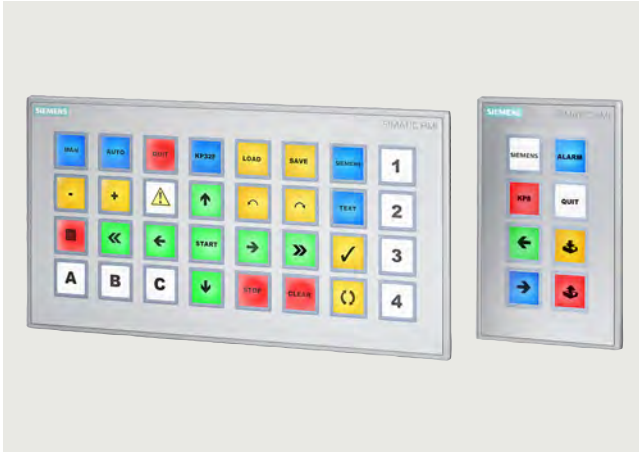


Operator panels

Basic HMI
Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Overview



Key Panel, blank front, at the front, populated



Key Panel, blank front, at the back, not populated



SIMATIC HMI KP8 PN LX, 8 short-stroke keys, long, 1–6 mm sheet thickness, PN interfaces, black neutral design, 8 configurable DI/DQ pins

SIMATIC HMI Key Panels

- Optimum operability thanks to large mechanical keys and multi-colored LED backlighting (daylight readable)
- Over 60% time savings for wiring and installation (Plug&Play)
- More than 30% savings in material costs compared to conventional keypad operator panels
- 2 PROFINET ports (incl. switch) already integrated for setting up line and ring topologies
- Freely configurable digital I/Os on the rear for connecting key-operated switches, indicator lights, etc.
- Connection of fail-safe emergency stop buttons or other fail-safe signals with KP8F and KP32F (in SIL2 or SIL3)
- Functionally compatible with all standard PROFINET master CPUs, also non-Siemens
- KP8 PN LX is suitable for direct installation next to monitors
- KP8 and blank front design, also optimized for installation in IPC Extension Units in IP65
- Maximum flexibility due to parameterization
- Blank front design for standardized assembly of flexible operator panels
- Installation enclosure, fully-enclosed IP65, no drilling or milling necessary, KP8(F) not included; for accessories see technical specifications for installation enclosure

Ordering data	Article No.	Technical specifications		
SIMATIC HMI KP8 PN Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces, 2 x parameterizable with STEP 7 V5.5 or higher SIEMENS Design (4 x 2 pairs of keys)	6AV3688-3AY36-0AX0	Article number	6AV3688-3AY36-0AX0 SIMATIC HMI KP8 PN	6AV2127-1AB00-0LX1 SIMATIC HMI KP8 PN LX 6mm
SIMATIC HMI KP8 PN LX Neutral design black LX (8 keys on top of each other); Short-stroke keys long, 1-6 mm sheet thickness, PN interfaces, 8 configurable DI/DO pins, 24 V DC can be looped through, parameterizable with STEP 7 V5.5 or higher	6AV2127-1AB00-0LX1	General information		
		Product type designation	KP8 PN	Key Panel KP8 PN LX (1 ... 6 mm)
		Control elements		
		With parameterizable keys	Yes	Yes
		Keyboard fonts		
SIMATIC HMI KP8F PN Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFI-safe, parameterizable with STEP 7 V5.5 or higher; 4 additional fail-safe inputs. Can be used as 2 x SIL 2 or 1 x SIL 3 • SIEMENS design • As neutral design without Siemens imprint • Blank front design for standard 22.5 mm operator controls, same mounting dimensions as KP8	6AV3688-3AF37-0AX0 6AV3688-3AF37-0AX0-Z A01+S00 6AV3688-3XY38-3AX0	• Membrane keyboard - user-definable label membrane keys • Function keys - Number of function keys • Short-stroke keys - Number of short-stroke keys	Yes	No; possible via adjacent display with L-pattern at key edge 8; 19 x 19 mm per button
		8		
		8	8	
		Expansions for operator control of the process		
		• DP direct LEDs (LEDs as S7 output I/O)	8; Adjustable brightness	
		• Number of color modes for LED	5; red, green, blue, yellow, white	
		• Direct keys (keys as S7 input I/O)	8	8
		Installation type/mounting		
		Mounting type	Clamp terminals	clamp fastening with additional mounting clips
		Front mounting	Yes; Compatible with Extension Units dimensions	Yes; mounting clip - Torx T20 tighten to 0.2 Nm; enclosure - Torx T10 tighten to 0.2 Nm
Rail mounting	No	No		
Mounting in portrait format possible	Yes	Yes		
Mounting in landscape format possible	Yes	Yes		
maximum permissible angle of inclination without external ventilation	30°; To the front/rear	30°; To the front/rear		
Number of slots for command devices and signaling units	0	0		
Supply voltage				
Rated value (DC)	24 V; 24 V looped through at connector, no interruption on pulling			
Digital inputs				
Number of digital inputs	8; Max. 8 inputs and outputs (total)			
Input voltage				
• Rated value (DC)	24 V	24 V		

Operator panels

Basic HMI
Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AV3688-3AY36-0AX0 SIMATIC HMI KP8 PN	6AV2127-1AB00-0LX1 SIMATIC HMI KP8 PN LX 6mm
Digital outputs		
Number of digital outputs	8; Max. 8 inputs and outputs (total)	
Short-circuit protection	Yes	Yes
Switching capacity of the outputs		
• with resistive load, max.	100 mA	100 mA
Output voltage		
• Rated value (DC)	24 V; Non-isolated	24 V; Non-isolated
Total current of the outputs		
• Current per channel, max.	100 mA	100 mA
• Current per group, max.	800 mA	800 mA
Interfaces		
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch	2; Incl. switch
Industrial Ethernet		
• Number of ports of the integrated switch	2; Per port	2; Per port
Protocols		
PROFINET	Yes; also 3rd party PLC	Yes; also 3rd party PLC
PROFINET CBA	No	No
IRT	Yes	Yes
PROFIsafe	No	No
PROFIBUS	No	No
Redundancy mode		
Media redundancy		
- MRP	Yes	Yes
Test commissioning functions		
Illuminant test	Yes; During switch on	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on	Yes; automatically when switching on
Degree and class of protection		
IP (at the front)	IP65	IP64
IP (rear)	IP20	IP20
NEMA (front)		
• Enclosure Type 4x at the front	Yes; Incl. NEMA12	No
• Enclosure Type 12 at the front		No

Article number	6AV3688-3AY36-0AX0 SIMATIC HMI KP8 PN	6AV2127-1AB00-0LX1 SIMATIC HMI KP8 PN LX 6mm
Standards, approvals, certificates		
CE mark	Yes	Yes
CSA approval		No
UL approval		No
cULus	Yes	No
FM approval		No
RCM (formerly C-TICK)	Yes	No
KC approval	Yes	No
EAC (formerly Gost-R)		No
CCC		No; not necessary
Suitable for safety functions	No	No
Marine approval		No
Use in hazardous areas		
• ATEX Zone 2	Yes	No
• ATEX Zone 22	Yes	No
• cULus Class I Zone 2, Division 2	Yes	No
• FM Class I Division 2	Yes	No
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	55 °C	60 °C
Relative humidity		
• Operation, max.	95 %; no condensation	
configuration / header		
Configuration software		
• STEP 7 Basic (TIA Portal)	Yes	Yes
• STEP 7 Professional (TIA Portal)	Yes	Yes
Functionality under WinCC (TIA Portal)		
Process coupling		
• S7-1200	Yes; with ET 200pro CPU and ET 200S CPU	Yes; with ET 200pro CPU and ET 200S CPU
• S7-1500	Yes	Yes
• S7-200	No	No
• S7-300/400	Yes; STEP 7 or SIMATIC STEP 7 Basic V11 or higher	Yes; with F-CPU: STEP 7 V11 SP1 (or higher) and Safety V11 (or higher) or SIMATIC STEP 7 Basic V11 (or higher)
• LOGO!	No	No
• WinAC	Yes	Yes
• SIMOTION	No	No
• Allen Bradley (EtherNet/IP)	No	No
• Allen Bradley (DF1)	No	No
• Mitsubishi (MC TCP/IP)	No	No
• Mitsubishi (FX)	No	No
• OMRON (FINS TCP)	No	No
• OMRON (LINK/Multilink)	No	No
• Modicon (Modbus TCP/IP)	No	No
• Modicon (Modbus)	No	No

Technical specifications

Article number	6AV3688-3AY36-0AX0 SIMATIC HMI KP8 PN	6AV2127-1AB00-0LX1 SIMATIC HMI KP8 PN LX 6mm
Mechanics/material		
Enclosure material (front)		Bayblend FR3010 enclosure, Autotex F150 front membrane
• Plastic	Yes	Yes; neutral enclosure, black RAL 9005
• Aluminum	No	No
Service life		
• Short-stroke keys (in switching cycles)	1 500 000	1 500 000
• LEDs (ON period)	100 %	100 %
Dimensions		
Width	98 mm	
Height	155 mm	
Depth	55 mm	
Width of the housing front	98 mm	40.7 mm
Height of housing front	155 mm	252.4 mm
Mounting cutout, width	67.7 mm; Max. thickness of mounting plate 2 - 6 mm	24 mm; tolerances +0.5 mm, not including connection plug (depending on connector type)
Mounting cutout, height	129.7 mm	244 mm; tolerances +0.5 mm, not including connection plug (depending on connector type)
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector	68.15 mm; mounting plate thickness max. 1 ... 6 mm
Weights		
Weight (without packaging)	270 g	297 g
Other		
Merchandise		Yes
Manufacturer name		GETT Gerätetechnik GmbH
Manufacturer's address		Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany
Note:		Key Panel must be configured as 6AV3688-3AY36-0AX0 Key Panel, compatible with 6AV2127-1AB00-0LX0

Article number	6AV3688-3AF37-0AX0 SIMATIC HMI KP8F PN
General information	
Product type designation	KP8F PN
Control elements	
With parameterizable keys	Yes
Keyboard fonts	
• Membrane keyboard	
- user-definable label membrane keys	Yes
• Function keys	
- Number of function keys	8
• Short-stroke keys	
- Number of short-stroke keys	8
Expansions for operator control of the process	
• DP direct LEDs (LEDs as S7 output I/O)	8; Adjustable brightness
• Number of color modes for LED	5; red, green, blue, yellow, white
• Direct keys (keys as S7 input I/O)	8
Installation type/mounting	
Mounting type	Mounting clip
Front mounting	Yes; Compatible with Extension Units dimensions
Rail mounting	No
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	30°; To the front/rear
Number of slots for command devices and signaling units	0
Supply voltage	
Rated value (DC)	24 V; 24 V can be looped through connector, interrupted when pulled
Digital inputs	
Number of digital inputs	8; Total inputs and outputs max. 8 and 2x SIL 2 or 1x SIL 3
Input voltage	
• Rated value (DC)	24 V

Operator panels

Basic HMI

Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AV3688-3AF37-0AX0 SIMATIC HMI KP8F PN
Digital outputs	
Number of digital outputs	8; Max. 8 inputs and outputs (total)
Short-circuit protection	Yes
Switching capacity of the outputs	
• with resistive load, max.	100 mA
Output voltage	
• Rated value (DC)	24 V; Non-isolated
Total current of the outputs	
• Current per channel, max.	100 mA
• Current per group, max.	800 mA
Interfaces	
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch
Industrial Ethernet	
• Number of ports of the integrated switch	2; Per port
Protocols	
PROFINET	Yes; also 3rd party PLC
PROFINET CBA	No
IRT	Yes
PROFIsafe	Yes; 1x SIL 3 (two-channel) or 2x SIL 2 (single-channel) emergency stop sensors
PROFIBUS	No
Redundancy mode	
Media redundancy	
- MRP	Yes
Test commissioning functions	
Illuminant test	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	Yes; Incl. NEMA12
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
CCC	No; not necessary
Suitable for safety functions	Yes
Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• cULus Class I Zone 2, Division 2	Yes
• FM Class I Division 2	Yes

Article number	6AV3688-3AF37-0AX0 SIMATIC HMI KP8F PN
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %; no condensation
configuration / header	
Configuration software	
• STEP 7 Basic (TIA Portal)	Yes
• STEP 7 Professional (TIA Portal)	Yes
Functionality under WinCC (TIA Portal)	
Process coupling	
• S7-1200	Yes; with ET 200pro CPU and ET 200S CPU
• S7-1500	Yes
• S7-200	No
• S7-300/400	Yes; with F-CPU: STEP 7 V11 SP1 (or higher) and Safety V11 (or higher) or SIMATIC STEP 7 Basic V11 (or higher)
• LOGO!	No
• WinAC	Yes
• SIMOTION	No
• Allen Bradley (EtherNet/IP)	No
• Allen Bradley (DF1)	No
• Mitsubishi (MC TCP/IP)	No
• Mitsubishi (FX)	No
• OMRON (FINS TCP)	No
• OMRON (LINK/Multilink)	No
• Modicon (Modbus TCP/IP)	No
• Modicon (Modbus)	No
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
• Aluminum	No
Service life	
• Short-stroke keys (in switching cycles)	1 500 000
• LEDs (ON period)	100 %
Dimensions	
Width of the housing front	98 mm
Height of housing front	155 mm
Mounting cutout, width	68 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	129 mm
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector
Weights	
Weight (without packaging)	280 g

Technical specifications

Article number	6AV3688-3EH47-0AX0 SIMATIC HMI KP32F PN
General information	
Product type designation	KP32F PN
Control elements	
With parameterizable keys	Yes
Keyboard fonts	
• Membrane keyboard	Yes
- user-definable label membrane keys	
• Function keys	32
- Number of function keys	
• Short-stroke keys	32
- Number of short-stroke keys	
Expansions for operator control of the process	
• DP direct LEDs (LEDs as S7 output I/O)	8; Adjustable brightness
• Number of color modes for LED	5; red, green, blue, yellow, white
• Direct keys (keys as S7 input I/O)	32
Installation type/mounting	
Mounting type	Mounting clip
Front mounting	Yes
Rail mounting	No
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	30°; To the front/rear
Number of slots for command devices and signaling units	0
Supply voltage	
Rated value (DC)	24 V; 24 V looped through at connector, no interruption on pulling
Digital inputs	
Number of digital inputs	32; Total inputs and outputs max. 32 and 2x SIL 2 or 4x SIL 3
Input voltage	
• Rated value (DC)	24 V
Digital outputs	
Number of digital outputs	16; Max. 32 inputs and outputs (total)
Short-circuit protection	Yes
Switching capacity of the outputs	
• with resistive load, max.	100 mA
Output voltage	
• Rated value (DC)	24 V; Non-isolated
Total current of the outputs	
• Current per channel, max.	100 mA
• Current per group, max.	800 mA

Article number	6AV3688-3EH47-0AX0 SIMATIC HMI KP32F PN
Interfaces	
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch
Industrial Ethernet	
• Number of ports of the integrated switch	2; Per port
Protocols	
PROFINET	Yes; incl. shared device, 3rd party PLC
PROFINET CBA	No
IRT	Yes
PROFIsafe	Yes; 2x SIL 3 (two-channel) or 4x SIL 2 (single-channel) emergency stop sensors
PROFIBUS	No
Redundancy mode	
Media redundancy	
- MRP	Yes
Test commissioning functions	
Illuminant test	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	Yes; Incl. NEMA12
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
CCC	No; not necessary
Suitable for safety functions	Yes
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• cULus Class I Zone 2, Division 2	No
• FM Class I Division 2	No
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %; no condensation
configuration / header	
Configuration software	
• STEP 7 Basic (TIA Portal)	Yes
• STEP 7 Professional (TIA Portal)	Yes

Operator panels

Basic HMI
Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AV3688-3EH47-0AX0 SIMATIC HMI KP32F PN
Functionality under WinCC (TIA Portal)	
Process coupling	
• S7-1200	Yes; with ET 200pro CPU and ET 200S CPU
• S7-1500	Yes
• S7-200	No
• S7-300/400	Yes; with F-CPU: STEP 7 V11 SP1 or higher and Safety V11 (or higher), without F-CPU STEP 7 or SIMATIC STEP 7 Basic V11 (or higher)
• LOGO!	No
• WinAC	Yes
• SIMOTION	No
• Allen Bradley (EtherNet/IP)	No
• Allen Bradley (DF1)	No
• Mitsubishi (MC TCP/IP)	No
• Mitsubishi (FX)	No
• OMRON (FINS TCP)	No
• OMRON (LINK/Multilink)	No
• Modicon (Modbus TCP/IP)	No
• Modicon (Modbus)	No
Mechanics/material	
Enclosure material (front)	
• Plastic	No
• Aluminum	Yes
Service life	
• Short-stroke keys (in switching cycles)	1 500 000
• LEDs (ON period)	100 %
Dimensions	
Width	295 mm
Height	155 mm
Depth	43 mm
Width of the housing front	295 mm
Height of housing front	155 mm
Mounting cutout, width	277 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	137 mm
Overall depth	37 mm; Incl. angled SIMATIC Ethernet connector
Weights	
Weight (without packaging)	1 220 g

Article number	6AV3688-3XY38-3AX0 KP8 Design blank Front
General information	
Product type designation	Empty front design
Installation type/mounting	
Mounting type	Clamp terminals
Rack mounting	No
Front mounting	Yes; Compatible with Extension Units dimensions
Rail mounting	No
Wall mounting/direct mounting	No
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	180°; To the front/rear
Number of slots for command devices and signaling units	5; Max. 5 possible
Supply voltage	
Design of the power supply	external
Interfaces	
Number of industrial Ethernet interfaces	0
Number of PROFINET interfaces	0
Number of USB interfaces	0
Protocols	
PROFINET	No
PROFIsafe	No
Redundancy mode	
Media redundancy	
- MRP	No
Test commissioning functions	
Key and signal lamp test	No
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	No
Standards, approvals, certificates	
CE mark	Yes
cULus	No
RCM (formerly C-TICK)	No
KC approval	No
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	No
• FM Class I Division 2	No
Marine approval	
• Germanischer Lloyd (GL)	No
• American Bureau of Shipping (ABS)	No
• Bureau Veritas (BV)	No
• Det Norske Veritas (DNV)	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (Class NK)	No
• Polski Rejestr Statkow (PRS)	No

Technical specifications

Article number	6AV3688-3XY38-3AX0 KP8 Design blank Front
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %
Mechanics/material	
Enclosure material (front)	
• Plastic	No
• Aluminum	Yes
• Stainless steel	No
Dimensions	
Width	98 mm
Height	155 mm
Mounting cutout, width	68 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	129 mm
Overall depth	49 mm
Weights	
Weight (without packaging)	240 g
Other	
Merchandise	Yes
Manufacturer name	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany

More information

More information is available on the internet at
<http://www.siemens.com/key-panels>

For accessories see "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Note:

Do you need a specific modification or option for the products described here? Then look up "Customized Automation", where you will find information about additional sector-specific products that can be ordered as well as about options for customer-specific modification and adaptation.

Operator panels

Basic HMI

Basic Panels

Standard devices 2nd Generation

Overview



Basic Panels 2nd Generation

With their fully developed HMI basic functions, SIMATIC HMI Basic Panels 2nd Generation are the ideal entry-level series for simple HMI applications.

The device family offers panels with 4", 7", 9" and 12" 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 bar code scanner, and supports the simple archiving of data on a USB flash drive as well as the manual backup and restoring of the complete panel.

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

More information is available at

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

Ordering data

Article No.

