

Operator panels

Advanced HMI – Panel-based
Comfort Panels

Introduction

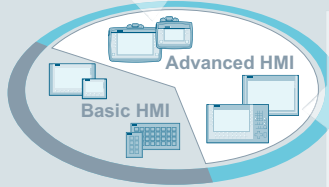
Overview

Advanced HMI

Mobile Panels

Maximum mobility and flexibility?

- Innovative operation of 4" ... 9" with and without cable
- Robust for site-related local operation
- Integrated safety concept



Comfort Panels

Highest demands in terms of performance and functionality?

- Brilliant widescreen displays from 4" ... 22"
- Innovative commissioning and service concept
- Energy management with PROFIenergy

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SIMATIC HMI Comfort Panels

SIMATIC HMI Comfort Panels are designed for implementing high-performance visualization tasks at machine-level. High performance, functionality and numerous integrated interfaces offer the greatest convenience in high-end applications.

The following modules are available:

- Comfort Panels
 - Comfort Panels
 - Comfort Panels Outdoor
 - Comfort Panels PRO
 - Comfort Panels INOX

SIMATIC HMI Mobile Panels

Take power and safety directly in your hands. Choose Mobile Panels for high-end mobile applications, fail-safe machines and widely distributed plants. The process communication can be wired or via WLAN.

The following modules are available:

- Mobile Panels
 - Mobile Panels 2nd Generation

Realization of demanding, complex HMI tasks with a high level of user convenience

If you are looking for a panel-based solution for more demanding applications with larger quantity scales, make a decision for Advanced HMI.

The user benefits from excellent functionality and a wide range of devices and applications, with key or touch operation. Both stationary and mobile solutions are available.

Overview



SIMATIC HMI Comfort Panels – Standard devices

- 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 PROFlenergy, via the HMI project or via a controller
- Modern industrial design, cast aluminum fronts for 7" upwards
- Upright installation for all touch devices
- Data security in the event of a power failure for the device and for the SIMATIC HMI Memory Card
- Innovative service and commissioning concept
- 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
- All versions can be used as an OPC UA client or as a 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 engineering framework

Note:

A 7" and a 15" Comfort Outdoor version are available. These devices have been specially designed for outdoor applications in difficult environments. Best display quality, even under sunlight, UV-resistant fronts and much more.

More information is available at:

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

Technical specifications

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
General information				
Product type designation	KTP400 Comfort	TP700 Comfort	TP900 Comfort	TP1200 Comfort
Display				
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
Resolution (pixels)				
• Horizontal image resolution	480 Pixel	800 Pixel	800 Pixel	1 280 Pixel
• Vertical image resolution	272 Pixel	480 Pixel	480 Pixel	800 Pixel
Backlighting				
• 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 %
Keyboard fonts				
• Function keys				
- Number of function keys	4	0	0	0
Touch operation				
• Design as touch screen	Yes	Yes	Yes	Yes
Installation type/mounting				
Mounting in portrait format possible	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	6AV2124-1QC02-0AX1 SIMATIC HMI KP1500 COMFORT
General information					
Product type designation	KP400 Comfort	KP700 Comfort	KP900 Comfort	KP1200 Comfort	KP1500 Comfort
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; LED, dimmable
Keyboard fonts					
• 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					
Memory available 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)	Yes	Yes	Yes	Yes	Yes
• retentive	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 industrial Ethernet interfaces	1	1; 2 ports (switch)	1; 2 ports (switch)	1; 2 ports (switch)	2; 2 ports (switch) + independent port
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
• USB Mini B	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 ports of the integrated switch	1; No switch integrated	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
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

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SIMATIC HMI Comfort Panels

Technical specifications (continued)

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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
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)					Yes
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
• Korean Register of Shipping (KRS)					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
• Chinese Classification Society (CCS)					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; For inscription on device rating plate
• cULus Class II Division 2					No; Available soon
• FM Class I Division 2	Yes	Yes	Yes	Yes	Yes
• FM Class II Division 2					No; Available soon
Ambient conditions					
Suited for indoor use					Yes
Suited for outdoor use					No
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; V14 SP1 HSP and higher
Languages					
Online languages					
• Number of online/runtime languages	32	32	32	32	32

Technical specifications (continued)

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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
• SIMATIC WinCC Audit	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 management					
• 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
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
• Ethernet	Yes	Yes	Yes	Yes	Yes

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Technical specifications (continued)

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Functionality under WinCC (TIA Portal) (continued)					
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
• SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB
• SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
• USB memory	Yes	Yes	Yes	Yes	Yes
• Network camera	Yes	Yes	Yes	Yes	Yes
Mechanics/material					
Enclosure material (front)					
• Plastic	Yes	No	No	No	No
• Aluminum	No	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No
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					
Weight without packaging	0.8 kg	2.2 kg	2.7 kg	4.4 kg	4.7 kg

Ordering data	Article No.		Article No.
SIMATIC HMI Comfort Panels		Starter kits for SIMATIC HMI Comfort Panels	
Key and touch devices		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	
SIMATIC HMI KTP400 Comfort Key/touch-screen operation; 4" widescreen display	6AV2124-2DC01-0AX0	Starter kit for SIMATIC HMI KTP400 Comfort, Key and Touch	6AV2181-4DB20-0AX0
Touch devices		Starter kit for SIMATIC HMI TP700 Comfort, Touch	6AV2181-4GB00-0AX0
SIMATIC HMI TP700 Comfort Touch-screen operation; 7" widescreen display	6AV2124-0GC01-0AX0	Starter kit for SIMATIC HMI TP900 Comfort, Touch	6AV2181-4JB00-0AX0
SIMATIC HMI TP900 Comfort Touch-screen operation; 9" widescreen display	6AV2124-0JC01-0AX0	Starter kit for SIMATIC HMI TP1200 Comfort, Touch	6AV2181-4MB00-0AX0
SIMATIC HMI TP1200 Comfort Touch-screen operation; 12" widescreen display	6AV2124-0MC01-0AX0	Starter kit for SIMATIC HMI TP1500 Comfort, Touch	6AV2181-4QB00-0AX0
SIMATIC HMI TP1500 Comfort Touch-screen operation; 15" widescreen display	6AV2124-0QC02-0AX1	Starter kit for SIMATIC HMI TP1900 Comfort, Touch	6AV2181-4UB00-0AX0
SIMATIC HMI TP1900 Comfort Touch-screen operation; 19" widescreen display	6AV2124-0UC02-0AX1	Starter kit for SIMATIC HMI TP2200 Comfort, Touch	6AV2181-4XB00-0AX0
SIMATIC HMI TP2200 Comfort Touch-screen operation; 22" widescreen display	6AV2124-0XC02-0AX1	Accessories	See chapter 6
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	6AV2124-1QC02-0AX1		

More information

More information is available on the Internet at:

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

Certain SIMATIC HMI Comfort Panels allow the application of a
customer name or logo, or selection of the membrane color in
accordance with the customer's corporate design. This is also
possible for small quantities.

More information is available at:

<http://www.siemens.com/express-hmi-tool>