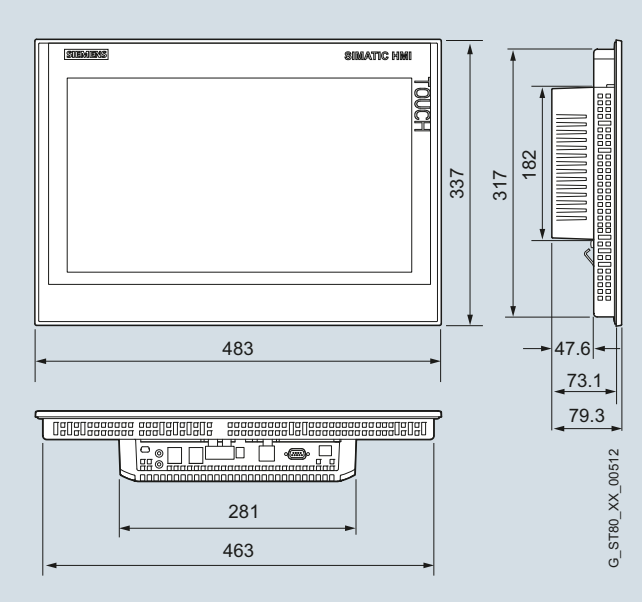
TP900 Comfort

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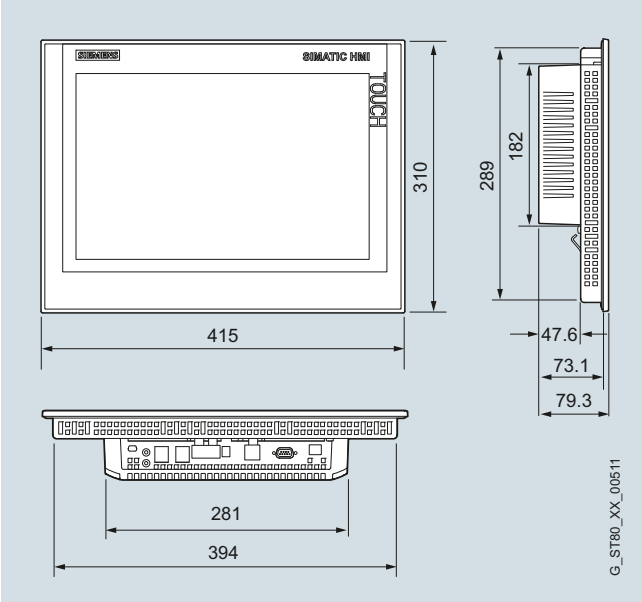
Dimensional drawings (continued)



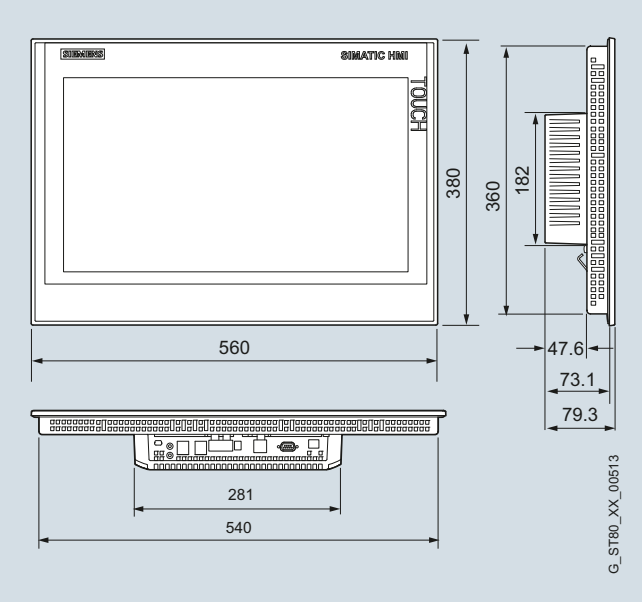
TP1200 Comfort



TP1900 Comfort



TP1500 Comfort



TP2200 Comfort