SIMATIC HMI Basic Panels (2nd Generation)

Key and touch devices

SIMATIC HMI KTP400 Basic

Key/touch operation;
4" TFT widescreen display,
65 536 colors, PROFINET interface

6AV2123-2DB03-0AX0

SIMATIC HMI TP400 Basic Keyless

Touch screen operation;
4" TFT widescreen display,
65 536 colors, PROFINET interface

6AV2143-6DB00-0AA0

SIMATIC HMI KTP700 Basic

Key/touch operation; 7" TFT display,
65 536 colors, PROFINET interface

6AV2123-2GB03-0AX0

SIMATIC HMI KTP700 Basic DP

Key/touch operation; 7" TFT display,
65 536 colors, PROFIBUS interface

6AV2123-2GA03-0AX0

SIMATIC HMI TP700 Basic Keyless

Touch screen operation;
7" TFT display, 65 536 colors,
PROFINET interface

6AV2143-6GB00-0AA0

SIMATIC HMI KTP900 Basic

Key/touch operation; 9" TFT display,
65 536 colors, PROFINET interface

6AV2123-2JB03-0AX0

SIMATIC HMI TP900 Basic Keyless

Touch screen operation;
9" TFT display, 65 536 colors,
PROFINET interface

6AV2143-6JB00-0AA0

SIMATIC HMI KTP1200 Basic

Key/touch operation;
12" TFT display, 65 536 colors,
PROFINET interface

6AV2123-2MB03-0AX0

SIMATIC HMI KTP1200 Basic DP

Key/touch operation;
12" TFT display, 65 536 colors,
PROFIBUS interface

6AV2123-2MA03-0AX0

Documentation

You can find the Equipment Manual for the Basic Panels on the Internet at:

<https://support.automation.siemens.com>

Accessories

See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Technical specifications

Article number	6AV2123-2DB03-0AX0 SIMATIC HMI KTP400 Basic	6AV2143-6DB00-0AA0 SIMATIC HMI TP400 Basic OEM	6AV2123-2GB03-0AX0 SIMATIC HMI KTP700 Basic	6AV2123-2GA03-0AX0 SIMATIC HMI KTP700 Basic DP	6AV2143-6GB00-0AA0 SIMATIC HMI TP700 Basic OEM
General information					
Product type designation	KTP400 Basic	TP400 Basic Keyless	KTP700 Basic color PN	KTP700 Basic color DP	TP700 Basic Keyless
Display					
Design of display	TFT widescreen display, LED backlighting				
Screen diagonal	4.3 in	4.3 in	7 in	7 in	7 in
Number of colors	65 536	65 536	65 536	65 536	65 536
Resolution (pixels)					
• Horizontal image resolution	480 pixel	480 pixel	800 pixel	800 pixel	800 pixel
• Vertical image resolution	272 pixel	272 pixel	480 pixel	480 pixel	480 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	20 000 h	20 000 h	20 000 h	20 000 h	20 000 h
Control elements					
Keyboard fonts					
• Function keys		No			No
- Number of function keys	4	0	8	8	0
Touch operation					
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive
• Design as multi-touch screen		No			
• Monitor keyboard		Yes			
Installation type/mounting					
Wall mounting/direct mounting	No	No	No		
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Supply voltage					
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Memory					
Memory available for user data	10 Mbyte	10 Mbyte	10 Mbyte	10 Mbyte	10 Mbyte
Type of output					
Acoustics					
• Buzzer	Yes	Yes	Yes	Yes	Yes
Time of day					
Clock					
• Software clock	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes	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	1	0	1
Number of RS 485 interfaces	0	0	0	1	0
Number of USB interfaces	1; Up to 16 GB	1	1; Up to 16 GB	1; Up to 16 GB	1; Up to 16 GB
Number of SD card slots	0	0	0	0	0

Operator panels

Basic HMI

Basic Panels

Standard devices 2nd Generation

Technical specifications

Article number	6AV2123-2DB03-0AX0 SIMATIC HMI KTP400 Basic	6AV2143-6DB00-0AA0 SIMATIC HMI TP400 Basic OEM	6AV2123-2GB03-0AX0 SIMATIC HMI KTP700 Basic	6AV2123-2GA03-0AX0 SIMATIC HMI KTP700 Basic DP	6AV2143-6GB00-0AA0 SIMATIC HMI TP700 Basic OEM
Protocols					
PROFINET	Yes	Yes	Yes	No	Yes
IRT	No	No	No	No	No
PROFIBUS	No	No	No	Yes	No
MPI	No	No	No	Yes	No
Redundancy mode					
Media redundancy					
- MRP	No		No	No	No
Degree and class of protection					
IP (at the front)	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20
NEMA (front)					
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes
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
EAC (formerly Gost-R)		Yes			
Use in hazardous areas					
• ATEX Zone 2	No	No	No	No	No
• ATEX Zone 22	No	No	No	No	No
• IECEx Zone 2	No		No	No	No
• IECEx Zone 22	No		No	No	No
• cULus Class I Zone 2, Division 2	No	No	No	No	No
• FM Class I Division 2	No	No	No	No	No
Marine approval					
• Germanischer Lloyd (GL)	Yes		Yes	Yes	Yes
• American Bureau of Shipping (ABS)	Yes		Yes	Yes	Yes
• Bureau Veritas (BV)	Yes		Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes		Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes		Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes		Yes	Yes	Yes
• Polski Rejestr Statkow (PRS)	No		No	No	No
• Chinese Classification Society (CCS)	No		No	No	
Ambient conditions					
Suited for indoor use	Yes			Yes	
Suited for outdoor use	No			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	50 °C	50 °C	50 °C
Relative humidity					
• Operation, max.	90 %; no condensation	90 %	90 %; no condensation	90 %; no condensation	90 %; no condensation

Technical specifications

Article number	6AV2123-2DB03-0AX0	6AV2143-6DB00-0AA0	6AV2123-2GB03-0AX0	6AV2123-2GA03-0AX0	6AV2143-6GB00-0AA0
	SIMATIC HMI KTP400 Basic	SIMATIC HMI TP400 Basic OEM	SIMATIC HMI KTP700 Basic	SIMATIC HMI KTP700 Basic DP	SIMATIC HMI TP700 Basic OEM
configuration / header					
Configuration software					
• STEP 7 Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)				
• WinCC flexible Compact	No	No	No	No	No
• WinCC Basic (TIA Portal)	Yes	Yes	Yes	Yes	Yes
Languages					
Online languages					
• Number of online/runtime languages	10	10	10	10	10
Functionality under WinCC (TIA Portal)					
Applications/options					
• Web browser	Yes		Yes	No	Yes
• SIMATIC WinCC Sm@rtServer	Yes; Available with WinCC (TIA Portal) V14 or higher		Yes; Available with WinCC (TIA Portal) V14 or higher	No	
Number of Visual Basic Scripts	No	No	No	No	No
Task planner	Yes	Yes	Yes	Yes	Yes
• time-controlled	No	No	No	No	No
• task-controlled	Yes	Yes	Yes	Yes	Yes
Message system					
• Bit messages					
- Number of bit messages	1 000	1 000	1 000	1 000	1 000
• Analog messages					
- Number of analog messages	25	25	25	25	25
• Message buffer					
- Number of entries	256	256	256	256	256
- Circulating buffer	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes
Recipe management					
• Number of recipes	50	50	50	50	50
• Size of internal recipe memory	256 kbyte	256 kbyte	256 kbyte	256 kbyte	256 kbyte
• Recipe memory expandable	No	No	No	No	No
Variables					
• Number of variables per device	800	800	800	800	800
• Number of variables per screen	100	100	100	100	100
Images					
• Number of configurable images	250	100	250	250	250
Archiving					
• Number of archives per device	2; One message and one process value archive	2	2; One message and one process value archive	2; One message and one process value archive	2
• Number of entries per archive	10 000	10 000	10 000	10 000	10 000
• Message archive	Yes	Yes	Yes	Yes	Yes
• Process value archive	Yes	Yes	Yes	Yes	Yes
• Archiving methods					
- Sequential archive	Yes	Yes	Yes	Yes	Yes
- Short-term archive	Yes	Yes	Yes	Yes	Yes
• Memory location					
- Memory card	No	No	No	No	No
- USB memory	Yes	Yes	Yes	Yes	Yes
- Ethernet	No	No	No	No	No
• Data storage format					
- CSV	No	Yes	No	No	No
- TXT	Yes	No	Yes	Yes	Yes
- RDB	No	No	No	No	No

Operator panels

Basic HMI

Basic Panels

Standard devices 2nd Generation

Technical specifications

Article number	6AV2123-2DB03-0AX0 SIMATIC HMI KTP400 Basic	6AV2143-6DB00-0AA0 SIMATIC HMI TP400 Basic OEM	6AV2123-2GB03-0AX0 SIMATIC HMI KTP700 Basic	6AV2123-2GA03-0AX0 SIMATIC HMI KTP700 Basic DP	6AV2143-6GB00-0AA0 SIMATIC HMI TP700 Basic OEM
Security					
• Number of user groups	50	50	50	50	50
• Number of users	50		50	50	50
• SIMATIC Logon	No	No	No	No	No
Transfer (upload/download)					
• MPI/PROFIBUS DP	No	No	No	Yes	No
• Ethernet	Yes	Yes	Yes	No	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	No	Yes
• Allen Bradley (DF1)	No	No	No	Yes	No
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	No	Yes
• Mitsubishi (FX)	No	No	No	Yes	No
• OMRON (FINS TCP)	No	No	No	No	No
• OMRON (LINK/Multilink)	No	No	No	Yes	No
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	No	Yes
• Modicon (Modbus)	No	No	No	Yes	No
Peripherals/Options					
Printer	No	No	No	No	No
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	No	No	No	No	No
USB memory	Yes	Yes; USB storage medium can be connected	Yes	Yes	Yes
Mechanics/material					
Enclosure material (front)					
• Plastic	Yes	Yes	Yes	Yes	Yes
• Aluminum	No	No	No	No	No
• Stainless steel	No	No	No	No	No
Dimensions					
Width of the housing front	140 mm	141 mm	214 mm	214 mm	214 mm
Height of housing front	116 mm	116 mm	158 mm	158 mm	158 mm
Mounting cutout, width	124 mm	123 mm	198 mm	198 mm	197 mm
Mounting cutout, height	100 mm	99 mm	142 mm	142 mm	141 mm
Overall depth	34.9 mm	33 mm	39 mm	39 mm	39 mm
Weights					
Weight (without packaging)	360 g		780 g	800 g	780 g

Technical specifications

Article number	6AV2123-2JB03-0AX0 SIMATIC HMI KTP900 Basic	6AV2143-6JB00-0AA0 SIMATIC HMI TP900 Basic OEM	6AV2123-2MB03-0AX0 SIMATIC HMI KTP1200 Basic	6AV2123-2MA03-0AX0 SIMATIC HMI KTP1200 Basic DP
General information				
Product type designation	KTP900 Basic color PN	TP900 Basic Keyless	KTP1200 Basic color PN	KTP1200 Basic color DP
Display				
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	9 in	9 in	12 in	12 in
Number of colors	65 536	65 536	65 536	65 536
Resolution (pixels)				
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel	1 280 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel	800 pixel
Backlighting				
• MTBF backlighting (at 25 °C)	20 000 h	20 000 h	20 000 h	20 000 h
Control elements				
Keyboard fonts				
• Function keys		No		
- Number of function keys	8	0	10	10
Touch operation				
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive
• Design as multi-touch screen		No		
• Monitor keyboard		Yes		
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Memory				
Memory available for user data	10 Mbyte	10 Mbyte	10 Mbyte	10 Mbyte
Type of output				
Acoustics		Buzzer		
• Buzzer	Yes	Yes	Yes	Yes
Time of day				
Clock				
• Software clock	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
• synchronizable	Yes	Yes	Yes	Yes
Interfaces				
Number of industrial Ethernet interfaces	1	1	1	0
Number of RS 485 interfaces	0	0	0	1
Number of USB interfaces	1; Up to 16 GB	1; USB 2.0, up to 16 GB respectively	1; Up to 16 GB	1; Up to 16 GB
Number of SD card slots	0	0	0	0
Industrial Ethernet				
• Number of ports of the integrated switch		0		

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Article number	6AV2123-2JB03-0AX0 SIMATIC HMI KTP900 Basic	6AV2143-6JB00-0AA0 SIMATIC HMI TP900 Basic OEM	6AV2123-2MB03-0AX0 SIMATIC HMI KTP1200 Basic	6AV2123-2MA03-0AX0 SIMATIC HMI KTP1200 Basic DP
Protocols				
PROFINET	Yes	Yes	Yes	No
IRT	No	No	No	No
PROFIBUS	No	No	No	Yes
MPI	No	No	No	Yes
Redundancy mode				
Media redundancy				
- MRP	No	No	No	No
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20
NEMA (front)				
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
cULus	Yes		Yes	Yes
RCM (formerly C-TICK)	Yes		Yes	Yes
KC approval	Yes		Yes	Yes
Use in hazardous areas				
• 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
Marine approval				
• Germanischer Lloyd (GL)	Yes		Yes	Yes
• American Bureau of Shipping (ABS)	Yes		Yes	Yes
• Bureau Veritas (BV)	Yes		Yes	Yes
• Det Norske Veritas (DNV)	Yes		Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes		Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes		Yes	Yes
• Polski Rejestr Statkow (PRS)	No		No	No
• Chinese Classification Society (CCS)	No		No	No
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
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header				
Configuration software				
• 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)	Yes; via integrated WinCC Basic (TIA Portal)
• WinCC flexible Compact	No	No	No	No
• WinCC Basic (TIA Portal)	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2123-2JB03-0AX0 SIMATIC HMI KTP900 Basic	6AV2143-6JB00-0AA0 SIMATIC HMI TP900 Basic OEM	6AV2123-2MB03-0AX0 SIMATIC HMI KTP1200 Basic	6AV2123-2MA03-0AX0 SIMATIC HMI KTP1200 Basic DP
Languages				
Online languages				
• Number of online/runtime languages	10	10	10	10
Functionality under WinCC (TIA Portal)				
Applications/options				
• Web browser	Yes	No	Yes	No
• SIMATIC WinCC Sm@rtServer	Yes; Available with WinCC (TIA Portal) V14 or higher	No	Yes; Available with WinCC (TIA Portal) V14 or higher	No
Number of Visual Basic Scripts	No	No	No	No
Task planner	Yes	Yes	Yes	Yes
• time-controlled	No	No	No	No
• task-controlled	Yes	Yes	Yes	Yes
Message system				
• Bit messages				
- Number of bit messages	1 000	1 000	1 000	1 000
• Analog messages				
- Number of analog messages	25	25	25	25
• Message buffer				
- Number of entries	256	256	256	256
- Circulating buffer	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes
Recipe management				
• Number of recipes	50	50	50	50
• Size of internal recipe memory	256 kbyte	256 kbyte	256 kbyte	256 kbyte
• Recipe memory expandable	No		No	No
Variables				
• Number of variables per device	800	800	800	800
• Number of variables per screen	100	100	100	100
Images				
• Number of configurable images	250	100	250	250
Archiving				
• Number of archives per device	2; One message and one process value archive	2	2; One message and one process value archive	2; One message and one process value archive
• Number of entries per archive	10 000	10 000	10 000	10 000
• Message archive	Yes	Yes	Yes	Yes
• Process value archive	Yes	Yes	Yes	Yes
• Archiving methods				
- Sequential archive	Yes	Yes	Yes	Yes
- Short-term archive	Yes	Yes	Yes	Yes
• Memory location				
- Memory card	No	No	No	No
- USB memory	Yes	Yes	Yes	Yes
- Ethernet	No	No	No	No
• Data storage format				
- CSV	No	No	No	No
- TXT	Yes	Yes	Yes	Yes
- RDB	No	No	No	No

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Technical specifications

Article number	6AV2123-2JB03-0AX0 SIMATIC HMI KTP900 Basic	6AV2143-6JB00-0AA0 SIMATIC HMI TP900 Basic OEM	6AV2123-2MB03-0AX0 SIMATIC HMI KTP1200 Basic	6AV2123-2MA03-0AX0 SIMATIC HMI KTP1200 Basic DP
Security				
• Number of user groups	50	50	50	50
• Number of users	50		50	50
• SIMATIC Logon	No	No	No	No
Transfer (upload/download)				
• MPI/PROFIBUS DP	No	No	No	Yes
• Ethernet	Yes	Yes	Yes	No
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	No
• Allen Bradley (DF1)	No	No	No	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	No
• Mitsubishi (FX)	No	No	No	Yes
• OMRON (FINS TCP)	No	No	No	No
• OMRON (LINK/Multilink)	No	No	No	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	No
• Modicon (Modbus)	No	No	No	Yes
Peripherals/Options				
Printer	No	No	No	No
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	No	No	No	No
USB memory	Yes	Yes; USB storage medium can be connected	Yes	Yes
Mechanics/material				
Enclosure material (front)				
• Plastic	Yes	Yes	Yes	Yes
• Aluminum	No	No	No	No
• Stainless steel	No	No	No	No
Dimensions				
Width of the housing front	267 mm	267 mm	330 mm	330 mm
Height of housing front	182 mm	182 mm	245 mm	245 mm
Mounting cutout, width	251 mm	251 mm	310 mm	310 mm
Mounting cutout, height	166 mm	166 mm	221 mm	221 mm
Overall depth	39.4 mm	55 mm	54.9 mm	54.9 mm
Weights				
Weight (without packaging)	1 130 g	1 130 g	1 710 g	1 710 g

More information

More information is available on the internet at

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

Note:

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

Operator panels

Basic HMI

SIMATIC HMI Unified Basic Panels

Overview



SIMATIC HMI Unified Basic Panels

SIMATIC HMI Unified Basic Panels consist of four different devices with varying display sizes. All devices come with the same number of hardware interfaces and the same functionality – just select the perfect device for your needs based on the screen size.

Each Unified Basic Panel is available in the standard design with Siemens and SIMATIC HMI branding.

SIMATIC WinCC Unified contains visualization, communication, alarms/warnings, administration of parameter sets, archiving of user administration.

Furthermore, a WinCC Unified Client Operate for remote operator control and monitoring is included.

Client access is based on native web technologies such as HTML5, SVG and JavaScript. The visualization can be accessed via any modern web browser – without the need for additional installation.

Ordering data

Article No.

SIMATIC HMI MTP400, Unified Basic Panel

Touch operation,
4" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as of
WinCC Unified Basic V18 Upd. 3,
contains open source SW which is
provided free of charge
See enclosed Blu-Ray

6AV2123-3DB32-0AW0

SIMATIC HMI MTP700, Unified Basic Panel

Touch operation,
7" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as of
WinCC Unified Basic V18 Upd. 3,
contains open source SW which is
provided free of charge
See enclosed Blu-Ray

6AV2123-3GB32-0AW0

SIMATIC HMI MTP1000, Unified Basic Panel

Touch operation,
10" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as of
WinCC Unified Basic V18 Upd. 3,
contains open source SW which is
provided free of charge
See enclosed Blu-Ray

6AV2123-3KB32-0AW0

SIMATIC HMI MTP1200, Unified Basic Panel

Touch operation,
12" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as of
WinCC Unified Basic V18 Upd. 3,
contains open source SW which is
provided free of charge
See enclosed Blu-Ray

6AV2123-3MB32-0AW0

Technical specifications

Article number	6AV2123-3DB32-0AW0 SIMATIC HMI MTP400 Unified Basic	6AV2123-3GB32-0AW0 SIMATIC HMI MTP700 Unified Basic	6AV2123-3KB32-0AW0 SIMATIC HMI MTP1000 Unified Basic	6AV2123-3MB32-0AW0 SIMATIC HMI MTP1200 Unified Basic
General information				
Product type designation	MTP400 Unified Basic	MTP700 Unified Basic	MTP1000 Unified Basic	MTP1200 Unified Basic
Display				
Design of display	TFT	TFT	TFT	TFT
Screen diagonal	4.3 in	7 in	10.1 in	12.1 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)				
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel	1 280 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel	800 pixel
Backlighting				
• MTBF backlighting (at 25 °C)	20 000 h; At 25°C	20 000 h; At 25°C	20 000 h; At 25°C	20 000 h; At 25°C
Control elements				
Touch operation				
• Design as touch screen	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes
• Monitor keyboard	Yes	Yes	Yes	Yes
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Time of day				
Clock				
• Software clock	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
• synchronizable	Yes	Yes	Yes	Yes
Interfaces				
Number of industrial Ethernet interfaces	1; Gigabit Ethernet (IE/PN), RJ45	1; Gigabit Ethernet (IE/PN), RJ45	1; Gigabit Ethernet (IE/PN), RJ45	1; Gigabit Ethernet (IE/PN), RJ45
Number of RS 485 interfaces	0	0	0	0
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of SD card slots	0	0	0	0
Industrial Ethernet				
• Number of ports of the integrated switch	1	1	1	1
Protocols				
PROFINET	Yes	Yes	Yes	Yes
IRT	No	No	No	No
MPI	No	No	No	No
Redundancy mode				
Media redundancy				
- MRP	No	No	No	No
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20
NEMA (front)	NEMA 4, NEMA 4x (when installed)	NEMA 4, NEMA 4x (when installed)	NEMA 4, NEMA 4x (when installed)	NEMA 4, NEMA 4x (when installed)
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	No	No	No	No

Operator panels

Basic HMI

SIMATIC HMI Unified Basic Panels

Technical specifications

Article number	6AV2123-3DB32-0AW0 SIMATIC HMI MTP400 Unified Basic	6AV2123-3GB32-0AW0 SIMATIC HMI MTP700 Unified Basic	6AV2123-3KB32-0AW0 SIMATIC HMI MTP1000 Unified Basic	6AV2123-3MB32-0AW0 SIMATIC HMI MTP1200 Unified Basic
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes
FM approval	No	No	No	No
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	No	No	No	No
CCC	No	No	No	No
Use in hazardous areas				
• ATEX Zone 2	No	No	No	No
• ATEX Zone 22	No	No	No	No
• IECEx Zone 2	No	No	No	No
• IECEx Zone 22	No	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No	No
• cULus Class II Division 2	No	No	No	No
• FM Class I Division 2	No	No	No	No
• FM Class II Division 2	No	No	No	No
Marine approval				
• Germanischer Lloyd (GL)	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• American Bureau of Shipping (ABS)	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Bureau Veritas (BV)	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon
• Det Norske Veritas (DNV)	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Korean Register of Shipping (KRS)	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Lloyds Register of Shipping (LRS)	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Nippon Kaiji Kyokai (Class NK)	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Chinese Classification Society (CCS)	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Ambient conditions				
Suited for indoor use	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No
Ambient temperature during operation				
Operation (vertical installation)				
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header				
Configuration software				
• WinCC Unified Basic Engineering (TIA Portal)	Yes	Yes	Yes	Yes
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes
Languages				
Online languages				
• Number of online/runtime languages	32	32	32	32
Functionality under WinCC Unified				
Applications/options	No	No	No	No
Number of Visual Basic Scripts	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes
functionality under WinCC Unified / alarm system / header				
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2123-3DB32-0AW0 SIMATIC HMI MTP400 Unified Basic	6AV2123-3GB32-0AW0 SIMATIC HMI MTP700 Unified Basic	6AV2123-3KB32-0AW0 SIMATIC HMI MTP1000 Unified Basic	6AV2123-3MB32-0AW0 SIMATIC HMI MTP1200 Unified Basic
Parameter set management (recipes)				
• Number of parameter set types	250	250	250	250
• Size of internal parameter set memory	5 Mbyte	5 Mbyte	5 Mbyte	5 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes
functionality under WinCC Unified / variables / header				
• Number of variables per device	1 000	1 000	1 000	1 000
• Number of variables per screen	300	300	300	300
functionality under WinCC Unified / screens / header				
• Number of configurable images	300	300	300	300
functionality under WinCC Unified / archiving / header				
• Number of archives per device	10	10	10	10
Security				
• Number of roles	50	50	50	50
• Number of users	200	200	200	200
• Central user administration	Yes	Yes	Yes	Yes
functionality under WinCC Unified / transfer (upload/download) / header				
• Ethernet	Yes	Yes	Yes	Yes
Process coupling				
• S7-1200	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes
• Number of S7 connections	8	8	8	8
• LOGO!	Yes; over Modbus	Yes; over Modbus	Yes; over Modbus	Yes; over Modbus
• SIMOTION	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes
• OPC UA Server	No	No	No	No
• Software Controller/Open Controller	No	No	No	No
Peripherals/Options				
Peripherals	card reader, barcode reader	card reader, barcode reader	card reader, barcode reader	card reader, barcode reader
Printer	No	No	No	No
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	No	No	No	No
USB memory	Yes	Yes	Yes	Yes
Network camera	No	No	No	No
Dimensions				
Width of the housing front	140 mm	214 mm	280 mm	326 mm
Height of housing front	116 mm	158 mm	205 mm	237 mm
Mounting cutout, width	123 mm	197 mm	264 mm	310 mm
Mounting cutout, height	99 mm	141 mm	189 mm	221 mm
Overall depth	36 mm	36 mm	55 mm	55 mm
Weights				
Weight (without packaging)	0.45 kg	0.85 kg	1.55 kg	2.08 kg

Operator panels

Advanced HMI Panel-based

Introduction

Overview

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

Advanced HMI is the Panel-based solution for demanding applications with large configuration limits. 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.

SIMATIC HMI Unified Comfort Panels

The new generation of high-end, 7–22" operator panels, part of the new SIMATIC WinCC Unified System, boasts numerous improvements over the predecessor devices in terms of performance, openness and user-friendliness.

- Rugged multi-touch technology
- Innovative SIMATIC WinCC Unified visualization software
- Integrated Edge functionality
- Remote Client support

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.

- Brilliant widescreen display of 4" to 22"
- Easy commissioning and service concept

SIMATIC HMI Mobile Panels

Panels for high-end mobile applications – even in the fail-safe area of machines and widely distributed plants. The process communication can be wired or via WLAN.

- Innovative operation from 4" to 9"
- Rugged for location-related local operation
- Integrated security concept

Overview



SIMATIC HMI Unified Comfort Panels

The new generation of high-end, 7–22-inch HMI devices, part of the new SIMATIC WinCC Unified System, boasts numerous improvements over the predecessor devices in terms of performance, openness and user-friendliness.

Thanks to their capacitive glass front with multi-touch technology, the Unified Comfort Panels are as convenient to use as a smartphone or tablet. The sharp colors and high contrast improve the readability and ease of use.

Visualization on the devices is based on SIMATIC WinCC Unified, the new visualization system in the TIA Portal. This opens up many new opportunities and functionalities for the user – across all device sizes.

Brand new to the SIMATIC HMI product portfolio is the option to expand device functionality with apps. Previously, HMI Panels were used exclusively for visualization software. Thanks to the integration of Siemens Industrial Edge, users can now run other programs simultaneously alongside this standard device functionality. Project-specific requirements can thus be implemented quickly and easily.

The following SIMATIC HMI Unified Comfort Panels are available:

- Standard design:
 - MTP700 Comfort
 - MTP1000 Comfort
 - MTP1200 Comfort
 - MTP1500 Comfort
 - MTP1900 Comfort
 - MTP2200 Comfort
- Neutral design:
 - MTP700 Comfort
 - MTP1000 Comfort
 - MTP1200 Comfort
 - MTP1500 Comfort
 - MTP1900 Comfort
 - MTP2200 Comfort

Starter Kits are available for standard design devices.

These consist of:

- HMI Unified Comfort Panel
- WinCC Unified V16 Comfort
- EDGE Runtime for Unified Comfort (Device-managed) license
- 1.5 m PROFINET cable
- Memory card (32 GB)
- Protective film

More information is available at

<https://www.siemens.com/unified-comfort-panels>

SIMATIC WinCC Unified options

- WinCC Unified Audit Basis
- WinCC Unified Clients (Operate Client and Monitor Client)
- WinCC Unified Database Storage
- WinCC Unified Logging
- WinCC Unified Parameter Control
- WinCC Unified Report Execution
- WinCC Unified Collaboration

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Standard

Overview



SIMATIC HMI MTP2200 Unified Comfort Panel Standard design front view

SIMATIC HMI Unified Comfort Panels - standard devices

SIMATIC HMI Unified Comfort Panels consist of six different devices with varying display sizes. All devices come with the same number of hardware interfaces and the same functionality – just select the perfect device for your needs based on the screen size.

Each Unified Comfort Panel is available in the standard design with Siemens and SIMATIC HMI branding and a silver-colored aluminum frame.

All Unified Comfort Panels come with integrated Edge functionality.

SIMATIC WinCC Unified contains visualization, communication, alarms/warnings, report creation, administration of parameter sets, archiving of user administration.

Furthermore, a WinCC Unified Client Operate (V17 or higher) for remote operator control and monitoring, and a WinCC Unified Client Monitor (V18 or higher) for monitoring only are also included. Additional clients can be enabled with a license. Up to three client licenses can be used.

Client access is based on native web technologies such as HTML5, SVG and JavaScript. The visualization can be accessed via any modern web browser – without the need for additional installation.

Siemens Industrial Edge can be used in two different ways:

- Device-managed Edge
- Centrally-managed Edge (planned)

SIMATIC HMI Unified Comfort Panels can also be ordered with a neutral design.

Note:

The technical specifications of the neutral design devices correspond to the technical specifications of the devices with standard design.

Ordering data

Article No.

Touch devices for SIMATIC HMI Unified Comfort Panels

Standard design

SIMATIC HMI MTP700 Unified Comfort Panel

6AV2128-3GB06-0AX1

7" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source SW which is provided free of charge. See enclosed DVD

SIMATIC HMI MTP1000 Unified Comfort Panel

6AV2128-3KB06-0AX1

10.1" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source SW which is provided free of charge. See enclosed DVD

SIMATIC HMI MTP1200 Unified Comfort Panel

6AV2128-3MB06-0AX1

12.1" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source SW which is provided free of charge. See enclosed DVD

SIMATIC HMI MTP1500 Unified Comfort Panel

6AV2128-3QB06-0AX1

15.6" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source SW which is provided free of charge. See enclosed DVD

SIMATIC HMI MTP1900 Unified Comfort Panel

6AV2128-3UB06-0AX1

18.5" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD

SIMATIC HMI Unified Comfort Panels Standard

Ordering data	Article No.		Article No.	
SIMATIC HMI MTP2200 Unified Comfort Panel 21.5" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	6AV2128-3XB06-0AX1		SIMATIC HMI MTP1500 Unified Comfort Panel Neutral, touch operation; 15.6" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	6AV2128-3QB36-0AX1
Neutral design				
SIMATIC HMI MTP700 Unified Comfort Panel Neutral, touch operation; 7" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	6AV2128-3GB36-0AX1		SIMATIC HMI MTP1900 Unified Comfort Panel Neutral, touch operation; 18.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	6AV2128-3UB36-0AX1
SIMATIC HMI MTP1000 Unified Comfort Panel Neutral, touch operation; 10.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	6AV2128-3KB36-0AX1		SIMATIC HMI MTP2200 Unified Comfort Panel Neutral, touch operation; 21.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	6AV2128-3XB36-0AX1
SIMATIC HMI MTP1200 Unified Comfort Panel Neutral, touch operation; 12.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	6AV2128-3MB36-0AX1		Software EDGE Runtime for SIMATIC Unified Comfort Runtime software, single license, license key for download, without software and documentation, Class A, email address required for delivery	6AV2170-2BA00-0AA0

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Standard

Technical specifications

Article number	6AV2128-3GB06-0AX1	6AV2128-3KB06-0AX1	6AV2128-3MB06-0AX1	6AV2128-3QB06-0AX1	6AV2128-3UB06-0AX1	6AV2128-3XB06-0AX1
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
General information						
Product type designation	MTP700 Unified Comfort	MTP1000 Unified Comfort	MTP1200 Unified Comfort	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

SIMATIC HMI Unified Comfort Panels Standard

Technical specifications

Article number	6AV2128-3GB06-0AX1	6AV2128-3KB06-0AX1	6AV2128-3MB06-0AX1	6AV2128-3QB06-0AX1	6AV2128-3UB06-0AX1	6AV2128-3XB06-0AX1
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
CCC	Yes	Yes	Yes	Yes	Yes	Yes
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
Marine approval						
• Germanischer Lloyd (GL)	No; included in DNV					
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes	Yes	Yes
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes	Yes	Yes
• Chinese Classification Society (CCS)	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation					
configuration / header						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Standard

Technical specifications

Article number	6AV2128-3GB06-0AX1 SIMATIC HMI MTP700 Unified Comfort	6AV2128-3KB06-0AX1 SIMATIC HMI MTP1000 Unified Comfort	6AV2128-3MB06-0AX1 SIMATIC HMI MTP1200 Unified Comfort	6AV2128-3QB06-0AX1 SIMATIC HMI MTP1500 Unified Comfort	6AV2128-3UB06-0AX1 SIMATIC HMI MTP1900 Unified Comfort	6AV2128-3XB06-0AX1 SIMATIC HMI MTP2200 Unified Comfort
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes					
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes					
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No					
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / alarm system / header						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte			12 Mbyte		
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / variables / header						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
functionality under WinCC Unified / screens / header						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
functionality under WinCC Unified / archiving / header						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17
functionality under WinCC Unified / transfer (upload/download) / header						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2128-3GB06-0AX1 SIMATIC HMI MTP700 Unified Comfort	6AV2128-3KB06-0AX1 SIMATIC HMI MTP1000 Unified Comfort	6AV2128-3MB06-0AX1 SIMATIC HMI MTP1200 Unified Comfort	6AV2128-3QB06-0AX1 SIMATIC HMI MTP1500 Unified Comfort	6AV2128-3UB06-0AX1 SIMATIC HMI MTP1900 Unified Comfort	6AV2128-3XB06-0AX1 SIMATIC HMI MTP2200 Unified Comfort
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front	214 mm	280 mm	326 mm	398 mm	464 mm	529 mm
Height of housing front	158 mm	205 mm	237 mm	257 mm	294 mm	331 mm
Mounting cutout, width	197 mm	264 mm	310 mm	382 mm	448 mm	513 mm
Mounting cutout, height	141 mm	189 mm	221 mm	241 mm	278 mm	315 mm
Overall depth	64 mm	64 mm	64 mm	73 mm	73 mm	73 mm
Weights						
Weight (without packaging)	1.4 kg	2.1 kg	2.8 kg	4.3 kg	5.5 kg	6.9 kg

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Standard

Technical specifications

Article number	6AV2128-3GB36-0AX1	6AV2128-3KB36-0AX1	6AV2128-3MB36-0AX1	6AV2128-3QB36-0AX1	6AV2128-3UB36-0AX1	6AV2128-3XB36-0AX1
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
General information						
Product type designation	MTP700 Unified Comfort	MTP1000 Unified Comfort	MTP1200 Unified Comfort	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2128-3GB36-0AX1	6AV2128-3KB36-0AX1	6AV2128-3MB36-0AX1	6AV2128-3QB36-0AX1	6AV2128-3UB36-0AX1	6AV2128-3XB36-0AX1
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
CCC	Yes	Yes	Yes	Yes	Yes	Yes
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
Marine approval						
• Germanischer Lloyd (GL)	No; included in DNV					
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes	Yes	Yes
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes	Yes	Yes
• Chinese Classification Society (CCS)	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation					
configuration / header						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Standard

Technical specifications

Article number	6AV2128-3GB36-0AX1 SIMATIC HMI MTP700 Unified Comfort Neutr	6AV2128-3KB36-0AX1 SIMATIC HMI MTP1000 Unified Comfort Neut	6AV2128-3MB36-0AX1 SIMATIC HMI MTP1200 Unified Comfort Neut	6AV2128-3QB36-0AX1 SIMATIC HMI MTP1500 Unified Comfort Neut	6AV2128-3UB36-0AX1 SIMATIC HMI MTP1900 Unified Comfort Neut	6AV2128-3XB36-0AX1 SIMATIC HMI MTP2200 Unified Comfort Neut
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes					
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes					
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No					
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / alarm system / header						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte			12 Mbyte		
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / variables / header						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
functionality under WinCC Unified / screens / header						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
functionality under WinCC Unified / archiving / header						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17
functionality under WinCC Unified / transfer (upload/download) / header						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2128-3GB36-0AX1	6AV2128-3KB36-0AX1	6AV2128-3MB36-0AX1	6AV2128-3QB36-0AX1	6AV2128-3UB36-0AX1	6AV2128-3XB36-0AX1
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front	214 mm	280 mm	326 mm	398 mm	464 mm	529 mm
Height of housing front	158 mm	205 mm	237 mm	257 mm	294 mm	331 mm
Mounting cutout, width	197 mm	264 mm	310 mm	382 mm	448 mm	513 mm
Mounting cutout, height	141 mm	189 mm	221 mm	241 mm	278 mm	315 mm
Overall depth	64 mm	64 mm	64 mm	73 mm	73 mm	73 mm
Weights						
Weight (without packaging)	1.4 kg	2.1 kg	2.8 kg	4.3 kg	5.5 kg	6.9 kg

More information

Every Unified Comfort Panel is available in two different design variants.

- The standard design has Siemens and SIMATIC HMI branding on the front and a silver-colored aluminum frame.
- The neutral design has no branding on the front and a black aluminum frame.

Note:

The devices with the Article No. extension *-0AX1 have additional certifications for explosion-proof areas as well as for use in shipbuilding (see technical specifications). All other functions and properties are fully compatible with the devices with Article No. extension *-0AX0.

More information is available on the internet at <https://www.siemens.com/unified-comfort-panels>

For selected SIMATIC HMI Unified Comfort Panels, the option exists to apply the customer name or logo or to select the membrane color in accordance with the customer's corporate design. This is also possible for small quantities.

More information is available at

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

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

Overview



SIMATIC HMI MTP2200 Unified Comfort Panel Hygienic, neutral design

SIMATIC HMI Unified Comfort Panels Hygienic - standard devices

SIMATIC HMI Unified Comfort Panels Hygienic comprise six different devices with different display sizes. All devices come with the same number of hardware interfaces and the same functionality – just select the perfect device for your needs based on the screen size.

Each Unified Comfort Panel Hygienic is available in a standard design with Siemens and SIMATIC HMI branding and a silver-colored aluminum frame.

All Unified Comfort Panels Hygienic are supplied with integrated Edge functionality.

SIMATIC WinCC Unified includes visualization, communication, alarms/messages, report generation, parameter set management, archiving, and user administration.

Furthermore, a WinCC Unified Client Operate (V17 or higher) for remote operator control and monitoring, and a WinCC Unified Client Monitor (V18 or higher) for monitoring only are also included. Additional clients can be enabled with a license.

In total, up to three client licenses can be used.

Client access is based on native web technologies such as HTML5, SVG and JavaScript. The visualization can be accessed via any modern web browser – without the need for additional installation.

Siemens Industrial Edge can be used in two different ways:

- Device-managed Edge
- Centrally-managed Edge (planned)

SIMATIC HMI Unified Comfort Panels Hygienic can also be ordered with a neutral design.

Note:

The technical specifications of the neutral design devices correspond to the technical specifications of the devices with standard design.

Ordering data

Article No.

Unified Comfort Panels Hygienic

SIMATIC HMI MTP700 Unified Comfort Hygienic

Touch operation,
7" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as from
WinCC Unified Comfort V17,
contains open source software,
which is provided free of charge,
see enclosed DVD

6AV2128-3GB40-0AX0

SIMATIC HMI MTP1000 Unified Comfort Hygienic

Touch operation,
10.1" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as from
WinCC Unified Comfort V17,
contains open source software,
which is provided free of charge,
see enclosed DVD

6AV2128-3KB40-0AX0

SIMATIC HMI MTP1200 Unified Comfort Hygienic

Touch operation,
12.1" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as from
WinCC Unified Comfort V17,
contains open source software,
which is provided free of charge,
see enclosed DVD

6AV2128-3MB40-0AX0

SIMATIC HMI MTP1500 Unified Comfort Hygienic

Touch operation,
15.6" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as from
WinCC Unified Comfort V17,
contains open source software,
which is provided free of charge,
see enclosed DVD

6AV2128-3QB40-0AX0

SIMATIC HMI MTP1900 Unified Comfort Hygienic

Touch operation,
18.5" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as from
WinCC Unified Comfort V17,
contains open source software,
which is provided free of charge,
see enclosed DVD

6AV2128-3UB40-0AX0

SIMATIC HMI MTP2200 Unified Comfort Hygienic

Touch operation,
21.5" widescreen TFT display,
16 million colors,
PROFINET interface,
configurable as from
WinCC Unified Comfort V17,
contains open source software,
which is provided free of charge,
see enclosed DVD

6AV2128-3XB40-0AX0

SIMATIC HMI Unified Comfort Panels Hygienic

Ordering data	Article No.		Article No.
SIMATIC HMI MTP700 Unified Comfort Hygienic Neutral Neutral, touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3GB70-0AX0	SIMATIC HMI MTP1500 Unified Comfort Hygienic Neutral Neutral, touch operation, 15.6" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3QB70-0AX0
SIMATIC HMI MTP1000 Unified Comfort Hygienic Neutral Neutral, touch operation, 10.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3KB70-0AX0	SIMATIC HMI MTP1900 Unified Comfort Hygienic Neutral Neutral, touch operation, 18.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3UB70-0AX0
SIMATIC HMI MTP1200 Unified Comfort Hygienic Neutral Neutral, touch operation, 12.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3MB70-0AX0	SIMATIC HMI MTP2200 Unified Comfort Hygienic Neutral Neutral, touch operation, 21.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3XB70-0AX0

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

Technical specifications

Article number	6AV2128-3GB40-0AX0	6AV2128-3KB40-0AX0	6AV2128-3MB40-0AX0	6AV2128-3QB40-0AX0	6AV2128-3UB40-0AX0	6AV2128-3XB40-0AX0
	SIMATIC HMI MTP700 Unified Comfort Hyg	SIMATIC HMI MTP1000 Unified Comfort Hyg	SIMATIC HMI MTP1200 Unified Comfort Hyg	SIMATIC HMI MTP1500 Unified Comfort Hyg	SIMATIC HMI MTP1900 Unified Comfort Hyg	SIMATIC HMI MTP2200 Unified Comfort Hyg
General information						
Product type designation	MTP700 Unified Comfort Hygienic	MTP1000 Unified Comfort	MTP1200 Unified Comfort Hygienic	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort Hygienic
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Monitor keyboard	Yes	Yes		Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2128-3GB40-0AX0	6AV2128-3KB40-0AX0	6AV2128-3MB40-0AX0	6AV2128-3QB40-0AX0	6AV2128-3UB40-0AX0	6AV2128-3XB40-0AX0
	SIMATIC HMI MTP700 Unified Comfort Hyg	SIMATIC HMI MTP1000 Unified Comfort Hyg	SIMATIC HMI MTP1200 Unified Comfort Hyg	SIMATIC HMI MTP1500 Unified Comfort Hyg	SIMATIC HMI MTP1900 Unified Comfort Hyg	SIMATIC HMI MTP2200 Unified Comfort Hyg
Degree and class of protection						
IP (at the front)	IP69	IP69	IP69	IP69	IP69	IP69
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Enclosure Type 12 at the front	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Standards, approvals, certificates						
CE mark	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes	Yes	Yes	Yes
UKCA mark		Yes	Yes	Yes	Yes	Yes
cULus	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
FM approval	No	No				
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
CCC	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Use in hazardous areas						
• ATEX Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• ATEX Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class I Zone 2, Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class II Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• FM Class I Division 2	No	No	No	No	No	No
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

Technical specifications

Article number	6AV2128-3GB40-0AX0	6AV2128-3KB40-0AX0	6AV2128-3MB40-0AX0	6AV2128-3QB40-0AX0	6AV2128-3UB40-0AX0	6AV2128-3XB40-0AX0
	SIMATIC HMI MTP700 Unified Comfort Hyg	SIMATIC HMI MTP1000 Unified Comfort Hyg	SIMATIC HMI MTP1200 Unified Comfort Hyg	SIMATIC HMI MTP1500 Unified Comfort Hyg	SIMATIC HMI MTP1900 Unified Comfort Hyg	SIMATIC HMI MTP2200 Unified Comfort Hyg
configuration / header						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes			Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	No	No	No	No	No	No
• Unified Collaboration	No	No	No	No	No	No
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / alarm system / header						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer						
- Circulating buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte		12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / variables / header						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
functionality under WinCC Unified / screens / header						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
functionality under WinCC Unified / archiving / header						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17

Technical specifications

Article number	6AV2128-3GB40-0AX0	6AV2128-3KB40-0AX0	6AV2128-3MB40-0AX0	6AV2128-3QB40-0AX0	6AV2128-3UB40-0AX0	6AV2128-3XB40-0AX0
	SIMATIC HMI MTP700 Unified Comfort Hyg	SIMATIC HMI MTP1000 Unified Comfort Hyg	SIMATIC HMI MTP1200 Unified Comfort Hyg	SIMATIC HMI MTP1500 Unified Comfort Hyg	SIMATIC HMI MTP1900 Unified Comfort Hyg	SIMATIC HMI MTP2200 Unified Comfort Hyg
functionality under WinCC Unified / transfer (upload/download) / header						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Accessories						
Further accessories are available	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Plastic	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front		292 mm	338 mm	412 mm	479 mm	556 mm
Height of housing front		217 mm	249 mm	273 mm	309 mm	358 mm
Mounting cutout, width	197 mm	264 mm	310 mm	382 mm	448 mm	513 mm
Mounting cutout, height	141 mm	189 mm	221 mm	241 mm	278 mm	315 mm
Overall depth	66 mm	67 mm	64 mm	79 mm	79 mm	79 mm
Weights						
Weight (without packaging)	1.9 kg	2.65 kg	3.4 kg	5.4 kg	6.7 kg	8.15 kg

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

Technical specifications

Article number	6AV2128-3GB70-0AX0	6AV2128-3KB70-0AX0	6AV2128-3MB70-0AX0	6AV2128-3QB70-0AX0	6AV2128-3UB70-0AX0	6AV2128-3XB70-0AX0
	SIMATIC HMI MTP700 UCP Hyg Neutral	SIMATIC HMI MTP1000 UCP Hyg Neutral	SIMATIC HMI MTP1200 UCP Hyg Neutral	SIMATIC HMI MTP1500 UCP Hyg Neutral	SIMATIC HMI MTP1900 UCP Hyg Neutral	SIMATIC HMI MTP2200 UCP Hyg Neutral
General information						
Product type designation	MTP700 Unified Comfort Hygienic	MTP1000 Unified Comfort	MTP1200 Unified Comfort Hygienic	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort Hygienic
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Monitor keyboard	Yes	Yes		Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP69	IP69	IP69	IP69	IP69	IP69
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Enclosure Type 12 at the front	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon

Technical specifications

Article number	6AV2128-3GB70-0AX0	6AV2128-3KB70-0AX0	6AV2128-3MB70-0AX0	6AV2128-3QB70-0AX0	6AV2128-3UB70-0AX0	6AV2128-3XB70-0AX0
	SIMATIC HMI MTP700 UCP Hyg Neutral	SIMATIC HMI MTP1000 UCP Hyg Neutral	SIMATIC HMI MTP1200 UCP Hyg Neutral	SIMATIC HMI MTP1500 UCP Hyg Neutral	SIMATIC HMI MTP1900 UCP Hyg Neutral	SIMATIC HMI MTP2200 UCP Hyg Neutral
Standards, approvals, certificates						
CE mark	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes	Yes	Yes	Yes
UKCA mark		Yes	Yes	Yes	Yes	Yes
cULus	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
FM approval	No	No				
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
CCC	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Use in hazardous areas						
• ATEX Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• ATEX Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class I Zone 2, Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class II Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• FM Class I Division 2	No	No	No	No	No	No
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

Technical specifications

Article number	6AV2128-3GB70-0AX0 SIMATIC HMI MTP700 UCP Hyg Neutral	6AV2128-3KB70-0AX0 SIMATIC HMI MTP1000 UCP Hyg Neutral	6AV2128-3MB70-0AX0 SIMATIC HMI MTP1200 UCP Hyg Neutral	6AV2128-3QB70-0AX0 SIMATIC HMI MTP1500 UCP Hyg Neutral	6AV2128-3UB70-0AX0 SIMATIC HMI MTP1900 UCP Hyg Neutral	6AV2128-3XB70-0AX0 SIMATIC HMI MTP2200 UCP Hyg Neutral
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes			Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	No	No	No	No	No	No
• Unified Collaboration	No	No	No	No	No	No
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / alarm system / header						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte		12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / variables / header						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
functionality under WinCC Unified / screens / header						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
functionality under WinCC Unified / archiving / header						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17
functionality under WinCC Unified / transfer (upload/download) / header						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2128-3GB70-0AX0	6AV2128-3KB70-0AX0	6AV2128-3MB70-0AX0	6AV2128-3QB70-0AX0	6AV2128-3UB70-0AX0	6AV2128-3XB70-0AX0
	SIMATIC HMI MTP700 UCP Hyg Neutral	SIMATIC HMI MTP1000 UCP Hyg Neutral	SIMATIC HMI MTP1200 UCP Hyg Neutral	SIMATIC HMI MTP1500 UCP Hyg Neutral	SIMATIC HMI MTP1900 UCP Hyg Neutral	SIMATIC HMI MTP2200 UCP Hyg Neutral
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Accessories						
Further accessories are available	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Plastic	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front		292 mm	338 mm	412 mm	479 mm	556 mm
Height of housing front		217 mm	249 mm	273 mm	309 mm	358 mm
Mounting cutout, width	197 mm	264 mm	310 mm	382 mm	448 mm	513 mm
Mounting cutout, height	141 mm	189 mm	221 mm	241 mm	278 mm	315 mm
Overall depth	66 mm	67 mm	64 mm	79 mm	79 mm	79 mm
Weights						
Weight (without packaging)	1.9 kg	2.65 kg	3.4 kg	5.4 kg	6.7 kg	8.15 kg

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Overview



SIMATIC HMI Unified Comfort PRO: fully-enclosed IP65 degree of protection, ready-to-use, can be installed directly at the machine

SIMATIC HMI Unified Comfort Panels PRO in 12", 15", 19" and 22" widescreen formats expand the Unified Comfort Panel portfolio to include devices with fully-enclosed IP65 protection. The rugged aluminum enclosure enables it to be used directly at the machine and guarantees durability, even in harsh and extreme operating environments.

Highlights:

- All-round IP65 degree of protection
- 100% Unified Comfort Panel functionality incl. Siemens Industrial Edge
- Identical display resolutions as the SIMATIC HMI Unified Comfort Panels
- Can be adapted to support arm system of various manufacturers
- Extension with hardware operator controls by means of Extension Units
- Fast integration capability
- Mechanical compatibility with SIMATIC HMI Comfort Panel PRO devices (support arm and Extension Unit connection)
- Devices can be ordered in Siemens and neutral design (without Siemens brand)

More information is available at
<http://siemens.com/simatic-hmi-pro>

System components for fully-enclosed IP65-protected devices:

System components for PRO devices are only suitable for SIMATIC HMI/IPC PRO devices.

In combination with SIMATIC HMI PRO basic devices, these components enable flexible adaptation to individual customer requirements for operator control and monitoring at the machine level, as well as offering a versatile and attractive solution for cabinet-free visualization and automation.

The following system components are available:

- Fixing elements
 - Adapter sets
 - Basic adapter
 - Round tube adapter
- Extension Units 12" – 22" with operator controls
- Extension components
 - Stainless steel keyboard
 - Tool and keyboard tray

For more detailed information about system components refer to "PC-based Automation" -> "Industrial PC" -> "Devices for special requirements" -> "System components for fully-enclosed IP65-protected devices".

SIMATIC HMI Unified Comfort Panel PRO

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Ordering data	Article No.		Article No.
SIMATIC Unified Comfort Panel PRO			
MTP1200 Unified Comfort PRO 12.1" TFT display, 1280 x 800 pixels, 16 million colors; multi-touch; 1 x RS422/485, 1 x PROFINET/Industrial Ethernet interface with MRP (2 ports); 1 x Ethernet (Gigabit); 2 x SD card slot; 4 x USB; - For support arm (not extendable, flange on top) - For support arm (not extendable, flange on top), neutral front - For support arm (extendable, round tube) - For support arm (extendable, round tube), neutral front - For supporting foot (extendable, flange below) - For supporting foot (extendable, flange below), neutral front	6AV2128-3MB27-0AX0 6AV2128-3MB57-0AX0 6AV2128-3MB27-0BX0 6AV2128-3MB57-0BX0 6AV2128-3MB27-1BX0 6AV2128-3MB57-1BX0		
MTP1500 Unified Comfort PRO 15.6" TFT display, 1366 x 768 pixels, 16 million colors; multi-touch; 1 x RS422/485, 1 x PROFINET/Industrial Ethernet interface with MRP (2 ports); 1 x Ethernet (Gigabit); 2 x SD card slot; 4 x USB; - For support arm (not extendable, flange on top) - For support arm (not extendable, flange on top), neutral front - For support arm (extendable, round tube) - For support arm (extendable, round tube), neutral front - For supporting foot (extendable, flange below) - For supporting foot (extendable, flange below), neutral front	6AV2128-3QB27-0AX0 6AV2128-3QB57-0AX0 6AV2128-3QB27-0BX0 6AV2128-3QB57-0BX0 6AV2128-3QB27-1BX0 6AV2128-3QB57-1BX0		
		MTP1900 Unified Comfort PRO 18.5" TFT display, 1920 x 1080 pixels, 16 million colors; multi-touch; 1 x RS422/485, 1 x PROFINET/Industrial Ethernet interface with MRP (2 ports); 1 x Ethernet (Gigabit); 2 x SD card slot; 4 x USB; - For support arm (not extendable, flange on top) - For support arm (not extendable, flange on top), neutral front - For support arm (extendable, round tube) - For support arm (extendable, round tube), neutral front - For supporting foot (extendable, flange below) - For supporting foot (extendable, flange below), neutral front	6AV2128-3UB27-0AX0 6AV2128-3UB57-0AX0 6AV2128-3UB27-0BX0 6AV2128-3UB57-0BX0 6AV2128-3UB27-1BX0 6AV2128-3UB57-1BX0
		MTP2200 Unified Comfort PRO 21.5" TFT display, 1920 x 1080 pixels, 16 million colors; multi-touch; 1 x RS422/485, 1 x PROFINET/Industrial Ethernet interface with MRP (2 ports); 1 x Ethernet (Gigabit); 2 x SD card slot; 4 x USB; - For support arm (not extendable, flange on top) - For support arm (not extendable, flange on top), neutral front - For support arm (extendable, round tube) - For support arm (extendable, round tube), neutral front - For supporting foot (extendable, flange below) - For supporting foot (extendable, flange below), neutral front	6AV2128-3XB27-0AX0 6AV2128-3XB57-0AX0 6AV2128-3XB27-0BX0 6AV2128-3XB57-0BX0 6AV2128-3XB27-1BX0 6AV2128-3XB57-1BX0

Technical specifications

Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
General information						
Product type designation	MTP1200 Unified Comfort PRO		MTP1200 Unified Comfort PRO		MTP1200 Unified Comfort PRO	
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	12.1 in	12.1 in	12.1 in	12.1 in	12.1 in	12.1 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 280 pixel	1 280 pixel	1 280 pixel	1 280 pixel	1 280 pixel	1 280 pixel
• Vertical image resolution	800 pixel	800 pixel	800 pixel	800 pixel	800 pixel	800 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
Installation type/mounting						
Mounting	Support arm	Support arm	Support arm	Support arm	Pedestal	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
CCC	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Use in hazardous areas						
• ATEX Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• ATEX Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class I Zone 2, Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class II Division 2	No	No	No	No	No	No
• FM Class I Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header						
Configuration software						
• WinCC Unified Basic Engineering (TIA Portal)	No	No	No	No	No	No
• WinCC Unified Comfort Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher
• WinCC Unified PC Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes	Yes	Yes	Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / alarm system / header						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / variables / header						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	600	600	600
functionality under WinCC Unified / screens / header						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
functionality under WinCC Unified / archiving / header						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / transfer (upload/download) / header						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	313 mm	313 mm	313 mm	313 mm	313 mm	313 mm
Height of housing front	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	163 mm; Without basic adapter	163 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights						
Weight (without packaging)	5.1 kg	5.1 kg	5 kg	5 kg	5.1 kg	5.1 kg

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3QB27-0AX0	6AV2128-3QB57-0AX0	6AV2128-3QB27-0BX0	6AV2128-3QB57-0BX0	6AV2128-3QB27-1BX0	6AV2128-3QB57-1BX0
	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO
General information						
Product type designation	MTP1500 Unified Comfort PRO	MTP1500 Unified Comfort PRO Neutral Front	MTP1500 Unified Comfort PRO		MTP1500 Unified Comfort PRO	MTP1500 Unified Comfort PRO Neutral Front
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	15.6 in	15.6 in	15.6 in	15.6 in	15.6 in	15.6 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel
• Vertical image resolution	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting	Support arm	Support arm	Support arm	Support arm	Pedestal	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3QB27-0AX0	6AV2128-3QB57-0AX0	6AV2128-3QB27-0BX0	6AV2128-3QB57-0BX0	6AV2128-3QB27-1BX0	6AV2128-3QB57-1BX0
	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
CCC	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Use in hazardous areas						
• ATEX Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• ATEX Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class I Zone 2, Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class II Division 2	No	No	No	No	No	No
• FM Class I Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header						
Configuration software						
• WinCC Unified Basic Engineering (TIA Portal)	No	No	No	No	No	No
• WinCC Unified Comfort Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher
• WinCC Unified PC Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3QB27-0AX0	6AV2128-3QB57-0AX0	6AV2128-3QB27-0BX0	6AV2128-3QB57-0BX0	6AV2128-3QB27-1BX0	6AV2128-3QB57-1BX0
	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes	Yes	Yes	Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / alarm system / header						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / variables / header						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	800	800	800	800	800	800
functionality under WinCC Unified / screens / header						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
functionality under WinCC Unified / archiving / header						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / transfer (upload/download) / header						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2128-3QB27-0AX0	6AV2128-3QB57-0AX0	6AV2128-3QB27-0BX0	6AV2128-3QB57-0BX0	6AV2128-3QB27-1BX0	6AV2128-3QB57-1BX0
	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	396 mm	396 mm	396 mm	396 mm	396 mm	396 mm
Height of housing front	255 mm; Without basic adapter	255 mm; Without basic adapter	255 mm; Without basic adapter	255 mm; Without basic adapter	255 mm; Without basic adapter	255 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	163 mm; Without basic adapter	163 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights						
Weight (without packaging)	6.1 kg	6.1 kg	6 kg	6 kg	6.1 kg	6.1 kg

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3UB27-0AX0	6AV2128-3UB57-0AX0	6AV2128-3UB27-0BX0	6AV2128-3UB57-0BX0	6AV2128-3UB27-1BX0	6AV2128-3UB57-1BX0
	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO
General information						
Product type designation	MTP1900 Unified Comfort PRO	MTP1900 Unified Comfort PRO Neutral Front	MTP1900 Unified Comfort PRO		MTP1900 Unified Comfort PRO	MTP1900 Unified Comfort PRO Neutral Front
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	18.5 in	18.5 in	18.5 in	18.5 in	18.5 in	18.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting	Support arm	Support arm	Support arm	Support arm	Pedestal	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3UB27-0AX0	6AV2128-3UB57-0AX0	6AV2128-3UB27-0BX0	6AV2128-3UB57-0BX0	6AV2128-3UB27-1BX0	6AV2128-3UB57-1BX0
	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
CCC	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Use in hazardous areas						
• ATEX Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• ATEX Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class I Zone 2, Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class II Division 2	No	No	No	No	No	No
• FM Class I Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header						
Configuration software						
• WinCC Unified Basic Engineering (TIA Portal)	No	No	No	No	No	No
• WinCC Unified Comfort Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher
• WinCC Unified PC Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3UB27-0AX0	6AV2128-3UB57-0AX0	6AV2128-3UB27-0BX0	6AV2128-3UB57-0BX0	6AV2128-3UB27-1BX0	6AV2128-3UB57-1BX0
	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes	Yes	Yes	Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / alarm system / header						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / variables / header						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	800	800	800	800	800	800
functionality under WinCC Unified / screens / header						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
functionality under WinCC Unified / archiving / header						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / transfer (upload/download) / header						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3UB27-0AX0	6AV2128-3UB57-0AX0	6AV2128-3UB27-0BX0	6AV2128-3UB57-0BX0	6AV2128-3UB27-1BX0	6AV2128-3UB57-1BX0
	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	462 mm	462 mm	462 mm	462 mm	462 mm	462 mm
Height of housing front	292 mm; Without basic adapter	292 mm; Without basic adapter	292 mm; Without basic adapter	292 mm; Without basic adapter	292 mm; Without basic adapter	292 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	163 mm; Without basic adapter	163 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights						
Weight (without packaging)	7.1 kg	7.1 kg	7 kg	7 kg	7.1 kg	7.1 kg

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3XB27-0AX0	6AV2128-3XB57-0AX0	6AV2128-3XB27-0BX0	6AV2128-3XB57-0BX0	6AV2128-3XB27-1BX0	6AV2128-3XB57-1BX0
	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO
General information						
Product type designation	MTP2200 Unified Comfort PRO	MTP2200 Unified Comfort PRO Neutral Front	MTP2200 Unified Comfort PRO		MTP2200 Unified Comfort PRO	MTP2200 Unified Comfort PRO Neutral Front
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	21.5 in	21.5 in	21.5 in	21.5 in	21.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting	Support arm	Support arm	Support arm	Support arm	Pedestal	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2128-3XB27-0AX0	6AV2128-3XB57-0AX0	6AV2128-3XB27-0BX0	6AV2128-3XB57-0BX0	6AV2128-3XB27-1BX0	6AV2128-3XB57-1BX0
	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
CCC	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Use in hazardous areas						
• ATEX Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• ATEX Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class I Zone 2, Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class II Division 2	No	No	No	No	No	No
• FM Class I Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header						
Configuration software						
• WinCC Unified Basic Engineering (TIA Portal)	No	No	No	No	No	No
• WinCC Unified Comfort Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher
• WinCC Unified PC Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher

Operator panels

Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3XB27-0AX0	6AV2128-3XB57-0AX0	6AV2128-3XB27-0BX0	6AV2128-3XB57-0BX0	6AV2128-3XB27-1BX0	6AV2128-3XB57-1BX0
	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes	Yes	Yes	Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / alarm system / header						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / variables / header						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	800	800	800	800	800	800
functionality under WinCC Unified / screens / header						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
functionality under WinCC Unified / archiving / header						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes	Yes	Yes	Yes	Yes	Yes
functionality under WinCC Unified / transfer (upload/download) / header						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3XB27-0AX0	6AV2128-3XB57-0AX0	6AV2128-3XB27-0BX0	6AV2128-3XB57-0BX0	6AV2128-3XB27-1BX0	6AV2128-3XB57-1BX0
	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	527 mm	527 mm	527 mm	527 mm	527 mm	527 mm
Height of housing front	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	163 mm; Without basic adapter	163 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights						
Weight (without packaging)	8.5 kg	8.5 kg	8.4 kg	8.4 kg	8.5 kg	8.5 kg

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels standard devices

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>

Ordering data

Article No.

SIMATIC HMI Comfort Panels

Touch devices

SIMATIC HMI TP700 Comfort

Touch operation;
7" widescreen display

6AV2124-0GC01-0AX0

SIMATIC HMI TP900 Comfort

Touch operation;
9" widescreen display

6AV2124-0JC01-0AX0

SIMATIC HMI TP1200 Comfort

Touch operation;
12" widescreen display

6AV2124-0MC01-0AX0

SIMATIC HMI TP1500 Comfort

Touch operation;
15" widescreen display

6AV2124-0QC02-0AX2

SIMATIC HMI TP1900 Comfort

Touch operation;
19" widescreen display

6AV2124-0UC02-0AX1

SIMATIC HMI TP2200 Comfort

Touch operation;
22" widescreen display

6AV2124-0XC02-0AX1

Key devices

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

6AV2124-1QC02-0AX2

Accessories

See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Technical specifications

Article number	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	6AV2124-1QC02-0AX2 SIMATIC HMI KP1500 Comfort
General information					
Product type designation	KP700 Comfort	KP900 Comfort	KP1200 Comfort	KP1500 Comfort	KP1500 Comfort
Display					
Design of display	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	9 in	12.1 in	15.4 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	800 pixel	800 pixel	1 280 pixel	1 280 pixel	1 280 pixel
• Vertical image resolution	480 pixel	480 pixel	800 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
Control elements					
Keyboard fonts					
• Function keys					
- Number of function keys	24	26	34	36	36
Touch operation					
• Design as touch screen	No; without	No; without	No; without	No; without	No
Installation type/mounting					
Wall mounting/direct mounting	No	No	No	No	No
Mounting in portrait format possible	No	No	No	No	No
Supply voltage					
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Memory					
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte	24 Mbyte	24 Mbyte
Type of output					
Acoustics					
• Speaker	Yes	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; 2 ports (switch)	1; 2 ports (switch)	1; 2 ports (switch)	2; 2 ports (switch) + independent port	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	2; 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		
Number of SD card slots	2	2	2	2	2
Industrial Ethernet					
• Number of ports of the integrated switch	2	2	2	2	2

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels standard devices

Technical specifications

Article number	6AV2124-1GC01-0AX0	6AV2124-1JC01-0AX0	6AV2124-1MC01-0AX0	6AV2124-1QC02-0AX1	6AV2124-1QC02-0AX2
	SIMATIC HMI KP700 Comfort	SIMATIC HMI KP900 Comfort	SIMATIC HMI KP1200 Comfort	SIMATIC HMI KP1500 Comfort	SIMATIC HMI KP1500 Comfort
Protocols					
PROFINET	Yes	Yes	Yes	Yes	Yes
IRT	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes	Yes; WinCC V14 SP1 HSP or higher
PROFIBUS	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes
Redundancy mode					
Media redundancy					
- MRP	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes	Yes
Degree and class of protection					
IP (at the front)	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20
NEMA (front)					
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes
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	Yes
Use in hazardous areas					
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes; For inscription on device rating plate	Yes
• cULus Class II Division 2				No; Available soon	No
• FM Class I Division 2	Yes	Yes	Yes	Yes; For inscription on device rating plate	Yes
• FM Class II Division 2				No; Available soon	No
Marine approval					
• Germanischer Lloyd (GL)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon
• American Bureau of Shipping (ABS)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon
• Bureau Veritas (BV)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon
• Det Norske Veritas (DNV)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon
• Korean Register of Shipping (KRS)				No	Yes; Available soon
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon
• Polski Rejestr Statkow (PRS)	No	No	No	No	No
• Chinese Classification Society (CCS)				No	Yes; Available soon
Ambient conditions					
Suited for indoor use				Yes	Yes
Suited for outdoor use				No	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; (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

Technical specifications

Article number	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	6AV2124-1QC02-0AX2 SIMATIC HMI KP1500 Comfort
configuration / header					
Configuration software					
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; from V11	Yes; from V11	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and 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
• 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	Yes	Yes	Yes		
- Number of bit messages	4 000	4 000	4 000	6 000	6 000
• Analog messages	Yes	Yes	Yes		
- Number of analog messages	200	200	200	200	200
Recipe management					
• Number of recipes	300	300	300	500	500
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes
Variables					
• Number of variables per device	2 048	2 048	2 048	4 096	4 096
• Number of variables per screen	400	400	400	400	400
Images					
• Number of configurable images	500	500	500	750	750
Archiving					
• Number of archives per device	50	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

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels standard devices

Technical specifications

Article number	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	6AV2124-1QC02-0AX2 SIMATIC HMI KP1500 Comfort
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					
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	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No
Dimensions					
Width of the housing front	308 mm	361.2 mm	454 mm	483 mm	483 mm
Height of housing front	204 mm	230 mm	289 mm	310 mm	310 mm
Mounting cutout, width	282 mm	338 mm	434 mm	450 mm	450 mm
Mounting cutout, height	178 mm	206 mm	269 mm	291 mm	291 mm
Overall depth	63 mm	63 mm	64.6 mm	73.2 mm	73.2 mm
Weights					
Weight (without packaging)	2.2 kg	2.7 kg	4.4 kg	4.7 kg	4.7 kg

Technical specifications

Article number	6AV2124-0GC01-0AX0 SIMATIC HMI TP700 Comfort	6AV2124-0JC01-0AX0 SIMATIC HMI TP900 Comfort	6AV2124-0MC01-0AX0 SIMATIC HMI TP1200 Comfort	6AV2124-0QC02-0AX1 SIMATIC HMI TP1500 Comfort	6AV2124-0QC02-0AX2 SIMATIC HMI TP1500 Comfort	6AV2124-0UC02-0AX1 SIMATIC HMI TP1900 Comfort	6AV2124-0XC02-0AX1 SIMATIC HMI TP2200 Comfort
General information							
Product type designation	TP700 Comfort	TP900 Comfort	TP1200 Comfort	TP1500 Comfort	TP1500 Comfort	TP1900 Comfort	TP2200 Comfort
Display							
Design of display	TFT	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	9 in	12.1 in	15.4 in	15.4 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)							
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel
Backlighting							
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h	80 000 h	80 000 h	50 000 h	30 000 h
Control elements							
Keyboard fonts							
• Function keys							
- Number of function keys	0	0	0	0	0	0	0
Touch operation							
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes	Yes; Analog-resistive	Yes; Analog-resistive
Installation type/mounting							
Wall mounting/direct mounting	No	No	No				
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage							
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V	24 V
Memory							
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte
Type of output							
Acoustics							
• Speaker	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time of day							
Clock							
• Hardware clock (real-time)	Yes	Yes	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	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces							
Number of industrial Ethernet interfaces	1; 2 ports (switch)	1; 2 ports (switch)	1; 2 ports (switch)	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	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	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				
Number of SD card slots	2	2	2	2	2	2	2
Industrial Ethernet							
• Number of ports of the integrated switch	2	2	2	2	2	2	2
Protocols							
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IRT	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes	Yes; WinCC V14 SP1 HSP or higher	Yes	Yes
PROFIBUS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode							
Media redundancy							
- MRP	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes	Yes	Yes	Yes

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels standard devices

Technical specifications

Article number	6AV2124-0GC01-0AX0 SIMATIC HMI TP700 Comfort	6AV2124-0JC01-0AX0 SIMATIC HMI TP900 Comfort	6AV2124-0MC01-0AX0 SIMATIC HMI TP1200 Comfort	6AV2124-0QC02-0AX1 SIMATIC HMI TP1500 Comfort	6AV2124-0QC02-0AX2 SIMATIC HMI TP1500 Comfort	6AV2124-0UC02-0AX1 SIMATIC HMI TP1900 Comfort	6AV2124-0XC02-0AX1 SIMATIC HMI TP2200 Comfort
Degree and class of protection							
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)							
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates							
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes; In application process	Yes	Yes
FM approval					Yes		
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)				Yes	Yes	Yes	Yes
Use in hazardous areas							
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• cULus Class II Division 2				No; Available soon	No	No; Available soon	No; Available soon
• FM Class I Division 2	Yes	Yes	Yes	Yes; For inscription on device rating plate	Yes	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• FM Class II Division 2				No; Available soon	No	No; Available soon	No; Available soon
Marine approval							
• Germanischer Lloyd (GL)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon	No	No
• American Bureau of Shipping (ABS)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon	No	No
• Bureau Veritas (BV)	Yes	Yes	Yes; As of product version: 10	No	Yes	No	No
• Det Norske Veritas (DNV)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon	No	No
• Korean Register of Shipping (KRS)				No	Yes; Available soon	No	No
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon	No	No
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes; As of product version: 10	No	Yes; Available soon	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No	No
• Chinese Classification Society (CCS)				No	Yes; Available soon	No	No
Ambient conditions							
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No	No
Ambient temperature during operation							
Operation (vertical installation)							
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	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)	45 °C	45 °C	45 °C

Technical specifications

Article number	6AV2124-0GC01-0AX0 SIMATIC HMI TP700 Comfort	6AV2124-0JC01-0AX0 SIMATIC HMI TP900 Comfort	6AV2124-0MC01-0AX0 SIMATIC HMI TP1200 Comfort	6AV2124-0QC02-0AX1 SIMATIC HMI TP1500 Comfort	6AV2124-0QC02-0AX2 SIMATIC HMI TP1500 Comfort	6AV2124-0UC02-0AX1 SIMATIC HMI TP1900 Comfort	6AV2124-0XC02-0AX1 SIMATIC HMI TP2200 Comfort
Relative humidity							
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header							
Configuration software							
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; from V11	Yes; from V11	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages							
Online languages							
• Number of online/runtime languages	32	32	32	32	32	32	32
Functionality under WinCC (TIA Portal)							
Applications/options							
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Task planner							
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Message system							
• Bit messages	Yes	Yes	Yes				
- Number of bit messages	4 000	4 000	4 000	6 000	6 000	6 000	6 000
• Analog messages	Yes	Yes	Yes				
- Number of analog messages	200	200	200	200	200	200	200
Recipe management							
• Number of recipes	300	300	300	500	500	500	500
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Variables							
• Number of variables per device	2 048	2 048	2 048	4 096	4 096	4 096	4 096
• Number of variables per screen	400	400	400	400	400	400	400
Images							
• Number of configurable images	500	500	500	750	750	750	750
Archiving							
• Number of archives per device	50	50	50	50	50	50	50
Security							
• Number of user groups	50	50	50	50	50	50	50
• Number of users	50	50	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Logging through printer							
• Alarms	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML	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	Yes	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels standard devices

Technical specifications

Article number	6AV2124-0GC01-0AX0 SIMATIC HMI TP700 Comfort	6AV2124-0JC01-0AX0 SIMATIC HMI TP900 Comfort	6AV2124-0MC01-0AX0 SIMATIC HMI TP1200 Comfort	6AV2124-0QC02-0AX1 SIMATIC HMI TP1500 Comfort	6AV2124-0QC02-0AX2 SIMATIC HMI TP1500 Comfort	6AV2124-0UC02-0AX1 SIMATIC HMI TP1900 Comfort	6AV2124-0XC02-0AX1 SIMATIC HMI TP2200 Comfort
Process coupling							
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options							
Printer	Yes	Yes	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	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	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material							
Enclosure material (front)							
• Plastic	No	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No	No
Dimensions							
Width of the housing front	214 mm	274 mm	330 mm	415 mm	415 mm	483 mm	560 mm
Height of housing front	158 mm	190 mm	241 mm	310 mm	310 mm	337 mm	380 mm
Mounting cutout, width	198 mm	251 mm	310 mm	396 mm	396 mm	465 mm	542 mm
Mounting cutout, height	142 mm	166 mm	221 mm	291 mm	291 mm	319 mm	362 mm
Overall depth	63 mm	62.7 mm	64 mm	73.2 mm	73.2 mm	73.2 mm	73.2 mm
Weights							
Weight (without packaging)	1.4 kg	1.9 kg	2.8 kg	4.4 kg	4.4 kg	5.6 kg	6.7 kg

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.industry.siemens.com/cs/ww/en/view/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

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

Operator panels

Advanced HMI Panel-based
Comfort Panels

Comfort Panels Outdoor

Overview



SIMATIC HMI Comfort Panels Outdoor

Special HMI Panels have been developed which are designed to withstand outdoor environments.

It's not only extreme temperatures which call for robust hardware. Direct sunlight, too, must not be allowed to impair display readability and the panel front must be protected from UV radiation.

The specially-bonded Outdoor fronts and the rugged hardware of the Outdoor Panels make the SIMATIC HMI Comfort Panels Outdoor a reliable partner in this environment.

- For outdoor operation without additional measures
- 7" and 15" daylight-readable display, widescreen
- Automatic, central or manual dimming of the backlight, with integrated sensor
- Panel front 100% UV protected
- Front resistant to salt mist
- Front IP66 and Nema4 x (indoor/outdoor)
- Numerous explosion protection and shipbuilding certifications
- Extended operating temperature range: from -30 °C to +60 °C at 3 000 m installation altitude
- TIA Portal central engineering tool (WinCC V13 SP1&HSP or higher)
- Comfort Panel functionality and performance

Notice:

The 7" Comfort Panel Outdoor corresponds to a 7" Comfort Panel Standard, the 15" Comfort Panel Outdoor corresponds to a 12" Comfort Panel Standard in respect of performance, functionality and quantity structure.

More information is available at

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

Ordering data

Article No.

SIMATIC HMI Comfort Panels Outdoor

SIMATIC TP700 Comfort Panel Outdoor

Touch operation,
7" widescreen TFT display,
16 million colors,
PROFINET interface,
MPI/PROFIBUS DP interface,
12 MB configuration memory,
Windows CE 6.0, configurable as
from WinCC Comfort V13, SP1, HSP

6AV2124-0GC13-0AX0

SIMATIC TP1500 Comfort Panel Outdoor

Touch operation,
15" widescreen TFT display,
16 million colors,
PROFINET interface,
MPI/PROFIBUS DP interface,
12 MB configuration memory,
Windows CE 6.0, configurable as
from WinCC Comfort V13, SP1, HSP

6AV2124-0QC13-0AX0

Accessories

See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Technical specifications

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
General information		
Product type designation	TP700 Comfort Outdoor	TP1500 Comfort Outdoor
Display		
Design of display	TFT, bonded, daylight-readable	TFT, bonded, daylight-readable
Screen diagonal	7 in	15.4 in
Number of colors	16 777 216	16 777 216
Resolution (pixels)		
• Horizontal image resolution	800 pixel	1 280 pixel
• Vertical image resolution	480 pixel	800 pixel
Backlighting		
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h
Control elements		
Keyboard fonts		
• Function keys		
- Number of function keys	0	0
Touch operation		
• Design as touch screen	Yes; Analog- resistive	Yes; Analog- resistive
Installation type/mounting		
Mounting in portrait format possible	Yes	Yes
Supply voltage		
Rated value (DC)	24 V	24 V
Memory		
Memory available for user data	12 Mbyte	12 Mbyte
Type of output		
Acoustics		
• Speaker	Yes	Yes
Time of day		
Clock		
• Hardware clock (real-time)	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes
Interfaces		
Number of industrial Ethernet interfaces	2	2
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0
• USB Mini B	1; 5-pole	1; 5-pole
Number of SD card slots	2	2
Industrial Ethernet		
• Number of ports of the integrated switch	2	2

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
Protocols		
PROFINET	Yes	Yes
IRT	Yes; WinCC V13 SP1 HSP or higher	Yes; WinCC V13 SP1 HSP or higher
PROFIBUS	Yes	Yes
MPI	Yes	Yes
Redundancy mode		
Media redundancy		
- MRP	Yes; WinCC V13 SP1 HSP or higher	Yes; WinCC V13 SP1 HSP or higher
Degree and class of protection		
IP (at the front)	IP66	IP66
IP (rear)	IP20	IP20
NEMA (front)		
• Enclosure Type 4x at the front	Yes	Yes
Standards, approvals, certificates		
CE mark	Yes	Yes
cULus	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes
KC approval	Yes	Yes
Use in hazardous areas		
• ATEX Zone 2	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• ATEX Zone 22	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• IECEx Zone 2	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• IECEx Zone 22	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• cULus Class I Zone 2, Division 2	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• FM Class I Division 2	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
Marine approval		
• Germanischer Lloyd (GL)	Yes	Yes
• American Bureau of Shipping (ABS)	Yes	Yes
• Bureau Veritas (BV)	Yes; Available soon	Yes; Available soon
• Det Norske Veritas (DNV)	Yes	Yes
• Korean Register of Shipping (KRS)	No; Available soon	No; Available soon
• Lloyds Register of Shipping (LRS)	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes; Available soon	Yes; Available soon
• Polski Rejestr Statkow (PRS)	No	No
• Chinese Classification Society (CCS)	Yes; Available soon	Yes; Available soon
• Compass working clearance	5 m	5 m

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels Outdoor

Technical specifications

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	Yes; Powder-coated, UV resistant	Yes; Powder-coated, UV resistant
Ambient temperature during operation		
Operation (vertical installation)		
- For vertical installation, min.	-30 °C	-30 °C
- For vertical installation, max.	60 °C; (55 °C, see entry ID: 64847814)	60 °C; (55 °C, see entry ID: 64847814)
Altitude during operation relating to sea level		
• Installation altitude above sea level, max.	3 000 m; Depending on the operating temperature	3 000 m; Depending on the operating temperature
Relative humidity		
• Operation, max.	90 %; no condensation	90 %; no condensation
configuration / header		
Configuration software		
• WinCC Comfort (TIA Portal)	Yes; WinCC V13 SP1 Update 7 + HSP or higher	Yes; WinCC V13 SP1 Update 7 + HSP or higher
Languages		
Online languages		
• Number of online/runtime languages	32	32
Functionality under WinCC (TIA Portal)		
Applications/options		
• Web browser	Yes	Yes
• Pocket Word	Yes	Yes
• Pocket Excel	Yes	Yes
• PDF Viewer	Yes	Yes
• Media Player	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes
Task planner		
• time-controlled	Yes	Yes
• task-controlled	Yes	Yes
Message system		
• Bit messages		
- Number of bit messages	4 000	4 000
• Analog messages		
- Number of analog messages	200	200

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
Recipe management		
• Number of recipes	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes
Variables		
• Number of variables per device	2 048	2 048
• Number of variables per screen	400	400
Images		
• Number of configurable images	500	500
Archiving		
• Number of archives per device	50	50
Security		
• Number of user groups	50	50
• Number of users	50	50
• SIMATIC Logon	Yes	Yes
Logging through printer		
• Alarms	Yes	Yes
• Report (shift log)	Yes	Yes
• Hardcopy	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)		
• MPI/PROFIBUS DP	Yes	Yes
• Ethernet	Yes	Yes
Process coupling		
• S7-1200	Yes	Yes
• S7-1500	Yes	Yes
• S7-200	Yes	Yes
• S7-300/400	Yes	Yes
• LOGO!	Yes	Yes
• WinAC	Yes	Yes
• SIMOTION	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes
• Mitsubishi (FX)	Yes	Yes
• OMRON (FINS TCP)	No	No
• OMRON (LINK/Multilink)	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes
• Modicon (Modbus)	Yes	Yes
• OPC UA Client	Yes	Yes
• OPC UA Server	Yes	Yes

Technical specifications

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
Peripherals/Options		
Printer	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes
USB memory	Yes; e.g. USB RFID reader, see FAQ entry ID: 99808171	
Network camera	Yes; See FAQ Entry ID: 62383298 and entry ID: 65647473	
Accessories		
Expansion module	Optional e.g. USB RFID reader, see FAQ entry ID: 99808171	
Further accessories are available	Yes; Mounting clips and 2-pin power supply connector	
Mechanics/material		
Enclosure material (front)		
• Plastic	No	No
• Aluminum	Yes; Powder-coated, UV resistant	Yes; Powder-coated, UV resistant
• Stainless steel	No	No

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
Dimensions		
Width of the housing front	214 mm	415 mm
Height of housing front	158 mm	310 mm
Mounting cutout, width	197 mm	396 mm
Mounting cutout, height	141 mm	291 mm
Overall depth	67 mm	77 mm
Weights		
Weight (without packaging)	1.5 kg	4 kg
Other		
Note:	Power, quantity structure and performance correspond to a standard 7" Comfort Panel	Power, quantity structure and performance correspond to a standard 12" Comfort Panel

More information

More information is available on the internet at

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

Note:

The TP700 Comfort Panel Outdoor is comparable with the TP700 Comfort Panel Standard.

The TP1500 Comfort Panel Outdoor is comparable with the TP1200 Comfort Panel Standard with a 15" display.

A TP1500 Comfort Standard unit with the maximum possible configuration cannot be installed on a TP1500 Comfort Panel Outdoor.

Overview



SIMATIC HMI Comfort PRO: The new Comfort Panel PRO with fully-enclosed IP65 degree of protection – powerful, ready-to-use, and can be installed directly at the machine

SIMATIC HMI Comfort Panels PRO with 12", 15", 19" and 22" widescreen format expand the Comfort Panel portfolio to include devices with glass fronts.

The rugged aluminum casing enables it to be used directly at the machine and guarantees durability, even in harsh and extreme operating environments.

Highlights:

- All-round IP65 degree of protection
- Comfort Panel functionality and performance
- Rugged, industrial 12", 15", 19" and 22" widescreen displays
- Slim, modern design
- Can be adapted to support arm system of various manufacturers
- Integration of operator controls with Extension Units
- High degree of investment security
- Fast integration capability

12", 15", 19" and 22" SIMATIC HMI Comfort Panels PRO are available in three different versions, depending on the application:

- For support arm (extendable, round tube): mounting by means of standard 48 mm round tube or Siemens round tube adapter
- For support arm (not extendable, flange on top): mounting by means of basic adapter and flange on top, included in scope of delivery
- For pedestal (extendable, flange below): mounting by means of basic adapter and flange below, included in scope of delivery

More information is available at

<http://siemens.com/simatic-hmi-pro>

System components for fully-enclosed IP65-protected devices

System components for PRO devices are only suitable for SIMATIC HMI/IPC PRO devices.

In combination with SIMATIC HMI PRO basic devices, these components enable easy adaptation to individual customer requirements for operator control and monitoring at the machine level, as well as offering a versatile and attractive solution for cabinet-free visualization and automation.

The following system components are available:

- Fixing elements
 - Adapter sets
 - Basic adapter
 - Round tube adapter
- Extension Units 12" - 22" with operator controls
- Extension components
 - Stainless steel keyboard
 - Tool and keyboard tray

For more detailed information about system components refer to "PC-based Automation" -> "Industrial PC" -> "Devices for special requirements" -> "System components for fully-enclosed IP65-protected devices".

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels PRO

Ordering data

Article No.

Article No.

Comfort Panels PRO

TP1200 Comfort PRO

12.1" TFT display,
1 280 x 800 pixels,
16 million colors; touch screen;
1 x MPI/PROFIBUS DP,
1 x PROFINET/Industrial Ethernet
interface with MRP and RT/IRT
support (2 ports);
1 x Ethernet (Gigabit);
2 x SD card slots; 2 x USB

- For support arm (not extendable, flange on top)
- For support arm (extendable, round tube) and Extension Unit:
- For pedestal (extendable, flange below)

Neutral design

- For support arm (not extendable, flange on top)
- For support arm (extendable, round tube) and Extension Unit:
- For pedestal (extendable, flange below)

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6AV2124-0MC24-0BX0

6AV2124-0MC24-1AX0

6AV2124-0MC24-0AB0

6AV2124-0MC24-0BB0

6AV2124-0MC24-1AB0

TP1900 Comfort PRO

18.5" TFT display,
1 366 x 768 pixels,
16 million colors; touch screen;
1 x MPI/PROFIBUS DP,
1 x PROFINET/Industrial Ethernet
Interface with MRP and RT/IRT
support (2 ports);
1 x Ethernet (Gigabit);
2 x SD card slots; 2 x USB

- For support arm (not extendable, flange on top)
- For support arm (extendable, round tube) and Extension Unit:
- For pedestal (extendable, flange below)

Neutral design

- For support arm (not extendable, flange on top)
- For support arm (extendable, round tube) and Extension Unit:
- For pedestal (extendable, flange below)

6AV2124-0UC24-0AX0

6AV2124-0UC24-0BX0

6AV2124-0UC24-1AX0

6AV2124-0UC24-0AB0

6AV2124-0UC24-0BB0

6AV2124-0UC24-1AB0

TP2200 Comfort PRO

21.5" TFT display,
1 920 x 1 080 pixels,
16 million colors; touch screen;
1 x MPI/PROFIBUS DP,
1 x PROFINET/Industrial Ethernet
Interface with MRP and RT/IRT
support (2 ports);
1 x Ethernet (Gigabit);
2 x SD card slots; 2 x USB

- For support arm (not extendable, flange on top)
- For support arm (extendable, round tube) and Extension Unit:
- For pedestal (extendable, flange below)

Neutral design

- For support arm (not extendable, flange on top)
- For support arm (extendable, round tube) and Extension Unit:
- For pedestal (extendable, flange below)

6AV2124-0XC24-0AX0

6AV2124-0XC24-0BX0

6AV2124-0XC24-1AX0

6AV2124-0XC24-0AB0

6AV2124-0XC24-0BB0

6AV2124-0XC24-1AB0

TP1500 Comfort PRO

15.6" TFT display,
1 366 x 768 pixels,
16 million colors; touch screen;
1 x MPI/PROFIBUS DP,
1 x PROFINET/Industrial Ethernet
Interface with MRP and RT/IRT
support (2 ports);
1 x Ethernet (Gigabit);
2 x SD card slots; 2 x USB

- For support arm (not extendable, flange on top)
- For support arm (extendable, round tube) and Extension Unit:
- For pedestal (extendable, flange below)

Neutral design

- For support arm (not extendable, flange on top)
- For support arm (extendable, round tube) and Extension Unit:
- For pedestal (extendable, flange below)

6AV2124-0QC24-0AX0

6AV2124-0QC24-0BX0

6AV2124-0QC24-1AX0

6AV2124-0QC24-0AB0

6AV2124-0QC24-0BB0

6AV2124-0QC24-1AB0

Technical specifications

Article number	6AV2124-0MC24-0AX0	6AV2124-0MC24-1AX0	6AV2124-0MC24-0BX0	6AV2124-0MC24-0AB0	6AV2124-0MC24-0BB0	6AV2124-0MC24-1AB0
	SIMATIC HMI TP1200 Comfort Pro	SIMATIC HMI TP1200 Comfort Pro	SIMATIC HMI TP1200 Comfort Pro	SIMATIC HMI TP1200 Comfort Pro Neutral	SIMATIC HMI TP1200 Comfort Pro Neutral	SIMATIC HMI TP1200 Comfort Pro Neutral
General information						
Product type designation	TP1200 Comfort PRO	TP1200 Comfort PRO	TP1200 Comfort PRO	SIMATIC HMI TP1200 Comfort PRO	SIMATIC HMI TP1200 Comfort PRO	SIMATIC HMI TP1200 Comfort PRO
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	12.1 in	12.1 in	12.1 in	12.1 in	12.1 in	12.1 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 280 pixel	1 280 pixel	1 280 pixel	1 280 pixel	1 280 pixel	1 280 pixel
• Vertical image resolution	800 pixel	800 pixel	800 pixel	800 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	80 000 h

Technical specifications

Article number	6AV2124-0MC24-0AX0	6AV2124-0MC24-1AX0	6AV2124-0MC24-0BX0	6AV2124-0MC24-0AB0	6AV2124-0MC24-0BB0	6AV2124-0MC24-1AB0
	SIMATIC HMI TP1200 Comfort Pro	SIMATIC HMI TP1200 Comfort Pro	SIMATIC HMI TP1200 Comfort Pro	SIMATIC HMI TP1200 Comfort Pro Neutral	SIMATIC HMI TP1200 Comfort Pro Neutral	SIMATIC HMI TP1200 Comfort Pro Neutral
Control elements						
Keyboard fonts						
• Function keys						
- Number of function keys	0	0	0			
Touch operation						
• Design as touch screen	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive
Installation type/mounting						
Mounting	Support arm	Pedestal	Support arm	Support arm	Support arm	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Memory						
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
Type of output						
Acoustics						
• Speaker	Yes	Yes	Yes	Yes	Yes	Yes
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
IRT	Yes	Yes	Yes	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels PRO

Technical specifications

Article number	6AV2124-0MC24-0AX0 SIMATIC HMI TP1200 Comfort Pro	6AV2124-0MC24-1AX0 SIMATIC HMI TP1200 Comfort Pro	6AV2124-0MC24-0BX0 SIMATIC HMI TP1200 Comfort Pro	6AV2124-0MC24-0AB0 SIMATIC HMI TP1200 Comfort Pro Neutral	6AV2124-0MC24-0BB0 SIMATIC HMI TP1200 Comfort Pro Neutral	6AV2124-0MC24-1AB0 SIMATIC HMI TP1200 Comfort Pro Neutral
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header						
Configuration software						
• WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC (TIA Portal)						
Applications/options						
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Message system						
Bit messages						
- Number of bit messages	4 000	4 000	4 000	4 000	4 000	4 000
Analog messages						
- Number of analog messages	200	200	200	200	200	200
Recipe management						
• Number of recipes	300	300	300	300	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Variables						
• Number of variables per device	2 048	2 048	2 048	2 048	2 048	2 048
• Number of variables per screen	400	400	400	400	400	400
Images						
• Number of configurable images	500	500	500	500	500	500
Archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of user groups	50	50	50	50	50	50
• Number of users	50	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2124-0MC24-0AX0	6AV2124-0MC24-1AX0	6AV2124-0MC24-0BX0	6AV2124-0MC24-0AB0	6AV2124-0MC24-0BB0	6AV2124-0MC24-1AB0
	SIMATIC HMI TP1200 Comfort Pro	SIMATIC HMI TP1200 Comfort Pro	SIMATIC HMI TP1200 Comfort Pro	SIMATIC HMI TP1200 Comfort Pro Neutral	SIMATIC HMI TP1200 Comfort Pro Neutral	SIMATIC HMI TP1200 Comfort Pro Neutral
Logging through printer						
• Alarms	Yes	Yes	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	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	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Printer	Yes	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	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	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	313 mm	313 mm	313 mm	313 mm	313 mm	313 mm
Height of housing front	226 mm; Without basic adapter	226 mm; Without basic adapter	226 mm; Without basic adapter	226 mm; Without basic adapter	226 mm; Without basic adapter	226 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights						
Weight (without packaging)	4.9 kg	4.9 kg	4.5 kg	4.9 kg	4.5 kg	4.9 kg

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels PRO

Technical specifications

Article number	6AV2124-0QC24-0AX0	6AV2124-0QC24-0BX0	6AV2124-0QC24-1AX0	6AV2124-0QC24-0AB0	6AV2124-0QC24-0BB0	6AV2124-0QC24-1AB0
	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort Pro Neutral	SIMATIC HMI TP1500 Comfort Pro Neutral	SIMATIC HMI TP1500 Comfort Pro Neutral
General information						
Product type designation	TP1500 Comfort PRO	TP1500 Comfort PRO	TP1500 Comfort PRO	TP1500 Comfort PRO	TP1500 Comfort PRO	TP1500 Comfort PRO
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	15.6 in	15.6 in	15.6 in	15.6 in	15.6 in	15.6 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel
• Vertical image resolution	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements						
Keyboard fonts						
• Function keys						
- Number of function keys	0	0	0		0	0
Touch operation						
• Design as touch screen	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive
Installation type/mounting						
Mounting	Support arm	Support arm	Pedestal	Support arm	Support arm	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Memory						
Memory available for user data	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte
Type of output						
Acoustics						
• Speaker	Yes	Yes	Yes	Yes	Yes	Yes
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
IRT	Yes	Yes	Yes	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2124-0QC24-0AX0	6AV2124-0QC24-0BX0	6AV2124-0QC24-1AX0	6AV2124-0QC24-0AB0	6AV2124-0QC24-0BB0	6AV2124-0QC24-1AB0
	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort Pro Neutral	SIMATIC HMI TP1500 Comfort Pro Neutral	SIMATIC HMI TP1500 Comfort Pro Neutral
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header						
Configuration software						
• WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC (TIA Portal)						
Applications/options						
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Message system						
• Bit messages						
- Number of bit messages	6 000	6 000	6 000	6 000	6 000	6 000
• Analog messages						
- Number of analog messages	200	200	200	200	200	200
Recipe management						
• Number of recipes	500	500	500	500	500	500
• Size of internal recipe memory	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes	Yes

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels PRO

Technical specifications

Article number	6AV2124-0QC24-0AX0 SIMATIC HMI TP1500 Comfort PRO	6AV2124-0QC24-0BX0 SIMATIC HMI TP1500 Comfort PRO	6AV2124-0QC24-1AX0 SIMATIC HMI TP1500 Comfort PRO	6AV2124-0QC24-0AB0 SIMATIC HMI TP1500 Comfort Pro Neutral	6AV2124-0QC24-0BB0 SIMATIC HMI TP1500 Comfort Pro Neutral	6AV2124-0QC24-1AB0 SIMATIC HMI TP1500 Comfort Pro Neutral
Variables						
• Number of variables per device	4 096	4 096	4 096	4 096	4 096	4 096
• Number of variables per screen	400	400	400	400	400	400
Images						
• Number of configurable images	750	750	750	750	750	750
Archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of user groups	50	50	50	50	50	50
• Number of users	50	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes	Yes
Logging through printer						
• Alarms	Yes	Yes	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	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	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Printer	Yes	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	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	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	396 mm	396 mm	396 mm	396 mm	396 mm	396 mm
Height of housing front	256 mm; Without basic adapter	256 mm; Without basic adapter	256 mm; Without basic adapter	256 mm; Without basic adapter	256 mm; Without basic adapter	256 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights						
Weight (without packaging)	6.3 kg	6.3 kg	6.3 kg	6.3 kg	6.3 kg	6.3 kg

Technical specifications

Article number	6AV2124-0UC24-0AX0	6AV2124-0UC24-0BX0	6AV2124-0UC24-1AX0	6AV2124-0UC24-0AB0	6AV2124-0UC24-0BB0	6AV2124-0UC24-1AB0
	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort Pro Neutral	SIMATIC HMI TP1900 Comfort Pro Neutral	SIMATIC HMI TP1900 Comfort PRO Neutral
General information						
Product type designation	TP1900 Comfort PRO	TP1900 Comfort PRO	TP1900 Comfort PRO	TP1900 Comfort PRO	TP1900 Comfort PRO	TP1900 Comfort PRO
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	18.5 in	18.5 in	18.5 in	18.5 in	18.5 in	18.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel
• Vertical image resolution	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements						
Keyboard fonts						
• Function keys						
- Number of function keys	0	0	0		0	0
Touch operation						
• Design as touch screen	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive
Installation type/mounting						
Mounting	Support arm	Support arm	Pedestal	Support arm	Support arm	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Memory						
Memory available for user data	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte
Type of output						
Acoustics						
• Speaker	Yes	Yes	Yes	Yes	Yes	Yes
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
IRT	Yes	Yes	Yes	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels PRO

Technical specifications

Article number	6AV2124-0UC24-0AX0	6AV2124-0UC24-0BX0	6AV2124-0UC24-1AX0	6AV2124-0UC24-0AB0	6AV2124-0UC24-0BB0	6AV2124-0UC24-1AB0
	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort Pro Neutral	SIMATIC HMI TP1900 Comfort Pro Neutral	SIMATIC HMI TP1900 Comfort PRO Neutral
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header						
Configuration software						
• WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC (TIA Portal)						
Applications/options						
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Message system						
• Bit messages						
- Number of bit messages	6 000	6 000	6 000	6 000	6 000	6 000
• Analog messages						
- Number of analog messages	200	200	200	200	200	200
Recipe management						
• Number of recipes	500	500	500	500	500	500
• Size of internal recipe memory	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2124-0UC24-0AX0	6AV2124-0UC24-0BX0	6AV2124-0UC24-1AX0	6AV2124-0UC24-0AB0	6AV2124-0UC24-0BB0	6AV2124-0UC24-1AB0
	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort Pro Neutral	SIMATIC HMI TP1900 Comfort Pro Neutral	SIMATIC HMI TP1900 Comfort PRO Neutral
Variables						
• Number of variables per device	4 096	4 096	4 096	4 096	4 096	4 096
• Number of variables per screen	400	400	400	400	400	400
Images						
• Number of configurable images	750	750	750	750	750	750
Archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of user groups	50	50	50	50	50	50
• Number of users	50	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes	Yes
Logging through printer						
• Alarms	Yes	Yes	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	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	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Printer	Yes	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	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	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	462 mm	462 mm	462 mm	462 mm	462 mm	462 mm
Height of housing front	296 mm; Without basic adapter	296 mm; Without basic adapter	296 mm; Without basic adapter	296 mm; Without basic adapter	296 mm; Without basic adapter	296 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights						
Weight (without packaging)	7.4 kg	7.4 kg	7.4 kg	7.4 kg	7.4 kg	7.4 kg

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels PRO

Technical specifications

Article number	6AV2124-0XC24-0AX0	6AV2124-0XC24-0BX0	6AV2124-0XC24-1AX0	6AV2124-0XC24-0AB0	6AV2124-0XC24-0BB0	6AV2124-0XC24-1AB0
	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort Pro Neutral	SIMATIC HMI TP2200 Comfort Pro Neutral	SIMATIC HMI TP2200 Comfort Pro Neutral
General information						
Product type designation	TP2200 Comfort PRO	TP2200 Comfort PRO	TP2200 Comfort PRO	TP2200 Comfort PRO	TP2200 Comfort PRO	TP2200 Comfort PRO
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	21.5 in	21.5 in	21.5 in	21.5 in	21.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	30 000 h	30 000 h	30 000 h	30 000 h	30 000 h	30 000 h
Control elements						
Keyboard fonts						
• Function keys						
- Number of function keys	0	0	0	0	0	0
Touch operation						
• Design as touch screen	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive	Yes; Projective- capacitive
Installation type/mounting						
Mounting	Support arm	Support arm	Pedestal	Support arm	Support arm	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Memory						
Memory available for user data	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte
Type of output						
Acoustics						
• Speaker	Yes	Yes	Yes	Yes	Yes	Yes
Time of day						
Clock						
• Hardware clock (real-time)	Yes	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	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	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	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
IRT	Yes	Yes	Yes	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

Technical specifications

Article number	6AV2124-0XC24-0AX0	6AV2124-0XC24-0BX0	6AV2124-0XC24-1AX0	6AV2124-0XC24-0AB0	6AV2124-0XC24-0BB0	6AV2124-0XC24-1AB0
	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort Pro Neutral	SIMATIC HMI TP2200 Comfort Pro Neutral	SIMATIC HMI TP2200 Comfort Pro Neutral
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header						
Configuration software						
• WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC (TIA Portal)						
Applications/options						
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Message system						
• Bit messages						
- Number of bit messages	6 000	6 000	6 000	6 000	6 000	6 000
• Analog messages						
- Number of analog messages	200	200	200	200	200	200
Recipe management						
• Number of recipes	500	500	500	500	500	500
• Size of internal recipe memory	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes	Yes

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels PRO

Technical specifications

Article number	6AV2124-0XC24-0AX0	6AV2124-0XC24-0BX0	6AV2124-0XC24-1AX0	6AV2124-0XC24-0AB0	6AV2124-0XC24-0BB0	6AV2124-0XC24-1AB0
	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort Pro Neutral	SIMATIC HMI TP2200 Comfort Pro Neutral	SIMATIC HMI TP2200 Comfort Pro Neutral
Variables						
• Number of variables per device	4 096	4 096	4 096	4 096	4 096	4 096
• Number of variables per screen	400	400	400	400	400	400
Images						
• Number of configurable images	750	750	750	750	750	750
Archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of user groups	50	50	50	50	50	50
• Number of users	50	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes	Yes
Logging through printer						
• Alarms	Yes	Yes	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	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	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Printer	Yes	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	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	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	527 mm	527 mm	527 mm	527 mm	527 mm	527 mm
Height of housing front	330 mm; Without basic adapter	330 mm; Without basic adapter	330 mm; Without basic adapter	330 mm; Without basic adapter	330 mm; Without basic adapter	330 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights						
Weight (without packaging)	8.5 kg	8.5 kg	8.5 kg	8.5 kg	8.5 kg	8.5 kg

Overview



SIMATIC HMI TP1200 Comfort INOX PCT

SIMATIC HMI TP Comfort Panels INOX and INOX PCT (PCT = Projected Capacitive Touchscreen)

Panels with touch screens (analog-resistive or projective-capacitive) and stainless steel fronts are designed for use in the food, beverages and tobacco industry, the pharmaceutical industry, fine chemicals and in other hygiene areas for machine-level operator control and monitoring.

For this reason, the devices with stainless steel front have been developed in compliance with EN 1672-2 "Food processing machinery – Safety and Hygiene Requirements".

More information is available at

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

Ordering data

Article No.

SIMATIC HMI TP Comfort Panel INOX

With analog-resistive touch and front film

SIMATIC HMI TP700 Comfort Panel INOX

With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.

6AV2144-8GC10-0AA0

SIMATIC HMI TP900 Comfort Panel INOX

With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.

6AV2144-8JC10-0AA0

SIMATIC HMI TP1200 Comfort Panel INOX

With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.

6AV2144-8MC10-0AA0

SIMATIC HMI TP Comfort Panel INOX PCT

With projective-capacitive touch and front glass

SIMATIC HMI TP700 Comfort Panel INOX PCT

Stainless steel front, glass pane, capacitive touch, IP69K degree of protection front, 7" widescreen TFT display, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, WinCC Comfort V15.1

6AV2144-8GC20-0AA0

SIMATIC HMI TP900 Comfort Panel INOX PCT

With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.

6AV2144-8JC20-0AA0

SIMATIC HMI TP1200 Comfort Panel INOX PCT

With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.

6AV2144-8MC20-0AA0

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels INOX and INOX PCT

2

Ordering data

Article No.

Article No.

Comfort Panels Large Front

SIMATIC HMI TP1200 Comfort INOX with long stainless steel front

12" widescreen TFT display with long stainless steel front, decorative membrane, IP66K degree of protection front, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0 (Microsoft support including safety updates set), configurable as from WinCC Comfort V11 or higher

6AV2144-8MC10-0AC0

SIMATIC HMI TP1900 Comfort Panel INOX with long stainless steel front

19" widescreen TFT display with long stainless steel front, decorative membrane, IP66K degree of protection front, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, Windows, CE 2013, configurable as from WinCC Comfort V14 SP1 with HSP or higher

6AV2144-8UC10-0AA1

Accessories

See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

SIMATIC HMI TP1500 Comfort Panel INOX with long stainless steel front

15" widescreen TFT display with long stainless steel front, decorative membrane, IP66K degree of protection front, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, Windows, CE 2013, configurable as from WinCC Comfort V14 SP1 with HSP or higher

6AV2144-8QC10-0AA2

The device seals can be replaced using the corresponding service packages from the accessories.

Technical specifications

Article number	6AV2144-8GC10-0AA0	6AV2144-8JC10-0AA0	6AV2144-8MC10-0AA0
	SIMATIC HMI TP700 COMFORT INOX	SIMATIC HMI TP900 Comfort INOX	SIMATIC HMI TP1200 COMFORT INOX
General information			
Product type designation	TP700 Comfort INOX	TP900 Comfort INOX	TP1200 Comfort INOX
Display			
Design of display	TFT	TFT	TFT
Screen diagonal	7 in	9 in	12.1 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	0	0	0
Touch operation			
• Design as touch screen	Yes; capacitive	Yes; capacitive	Yes; capacitive
Installation type/mounting			
Mounting in portrait format possible	Yes	Yes	Yes
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte
Type of output			
Acoustics			
• Speaker	Yes	Yes	Yes

Technical specifications

Article number	6AV2144-8GC10-0AA0 SIMATIC HMI TP700 COMFORT INOX	6AV2144-8JC10-0AA0 SIMATIC HMI TP900 Comfort INOX	6AV2144-8MC10-0AA0 SIMATIC HMI TP1200 COMFORT INOX
Time of day			
Clock			
• Hardware clock (real-time)	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
• synchronizable	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	1; 2 ports (switch)	1; 2 ports (switch)	1; 2 ports (switch)
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
• USB Mini B	1; 5-pole	1; 5-pole	1; 5-pole
Number of SD card slots	2	2	2
Industrial Ethernet			
• 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
PROFIBUS	Yes	Yes	Yes
MPI	Yes	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12
Degree and class of protection			
IP (at the front)	IP66K	IP66K	IP66K
IP (rear)	IP20	IP20	IP20
NEMA (front)			
• Enclosure Type 4x at the front	Yes; indoor use only	Yes; indoor use only	Yes; indoor use only
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
FM approval	Yes		Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	Yes		Yes
EAC (formerly Gost-R)	Yes	Yes	Yes
Use in hazardous areas			
• ATEX Zone 2	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes
• FM Class I Division 2	Yes	No	Yes
Marine approval			
• 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
• Korean Register of Shipping (KRS)			No
• Lloyds Register of Shipping (LRS)	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No
Ambient conditions			
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	80 %; no condensation

Operator panels

Advanced HMI Panel-based
Comfort Panels

Comfort Panels INOX and INOX PCT

Technical specifications

Article number	6AV2144-8GC10-0AA0 SIMATIC HMI TP700 COMFORT INOX	6AV2144-8JC10-0AA0 SIMATIC HMI TP900 Comfort INOX	6AV2144-8MC10-0AA0 SIMATIC HMI TP1200 COMFORT INOX
configuration / header			
Configuration software			
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; from V11	Yes; from V11
Languages			
Online languages			
• Number of online/runtime languages	32	32	32
Functionality under WinCC (TIA Portal)			
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
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner			
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Message system			
• Bit messages			
- Number of bit messages	4 000	4 000	4 000
• Analog messages			
- Number of analog messages	200	200	200
Recipe management			
• Number of recipes	300	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	2 048	2 048	2 048
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	500	500	500
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
• Ethernet	Yes	Yes	Yes

Technical specifications

Article number	6AV2144-8GC10-0AA0 SIMATIC HMI TP700 COMFORT INOX	6AV2144-8JC10-0AA0 SIMATIC HMI TP900 Comfort INOX	6AV2144-8MC10-0AA0 SIMATIC HMI TP1200 COMFORT INOX
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			
Printer	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
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes
Network camera	Yes	Yes	Yes
Mechanics/material			
Enclosure material (front)			
• Plastic	No	No	No
• Aluminum	No	No	No
• Stainless steel	Yes	Yes	Yes
Dimensions			
Width of the housing front	214 mm	274 mm	330 mm
Height of housing front	158 mm	190 mm	241 mm
Mounting cutout, width	197 mm	250 mm	310 mm
Mounting cutout, height	141 mm	166 mm	221 mm
Overall depth	65 mm	65 mm	67 mm
Weights			
Weight (without packaging)	1.9 kg	2.5 kg	3.6 kg

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels INOX and INOX PCT

Technical specifications

Article number	6AV2144-8GC20-0AA0 SIMATIC HMI TP700 Comfort INOX PCT	6AV2144-8JC20-0AA0 SIMATIC HMI TP900 COMFORT INOX PCT	6AV2144-8MC20-0AA0 SIMATIC HMI TP1200 COMFORT INOX PCT
General information			
Product type designation	TP700 Comfort INOX PCT	TP900 Comfort INOX PCT	TP1200 Comfort INOX PCT
Display			
Design of display	TFT	TFT	TFT
Screen diagonal	7 in	9 in	12.1 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	0	0	0
Touch operation			
• Design as touch screen	Yes; capacitive	Yes; capacitive	Yes; capacitive
• Design as multi-touch screen	No	No	No
• Monitor keyboard	Yes	Yes	Yes
Installation type/mounting			
Mounting in portrait format possible	No	Yes	Yes
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte
Type of output			
Acoustics	Speaker	Speaker	Speaker
• Speaker	Yes	Yes	Yes
Time of day			
Clock			
• Hardware clock (real-time)	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
• synchronizable	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	1; 2 ports (switch)	1; 2 ports (switch)	1; 2 ports (switch)
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
• USB Mini B	1; 5-pole	1; 5-pole	1; 5-pole
Number of SD card slots	2	2	2
Industrial Ethernet			
• Number of ports of the integrated switch	2	2	2
Protocols			
PROFINET	Yes	Yes	Yes
IRT	Yes; As of WinCC V15.1	Yes; As of WinCC V15	Yes; As of WinCC V15
PROFIBUS	Yes	Yes	Yes
MPI	Yes	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	Yes; As of WinCC V15.1	Yes; As of WinCC V15	Yes; As of WinCC V15

Technical specifications

Article number	6AV2144-8GC20-0AA0 SIMATIC HMI TP700 Comfort INOX PCT	6AV2144-8JC20-0AA0 SIMATIC HMI TP900 COMFORT INOX PCT	6AV2144-8MC20-0AA0 SIMATIC HMI TP1200 COMFORT INOX PCT
Degree and class of protection			
IP (at the front)	IP66 / IPx6K and IP69 / IPx9K	IP66 / IPx6K and IP69 / IPx9K	IP66 / IPx6K and IP69 / IPx9K
IP (rear)	IP20	IP20	IP20
NEMA (front)			NEMA 4, NEMA 12 (when installed)
• Enclosure Type 4x at the front		No	Yes
• Enclosure Type 12 at the front	No	No	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No	No	No
EAC (formerly Gost-R)	Yes	Yes	Yes
Use in hazardous areas			
• ATEX Zone 2	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes
• cULus Class II Division 2	No	No	No
• FM Class I Division 2	No	No	No
• FM Class II Division 2	No	No	No
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	No	No	No
Ambient temperature during operation			
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)	50 °C; (55 °C, see entry ID: 64847814)	50 °C
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
configuration / header			
Configuration software			
• WinCC Comfort (TIA Portal)	Yes; From WinCC V15.1 HSP	Yes; As of WinCC V15	Yes; As of WinCC V15
Languages			
Online languages			
• Number of online/runtime languages	32	32	32

Operator panels

Advanced HMI Panel-based
Comfort Panels

Comfort Panels INOX and INOX PCT

Technical specifications

Article number	6AV2144-8GC20-0AA0 SIMATIC HMI TP700 Comfort INOX PCT	6AV2144-8JC20-0AA0 SIMATIC HMI TP900 COMFORT INOX PCT	6AV2144-8MC20-0AA0 SIMATIC HMI TP1200 COMFORT INOX PCT
Functionality under WinCC (TIA Portal)			
Applications/options	Internet Explorer, PDF/Word/Excel Viewer, Sm@rtService, Sm@rtAccess, ProAgent	Internet Explorer, PDF/Word/Excel Viewer, Sm@rtService, Sm@rtAccess, ProAgent	Internet Explorer, PDF/Word/Excel Viewer, Sm@rtService, Sm@rtAccess, ProAgent
• Web browser	Yes	Yes	Yes
• Pocket Word	Yes; Viewer	Yes; Viewer	Yes; Viewer
• Pocket Excel	Yes; Viewer	Yes; Viewer	Yes; Viewer
• PDF Viewer	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner	Yes	Yes	Yes
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Message system			
• Bit messages			
- Number of bit messages	4 000	4 000	4 000
• Analog messages			
- Number of analog messages	200	200	200
Recipe management			
• Number of recipes	300	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	2 048	2 048	2 048
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	500	500	500
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	No	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)			
• MPI/PROFIBUS DP	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes

Technical specifications

Article number	6AV2144-8GC20-0AA0 SIMATIC HMI TP700 Comfort INOX PCT	6AV2144-8JC20-0AA0 SIMATIC HMI TP900 COMFORT INOX PCT	6AV2144-8MC20-0AA0 SIMATIC HMI TP1200 COMFORT INOX PCT
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			
Printer	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
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes
Network camera	Yes	Yes	Yes
Accessories			
Further accessories are available	Yes; Service Pack (seal, mounting clips, clamping frame, power supply connector)	Yes; Service Pack (seal, mounting clips, clamping frame, power supply connector)	Yes; Service Pack (seal, mounting clips, clamping frame, power supply connector)
Mechanics/material			
Enclosure material (front)			
• Plastic	No	No	No
• Aluminum	No	No	No
• Stainless steel	Yes	Yes	Yes
Dimensions			
Width of the housing front	214 mm	274 mm	330 mm
Height of housing front	158 mm	190 mm	241 mm
Mounting cutout, width	197 mm	251 mm	310 mm
Mounting cutout, height	141 mm	166 mm	221 mm
Overall depth	66 mm	66 mm	65 mm
Weights			
Weight (without packaging)	2 kg	2.9 kg	4.2 kg

Operator panels

Advanced HMI Panel-based Comfort Panels

Comfort Panels INOX and INOX PCT

Technical specifications

Article number	6AV2144-8MC10-0AC0 SIMATIC HMI TP1200 COMFORT INOX LF	6AV2144-8QC10-0AA2 SIMATIC HMI TP1500 Comfort INOX	6AV2144-8UC10-0AA1 SIMATIC HMI TP1900 Comfort INOX
General information			
Product type designation	TP1200 Comfort INOX LF	TP1500 Comfort INOX	TP1900 Comfort INOX
Display			
Design of display	TFT	TFT	TFT
Screen diagonal	12.1 in	15.4 in	18.5 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	1 280 pixel	1 280 pixel	1 366 pixel
• Vertical image resolution	800 pixel	800 pixel	768 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	50 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	0	0	0
Touch operation			
• Design as touch screen	Yes; capacitive	Yes; Analog-resistive	Yes; capacitive
Installation type/mounting			
Mounting in portrait format possible	Yes	Yes	Yes
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	12 Mbyte	24 Mbyte	24 Mbyte
Type of output			
Acoustics			
• Speaker	Yes	Yes	Yes
Time of day			
Clock			
• Hardware clock (real-time)	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
• synchronizable	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	1; 2 ports (switch)	2; 2 ports (switch) + independent port	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
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0
• USB Mini B	1; 5-pole		
Number of SD card slots	2	2	2
Industrial Ethernet			
• Number of ports of the integrated switch	2	2	2
Protocols			
PROFINET	Yes	Yes	Yes
IRT	Yes; As of WinCC V12	Yes	Yes
PROFIBUS	Yes	Yes	Yes
MPI	Yes	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	Yes; As of WinCC V12	Yes	Yes
Degree and class of protection			
IP (at the front)	IP66K	IP66K	IP66K
IP (rear)	IP20	IP20	IP20
NEMA (front)			
• Enclosure Type 4x at the front	Yes; indoor use only	Yes; indoor use only	Yes; indoor use only

Technical specifications

Article number	6AV2144-8MC10-0AC0 SIMATIC HMI TP1200 COMFORT INOX LF	6AV2144-8QC10-0AA2 SIMATIC HMI TP1500 Comfort INOX	6AV2144-8UC10-0AA1 SIMATIC HMI TP1900 Comfort INOX
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
FM approval	No		
RCM (formerly C-TICK)	No	Yes	Yes
KC approval	No	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes
Use in hazardous areas			
• ATEX Zone 2	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes
• FM Class I Division 2	No	No	No
Marine approval			
• Germanischer Lloyd (GL)	No	No	No; In application process
• American Bureau of Shipping (ABS)	No	No	No; Available soon
• Bureau Veritas (BV)	No	No	No; Available soon
• Det Norske Veritas (DNV)	No	No	No; Available soon
• Korean Register of Shipping (KRS)	No	No	No; Available soon
• Lloyds Register of Shipping (LRS)	No	No	No; Available soon
• Nippon Kaiji Kyokai (Class NK)	No	No	No; Available soon
• Polski Rejestr Statkow (PRS)	No	No	No; Available soon
• Chinese Classification Society (CCS)		No	No; Available soon
Ambient conditions			
Suited for indoor use		Yes	Yes
Suited for outdoor use		No	No
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	45 °C
Relative humidity			
• Operation, max.	80 %; no condensation	80 %; no condensation	70 %; no condensation
configuration / header			
Configuration software			
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages			
Online languages			
• Number of online/runtime languages	32	32	32

Operator panels

Advanced HMI Panel-based
Comfort Panels

Comfort Panels INOX and INOX PCT

Technical specifications

Article number	6AV2144-8MC10-0AC0 SIMATIC HMI TP1200 COMFORT INOX LF	6AV2144-8QC10-0AA2 SIMATIC HMI TP1500 Comfort INOX	6AV2144-8UC10-0AA1 SIMATIC HMI TP1900 Comfort INOX
Functionality under WinCC (TIA Portal)			
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
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner			
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Message system			
• Bit messages			
- Number of bit messages	4 000	6 000	6 000
• Analog messages			
- Number of analog messages	200	200	200
Recipe management			
• Number of recipes	300	500	500
• Size of internal recipe memory	2 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	2 048	4 096	4 096
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	500	750	750
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
• Ethernet	Yes	Yes	Yes

Technical specifications

Article number	6AV2144-8MC10-0AC0 SIMATIC HMI TP1200 COMFORT INOX LF	6AV2144-8QC10-0AA2 SIMATIC HMI TP1500 Comfort INOX	6AV2144-8UC10-0AA1 SIMATIC HMI TP1900 Comfort INOX
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			
Printer	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
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes
Network camera	Yes	Yes	Yes
Mechanics/material			
Enclosure material (front)			
• Plastic	No	No	No
• Aluminum	No	No	No
• Stainless steel	Yes	Yes	Yes
Dimensions			
Width of the housing front	330 mm	415 mm	483 mm
Height of housing front	269 mm	310 mm	337 mm
Mounting cutout, width	310 mm	396 mm	465 mm
Mounting cutout, height	248 mm	291 mm	319 mm
Overall depth	67 mm	74 mm	73 mm
Weights			
Weight (without packaging)	4.2 kg	5.9 kg	7.9 kg

More information

Customer-specific modifications

- Customized design (logo, type designation and background color)
- Protection against condensation and corrosive gases

More information is available on the Internet at

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

Operator panels

Advanced HMI Panel-based
Mobile Panels

Mobile Panels

Overview

SIMATIC Mobile Panels

Mobile Panels 2nd Generation

The second generation of SIMATIC HMI Mobile Panels impresses with its convenience, performance and quality.

The highlights: A brilliant widescreen display, particularly simple configuration and the unique illuminated emergency stop button.

This series of devices offers Panels with 7", 9" and 10" displays, some of which are available with or without safety-related operator controls.

Mobile Panels of the 2nd Generation are the successors to the SIMATIC HMI Mobile Panels x77 with cable connections.

- SIMATIC HMI KTP400F Mobile
- SIMATIC HMI KTP700 Mobile
- SIMATIC HMI KTP700F Mobile
- SIMATIC HMI KTP700F Mobile HW
- SIMATIC HMI KTP700F Mobile HW/OR
- SIMATIC HMI KTP900 Mobile
- SIMATIC HMI KTP900F Mobile
- SIMATIC HMI TP1000F Mobile

Mobile Panels for low-temperature environment

SIMATIC HMI KTP700F Mobile Arctic is designed for use in weather-protected areas with low ambient temperatures down to -28 °C.

For optimum operation even at low temperatures, a touch pen has been integrated in the front panel at the center underneath the display.

The operator panel has the same functionality as the SIMATIC HMI Mobile Panels 2nd Generation and is integrated in the "Totally Integrated Automation Portal" engineering framework.

Overview



- SIMATIC HMI KTP700F Mobile HW
- SIMATIC HMI KTP700F Mobile HW/OR
- SIMATIC HMI TP1000F Mobile
- SIMATIC HMI KTP400F Mobile
- SIMATIC HMI KTP700 Mobile
- SIMATIC HMI KTP700F Mobile
- SIMATIC HMI KTP900 Mobile
- SIMATIC HMI KTP900F Mobile

Ordering data

Article No.

SIMATIC Mobile Panels 2nd Generation¹⁾

SIMATIC HMI KTP700F Mobile HW

7.0" TFT display, 800 x 480 pixels,
16 million colors,
key and touch operation,
6 function keys,
2 illuminated pushbuttons,
1x PROFINET/Industrial Ethernet
interface,
1x Multimedia card,
1x USB, key-operated switch,
acknowledgment button,
emergency stop/stop button,
handwheel, configurable as from
WinCC Comfort V15

6AV2145-8GB00-0AA0

SIMATIC HMI KTP700F Mobile HW/OR

7.0" TFT display, 800 x 480 pixels,
16 million colors,
key and touch operation,
6 function keys,
2 illuminated pushbuttons,
1x PROFINET/Industrial Ethernet
interface,
1x Multimedia card,
1x USB, key-operated switch,
acknowledgment button,
emergency stop/stop button,
handwheel and override,
configurable as from
WinCC Comfort V15

6AV2145-8GB01-0AA0

SIMATIC HMI TP1000F Mobile

10.0" TFT display,
1 280 x 800 pixels, 16 million colors,
touch operation, touch pen,
1x PROFINET/Industrial Ethernet
interface,
1x Multimedia card,
1x USB, key-operated switch,
acknowledgment button,
emergency stop/stop pushbutton,
configurable as from
WinCC Comfort V14

6AV2145-6KB20-0AS0

KTP400F Mobile

6AV2125-2DB23-0AX0

KTP700 Mobile

6AV2125-2GB03-0AX0

KTP700F Mobile

6AV2125-2GB23-0AX0

KTP900 Mobile

6AV2125-2JB03-0AX0

KTP900F Mobile

6AV2125-2JB23-0AX0

Accessories

Connecting cable and accessories for Mobile Panels

See "SIMATIC HMI operator control
and monitoring systems" ->
"Accessories"

¹⁾ The system components (connecting cables and connection boxes)
must be ordered separately.

Operator panels

Advanced HMI Panel-based Mobile Panels

Mobile Panels 2nd Generation

Technical specifications

Article number	6AV2145-8GB00-0AA0 SIMATIC HMI KTP700F Mobile HW	6AV2145-8GB01-0AA0 SIMATIC HMI KTP700F Mobile HW/OR	6AV2145-6KB20-0AS0 SIMATIC HMI TP1000F MOBILE
General information			
Product type designation	KTP700F	KTP700F	TP1000F Mobile
Display			
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	7 in	7 in	10.1 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	6	6	0
Touch operation			
• Design as touch screen	Yes	Yes	Yes
• Design as multi-touch screen	No	No	No
Special operator controls			
• Stop button (forced blocking)	Yes	Yes	Yes
• Emergency stop button (illuminated and forced blocking)	Yes	Yes	Yes
• Acknowledgement button (3-stage)	Yes	Yes	Yes
• Key-operated switch	Yes	Yes	Yes
• Illuminated pushbutton	Yes	Yes	Yes
• Handwheel	Yes	Yes	No
Camera			
• integrated camera	No	No	No
Expansions for operator control of the process			
• Direct keys (touch buttons as S7 input I/O)	32	32	0
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte
Time of day			
Clock			
• Hardware clock (real-time)	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	1	1	1
Number of PROFINET interfaces	1	1	1
Number of RS 485 interfaces	0	0	0
Number of USB interfaces	1; USB 2.0	1; USB 2.0	1; USB 2.0
Number of wireless interfaces	0	0	0
Number of SD card slots	1	1	1

Technical specifications

Article number	6AV2145-8GB00-0AA0 SIMATIC HMI KTP700F Mobile HW	6AV2145-8GB01-0AA0 SIMATIC HMI KTP700F Mobile HW/OR	6AV2145-6KB20-0AS0 SIMATIC HMI TP1000F MOBILE
Protocols			
PROFINET	Yes	Yes	Yes
PROFIsafe	Yes	Yes	Yes
PROFIBUS	No	No	No
EtherNet/IP	Yes	Yes	Yes
Protocols (Ethernet)			
• TCP/IP	Yes	Yes	Yes
• DHCP	Yes	Yes	Yes
• SNMP	Yes	Yes	Yes
• DCP	Yes	Yes	Yes
• LLDP	Yes	Yes	Yes
WEB characteristics			
• HTTP	Yes	Yes	Yes
• HTTPS	Yes	Yes	Yes
• HTML	Yes	Yes	Yes
• XML	No	No	No
• CSS	Yes	Yes	Yes
• Active X	No	No	No
• JavaScript	Yes	Yes	Yes
• Java VM	No	No	No
Further protocols			
• MODBUS	Yes	Yes	Yes
communication functions / header			
Wireless communication			
• supported standards			
- Radio standard WLAN 802.11	No	No	No
- Bluetooth radio standard	No	No	No
Degree and class of protection			
IP65 (all-round)	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
UL approval	Yes	Yes	
cULus	Yes	Yes	Yes
FM approval	No	No	
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No	No	No
EAC (formerly Gost-R)	Yes	Yes	
Suitable for safety functions	Yes	Yes	Yes
Marine approval	No	No	No
Highest safety class achievable in safety mode			
• Performance level according to ISO 13849-1	PLe	PLe	PLe
• SIL acc. to IEC 61508	SIL 3	SIL 3	SIL 3
Use in hazardous areas			
• 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
• cULus Class II Division 2	No	No	
• FM Class I Division 2	No	No	No
• FM Class II Division 2	No	No	

Operator panels

Advanced HMI Panel-based
Mobile Panels

Mobile Panels 2nd Generation

Technical specifications

Article number	6AV2145-8GB00-0AA0 SIMATIC HMI KTP700F Mobile HW	6AV2145-8GB01-0AA0 SIMATIC HMI KTP700F Mobile HW/OR	6AV2145-6KB20-0AS0 SIMATIC HMI TP1000F MOBILE
Ambient conditions			
Free fall			
• Fall height, max.	1.2 m	1.2 m	1.2 m
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
Languages			
Online languages			
• Number of online/runtime languages	32	32	32
Functionality under WinCC (TIA Portal)			
Applications/options			
• Web browser	Yes	Yes	Yes
• Pocket Word	No	No	No
• Pocket Excel	No	No	No
• PDF Viewer	Yes	Yes	Yes
• Media Player	No	No	No
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner			
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Multiproject			
• Number of projects (internal)	0	0	0
• Number of projects (external)	0	0	0
Message system			
• Bit messages			
- Number of bit messages	4 000	4 000	4 000
• 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
Recipe management			
• Number of recipes	300	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	2 048	2 048	2 048
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	500	500	500
Archiving			
• Number of archives per device	50	50	50
• Number of entries per archive	20 000	20 000	20 000

Technical specifications

Article number	6AV2145-8GB00-0AA0 SIMATIC HMI KTP700F Mobile HW	6AV2145-8GB01-0AA0 SIMATIC HMI KTP700F Mobile HW/OR	6AV2145-6KB20-0AS0 SIMATIC HMI TP1000F MOBILE
Security			
• Number of user groups	50	50	50
• Number of users	50	50	50
• SIMATIC Logon	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	No	No	Yes; WinAC RTX
• SIMOTION	Yes	Yes	Yes
Peripherals/Options			
SIMATIC HMI MM memory card: Multi Media Card	Yes	Yes	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes
USB memory	Yes	Yes	Yes
Mechanics/material			
Enclosure material (front)			
• Plastic	Yes	Yes	Yes
• Aluminum	No	No	No
• Stainless steel	No	No	No
Dimensions			
Width of the housing front	248.4 mm	248.4 mm	307.5 mm
Height of housing front	171.7 mm	171.7 mm	223.5 mm
Weights			
Weight (without packaging)	1.3 kg	1.3 kg	1.6 kg

Operator panels

Advanced HMI Panel-based Mobile Panels

Mobile Panels 2nd Generation

Technical specifications

Article number	6AV2125-2DB23-0AX0 SIMATIC HMI KTP400F Mobile	6AV2125-2GB03-0AX0 SIMATIC HMI KTP700 Mobile	6AV2125-2GB23-0AX0 SIMATIC HMI KTP700F Mobile	6AV2125-2JB03-0AX0 SIMATIC HMI KTP900 Mobile	6AV2125-2JB23-0AX0 SIMATIC HMI KTP900F Mobile
General information					
Product type designation	KTP400F Mobile	KTP700 Mobile	KTP700F Mobile	KTP900 Mobile	KTP900F Mobile
Display					
Design of display	TFT	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	4.3 in	7 in	7 in	9 in	9 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	800 pixel	800 pixel
• Vertical image resolution	272 pixel	480 pixel	480 pixel	480 pixel	480 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements					
Keyboard fonts					
• Function keys					
- Number of function keys	4	8	8	10	10
Touch operation					
• Design as touch screen	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	No	No	No	No	No
Special operator controls					
• Stop button (forced blocking)	Yes	No	Yes	No	Yes
• Emergency stop button (illuminated and forced blocking)	Yes	No	Yes	No	Yes
• Acknowledgement button (3-stage)	Yes	No	Yes	No	Yes
• Key-operated switch	No	No	Yes	No	Yes
• Illuminated pushbutton	Yes	Yes	Yes	Yes	Yes
Camera					
• integrated camera	No	No	No	No	No
Expansions for operator control of the process					
• Direct keys (touch buttons as S7 input I/O)	32	32	32	32	32
Supply voltage					
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	12 Mbyte
Time of day					
Clock					
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes
Interfaces					
Number of industrial Ethernet interfaces	1	1	1	1	1
Number of PROFINET interfaces	1	1	1	1	1
Number of RS 485 interfaces	0	0	0	0	0
Number of USB interfaces	1; USB 2.0	1; USB 2.0	1; USB 2.0	1; USB 2.0	1; USB 2.0
Number of wireless interfaces	0	0	0	0	0
Number of SD card slots	0	1	1	1	1

Technical specifications

Article number	6AV2125-2DB23-0AX0	6AV2125-2GB03-0AX0	6AV2125-2GB23-0AX0	6AV2125-2JB03-0AX0	6AV2125-2JB23-0AX0
	SIMATIC HMI KTP400F Mobile	SIMATIC HMI KTP700 Mobile	SIMATIC HMI KTP700F Mobile	SIMATIC HMI KTP900 Mobile	SIMATIC HMI KTP900F Mobile
Protocols					
PROFINET	Yes	Yes	Yes	Yes	Yes
PROFIsafe	Yes	No	Yes	No	Yes
PROFIBUS	No	No	No	No	No
EtherNet/IP	Yes	Yes	Yes	Yes	Yes
Protocols (Ethernet)					
• TCP/IP	Yes	Yes	Yes	Yes	Yes
• DHCP	Yes	Yes	Yes	Yes	Yes
• SNMP	Yes	Yes	Yes	Yes	Yes
• DCP	Yes	Yes	Yes	Yes	Yes
• LLDP	Yes	Yes	Yes	Yes	Yes
WEB characteristics					
• HTTP	Yes	Yes	Yes	Yes	Yes
• HTTPS	Yes	Yes	Yes	Yes	Yes
• HTML	Yes	Yes	Yes	Yes	Yes
• XML	No	No	No	No	No
• CSS	Yes	Yes	Yes	Yes	Yes
• Active X	No	No	No	No	No
• JavaScript	Yes	Yes	Yes	Yes	Yes
• Java VM	No	No	No	No	No
Further protocols					
• MODBUS	Yes	Yes	Yes	Yes	Yes
communication functions / header					
Wireless communication					
• supported standards					
- Radio standard WLAN 802.11	No	No	No	No	No
- Bluetooth radio standard	No	No	No	No	No
Degree and class of protection					
IP65 (all-round)	Yes	Yes	Yes	Yes	Yes
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
Suitable for safety functions	Yes	No	Yes	No	Yes
Marine approval	Yes	Yes	Yes	Yes	Yes
Highest safety class achievable in safety mode					
• Performance level according to ISO 13849-1	PLe	none	PLe	none	PLe
• SIL acc. to IEC 61508	SIL 3	No	SIL 3	No	SIL 3
Use in hazardous areas					
• ATEX Zone 2	No	No	No	No	No
• ATEX Zone 22	No	No	No	No	No
• IECEx Zone 2	No	No	No	No	No
• IECEx Zone 22	No	No	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No	No	No
• FM Class I Division 2	No	No	No	No	No

Operator panels

Advanced HMI Panel-based Mobile Panels

Mobile Panels 2nd Generation

Technical specifications

Article number	6AV2125-2DB23-0AX0 SIMATIC HMI KTP400F Mobile	6AV2125-2GB03-0AX0 SIMATIC HMI KTP700 Mobile	6AV2125-2GB23-0AX0 SIMATIC HMI KTP700F Mobile	6AV2125-2JB03-0AX0 SIMATIC HMI KTP900 Mobile	6AV2125-2JB23-0AX0 SIMATIC HMI KTP900F Mobile
Ambient conditions					
Free fall					
• Fall height, max.	1.2 m	1.2 m	1.2 m	1.2 m	1.2 m
Ambient temperature during operation					
• min.	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity					
• Operation, max.	90 %	90 %	90 %	90 %	90 %
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	No	No	No	No	No
• Pocket Excel	No	No	No	No	No
• PDF Viewer	Yes	Yes	Yes	Yes	Yes
• Media Player	No	No	No	No	No
• 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
Multiproject					
• Number of projects (internal)	0	0	0	0	0
• Number of projects (external)	0	0	0	0	0
Message system					
• Bit messages					
- Number of bit messages	4 000	4 000	4 000	4 000	4 000
• Analog messages					
- Number of analog messages	200	200	200	200	200
• Message buffer					
- Number of entries	1 024	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	300	300	300	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes
Variables					
• Number of variables per device	2 048	2 048	2 048	2 048	2 048
• Number of variables per screen	50	400	400	400	400
Images					
• Number of configurable images	500	500	500	500	500
Archiving					
• Number of archives per device	50	50	50	50	50
• Number of entries per archive	20 000	20 000	20 000	20 000	20 000

Technical specifications

Article number	6AV2125-2DB23-0AX0 SIMATIC HMI KTP400F Mobile	6AV2125-2GB03-0AX0 SIMATIC HMI KTP700 Mobile	6AV2125-2GB23-0AX0 SIMATIC HMI KTP700F Mobile	6AV2125-2JB03-0AX0 SIMATIC HMI KTP900 Mobile	6AV2125-2JB23-0AX0 SIMATIC HMI KTP900F Mobile
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
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; WinAC RTX	Yes; WinAC RTX	Yes; WinAC RTX	Yes; WinAC RTX	Yes; WinAC RTX
• SIMOTION	Yes	Yes	Yes	Yes	Yes
Peripherals/Options					
SIMATIC HMI MM memory card: Multi Media Card	No	Yes	Yes	Yes	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	No	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes
Mechanics/material					
Enclosure material (front)					
• Plastic	Yes	Yes	Yes	Yes	Yes
• Aluminum	No	No	No	No	No
• Stainless steel	No	No	No	No	No
Weights					
Weight (without packaging)	0.7 kg	1.2 kg	1.3 kg	1.5 kg	1.6 kg

More information

More information is available on the internet at

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

Note:

Do you need a specific modification or option for the products described here? Then look up "Customized products", where you will find information about additional sector-specific products that can be ordered as well as about options for customer-specific modification and adaptation.

Operator panels

Advanced HMI Panel-based
Mobile Panels

Connection box for Mobile Panels (2nd Generation)

Overview



Mobile Panels with emergency stop/stop buttons can be wired into the emergency stop circuit of a machine or plant by means of the connection boxes.

Pressing the emergency stop/stop button on the Mobile Panel activates the emergency stop function.

The emergency stop/stop button on the Mobile Panel supplements, but does not replace, the emergency stop equipment permanently installed on the machine.

Ordering data

Article No.

Connection boxes for SIMATIC Mobile Panels of 2nd Generation and Arctic Panel

- Connection Box, Compact
- Connection Box, Standard
- Connection Box, Advanced

6AV2125-2AE03-0AX0
6AV2125-2AE13-0AX0
6AV2125-2AE23-0AX0

Connecting cable and accessories for Mobile Panels

See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Technical specifications

Article number	6AV2125-2AE03-0AX0	6AV2125-2AE13-0AX0	6AV2125-2AE23-0AX0
	SIMATIC HMI Connection Box Compact	SIMATIC HMI Connection Box Standard	SIMATIC HMI Connection Box Advanced
General information			
Product type designation	Connection box	Connection box	Connection box
Product function			
• Web-based management	No	Yes	Yes
FH technology			
Safety evaluation through direct wiring			
• Reconnection without emergency stop circuit interruption	No	No	Yes
• Reconnection with emergency stop circuit interruption	Yes	Yes	No
• Monitoring the STOP button	Yes	Yes	Yes
• Monitoring of emergency stop button	Yes	Yes	Yes
• Monitoring of acknowledgement button	Yes	Yes	Yes
Safety evaluation via PROFIsafe			
• Reconnection without emergency stop circuit interruption	Yes	Yes	Yes
• Reconnection with emergency stop circuit interruption	No	No	No
• Monitoring the STOP button	Yes	Yes	Yes
• Monitoring of emergency stop button	Yes	Yes	Yes
• Monitoring of acknowledgement button	Yes	Yes	Yes
Installation type/mounting			
Wall mounting/direct mounting	No	Yes	Yes
Control cabinet installation	Yes	No	No
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Input current			
Current consumption (rated value)	18 mA	96 mA	95 mA
Starting current inrush I _{pt}	0.003 A ² ·s	0.15 A ² ·s	0.16 A ² ·s
Power			
Active power input, typ.	0.43 W	2.3 W	2.3 W

Connection box for Mobile Panels (2nd Generation)

Technical specifications

Article number	6AV2125-2AE03-0AX0	6AV2125-2AE13-0AX0	6AV2125-2AE23-0AX0
	SIMATIC HMI Connection Box Compact	SIMATIC HMI Connection Box Standard	SIMATIC HMI Connection Box Advanced
Interfaces			
Number of industrial Ethernet interfaces	2	3	3
Number of PROFINET interfaces	2	3	3
Connection point identification	Yes	Yes	Yes
Industrial Ethernet			
• Industrial Ethernet status LED	0	3	3
Protocols			
PROFINET	Yes; No switch functionality	Yes	Yes
IRT	No	No	Yes
PROFIsafe	Yes; No switch functionality	Yes	Yes
EtherNet/IP	Yes	Yes	Yes
AS-Interface	No	No	No
EIB/KNX	No	No	No
Protocols (Ethernet)			
• TCP/IP	Yes; No switch functionality	Yes	Yes
• DHCP	No	Yes	Yes
• SNMP	No	Yes	Yes
• DCP	No	Yes	Yes
• LLDP	No	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	No	No	Yes
Further protocols			
• MODBUS	Yes	Yes	Yes
• other bus systems	No	No	No
Degree and class of protection			
IP degree of protection		IP65	IP65
IP65 (all-round)		Yes	Yes
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP20		
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon
Suitable for safety functions	Yes	Yes	Yes
Highest safety class achievable in safety mode			
• Performance level according to ISO 13849-1	PLe	PLe	PLe
• SIL acc. to IEC 61508	SIL 3	SIL 3	SIL 3

Article number	6AV2125-2AE03-0AX0	6AV2125-2AE13-0AX0	6AV2125-2AE23-0AX0
	SIMATIC HMI Connection Box Compact	SIMATIC HMI Connection Box Standard	SIMATIC HMI Connection Box Advanced
Use in hazardous areas			
• ATEX Zone 2	No	No	No
• ATEX Zone 22	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No
• FM Class I Division 2	No	No	No
Marine approval			
• Germanischer Lloyd (GL)	Yes	Yes	Yes
• American Bureau of Shipping (ABS)	Yes	Yes	Yes
• Bureau Veritas (BV)	No; Available soon	No; Available soon	No; Available soon
• Det Norske Veritas (DNV)	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	No	No	No
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes
• Polski Rejestr Statkow (PRS)	No	No	No
• Chinese Classification Society (CCS)	No	No	No
Ambient conditions			
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
configuration / header			
Configuration software			
• STEP 7 Professional (TIA Portal)	No	No	No
• WinCC Comfort (TIA Portal)	No	Yes; Optional	Yes; Optional
• WinCC Advanced (TIA Portal)	No	Yes; Optional	Yes; Optional
• WinCC Professional (TIA Portal)	No	Yes; Optional	Yes; Optional
Mechanics/material			
Enclosure material (front)			
• Plastic	Yes	Yes	Yes
• Aluminum	No	No	No
• Stainless steel	No	No	No
Dimensions			
Width	96 mm	230 mm	230 mm
Height	125 mm	151.5 mm	151.3 mm
Depth	77.9 mm	75.4 mm	75.4 mm
Mounting cutout, width	78 mm		
Mounting cutout, height	107 mm		
Overall depth	30 mm		
Weights			
Weight (without packaging)	0.25 kg	0.72 kg	0.72 kg

More information

More information is available on the internet at

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

Operator panels

Advanced HMI Panel-based
Mobile Panels

Mobile Panels for low-temperature environment

Overview



SIMATIC HMI KTP700F MOBILE ARCTIC

SIMATIC HMI KTP700F Mobile Arctic

The operator panel with glass touch screen is designed for use in weather-protected areas with low ambient temperatures, e.g. in cooling technology.

It has the same functionality as the SIMATIC HMI Mobile Panels 2nd Generation and is configured exclusively with the innovative HMI software WinCC.

The engineering software is integrated into the "Totally Integrated Automation Portal" engineering framework. WinCC (TIA Portal) as of V15.1 is required to configure the device.

Ordering data

Article No.

SIMATIC HMI KTP700F Mobile Arctic

Extended operating temperature range,
7.0" TFT display,
800 x 480 pixels, 16 million colors,
key and touch operation,
8 function keys,
1x PROFINET/Industrial Ethernet interface,
1x Multimedia card, 1x USB,
1x touch pen, key-operated switch,
acknowledgment button,
emergency stop/stop button,
configurable as of
WinCC Comfort V15.1

6AV2145-6GB06-0AA0

Accessories

Connection boxes, Compact and Advanced

See System components
for Mobile Panels

Connecting cable

Connecting cable KTP Mobile

Technical specifications

Article number	6AV2145-6GB06-0AA0 SIMATIC HMI KTP700F Mobile Arctic
General information	
Product type designation	KTP700F Mobile Arctic
Display	
Design of display	TFT, bonded, daylight-readable
Screen diagonal	7 in
Number of colors	16 777 216
Resolution (pixels)	
• Horizontal image resolution	800 pixel
• Vertical image resolution	480 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	50 000 h
Control elements	
Keyboard fonts	
• Function keys	
- Number of function keys	8
Touch operation	
• Design as touch screen	Yes
• Design as multi-touch screen	No
Special operator controls	
• Stop button (forced blocking)	Yes
• Emergency stop button (illuminated and forced blocking)	Yes
• Acknowledgement button (3-stage)	Yes
• Key-operated switch	Yes
• Illuminated pushbutton	Yes
Camera	
• integrated camera	No
Expansions for operator control of the process	
• Direct keys (touch buttons as S7 input I/O)	32
Supply voltage	
Rated value (DC)	24 V
Memory	
Memory available for user data	12 Mbyte
Time of day	
Clock	
• Hardware clock (real-time)	Yes
Interfaces	
Number of industrial Ethernet interfaces	1
Number of PROFINET interfaces	1
Number of RS 485 interfaces	0
Number of USB interfaces	1; USB 2.0
Number of wireless interfaces	0
Number of SD card slots	1

Mobile Panels for low-temperature environment

Technical specifications

Article number	6AV2145-6GB06-0AA0 SIMATIC HMI KTP700F Mobile Arctic
Protocols	
PROFINET	Yes
PROFIsafe	Yes
PROFIBUS	No
EtherNet/IP	Yes
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
WEB characteristics	
• HTTP	Yes
• HTTPS	Yes
• HTML	Yes
• XML	No
• CSS	Yes
• Active X	No
• JavaScript	Yes
• Java VM	No
Further protocols	
• MODBUS	Yes
communication functions / header	
Wireless communication	
• supported standards	
- Radio standard WLAN 802.11	No
- Bluetooth radio standard	No
Degree and class of protection	
IP65 (all-round)	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
FM approval	No
RCM (formerly C-TICK)	Yes
KC approval	No
Suitable for safety functions	Yes
Marine approval	No
Highest safety class achievable in safety mode	
• Performance level according to ISO 13849-1	PLe
• SIL acc. to IEC 61508	SIL 3
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• IECEx Zone 2	No
• IECEx Zone 22	No
• cULus Class I Zone 2, Division 2	No
• cULus Class II Division 2	No
• FM Class I Division 2	No
• FM Class II Division 2	No

Article number	6AV2145-6GB06-0AA0 SIMATIC HMI KTP700F Mobile Arctic
Ambient conditions	
Free fall	
• Fall height, max.	1.2 m
Ambient temperature during operation	
• min.	-28 °C
• max.	45 °C
Relative humidity	
• Operation, max.	90 %; no condensation
Languages	
Online languages	
• Number of online/runtime languages	32
Functionality under WinCC (TIA Portal)	
Applications/options	
• Web browser	Yes
• Pocket Word	No
• Pocket Excel	No
• PDF Viewer	Yes
• Media Player	No
• SIMATIC WinCC Sm@rtServer	Yes
• SIMATIC WinCC Audit	Yes
Number of Visual Basic Scripts	Yes
Task planner	
• time-controlled	Yes
• task-controlled	Yes
Multiproject	
• Number of projects (internal)	0
• Number of projects (external)	0
Message system	
• Bit messages	
- Number of bit messages	4 000
• Analog messages	
- Number of analog messages	200
• Message buffer	
- Number of entries	1 024
- Circulating buffer	Yes
- retentive	Yes
Recipe management	
• Number of recipes	300
• Size of internal recipe memory	2 Mbyte
• Recipe memory expandable	Yes
Variables	
• Number of variables per device	2 048
• Number of variables per screen	400
Images	
• Number of configurable images	500
Archiving	
• Number of archives per device	50
• Number of entries per archive	20 000

Operator panels

Advanced HMI Panel-based Mobile Panels

Mobile Panels for low-temperature environment

Technical specifications

Article number	6AV2145-6GB06-0AA0 SIMATIC HMI KTP700F Mobile Arctic
Security	
• Number of user groups	50
• Number of users	50
• SIMATIC Logon	Yes
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
• WinAC	Yes; WinAC RTX
• SIMOTION	Yes
Peripherals/Options	
SIMATIC HMI MM memory card: Multi Media Card	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	Yes
USB memory	Yes
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
• Aluminum	No
• Stainless steel	No
Dimensions	
Width of the housing front	248.4 mm
Height of housing front	171.7 mm
Weights	
Weight (without packaging)	1.3 kg

More information

More information is available on the internet at

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

Customized modification options

Do you need a specific modification or option for the products described here? Then look up "Customized products", where you will find information about additional sector-specific products that can be ordered as well as about options for customer-specific modification and adaptation.

Overview

An Industrial Web Panel (IWP) is an HMI device with industrial approval for display and touch or key operation of HTML5 pages in "kiosk" mode.

Main features are:

- Ethernet interface
- Touch operation
- HTML5-capable web browser
- Online help on the device

Currently, the following Web Panels are offered:

- SIMATIC HMI IWP10F Mobile WebClient

Operator panels

Advanced HMI Panel-based
Web Panels

SIMATIC HMI IWP10F Mobile WebClient

Overview



IWP10F Mobile WebClient

IWP10F Mobile WebClient is an operator control and display device in rugged design.

Equipped with a capacitive multi-touch screen as well as hardwired safety elements and PROFINET, the HMI device is optimally equipped for various applications and offers additional flexibility in any application.

Technical specifications

Article number	6AV2145-6KM00-0AA0 IWP10F Mobile WebClient
General information	
Product type designation	IWP10F Mobile WebClient
Display	
Design of display	10" TFT multi-touch
Screen diagonal	10 in
Resolution (pixels)	
• Horizontal image resolution	1 280 pixel
• Vertical image resolution	800 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C
Control elements	
Keyboard fonts	
• Function keys	Yes
- Number of function keys	7
Touch operation	
• Design as touch screen	Yes
• Design as multi-touch screen	Yes; Projective-capacitive
Special operator controls	
• Stop button (forced blocking)	Yes
• Emergency stop button (illuminated and forced blocking)	Yes
• Acknowledgement button (3-stage)	Yes
• Handwheel	Yes
Supply voltage	
Rated value (DC)	24 V
Interfaces	
Number of industrial Ethernet interfaces	1
Number of USB interfaces	1
Number of wireless interfaces	0
Number of SD card slots	0
Protocols	
PROFINET	Yes
PROFIsafe	No
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
WEB characteristics	
• HTTP	Yes
• HTTPS	Yes
• HTML	Yes; HTML5
• XML	Yes
• CSS	Yes
• Active X	No
• JavaScript	Yes
• Java VM	No

Ordering data

Article No.

SIMATIC HMI IWP10F Mobile WebClient

Mobile WebClient,
10.0" TFT display,
1280x800 pixels, 16 million colors,
multi-touch, 7 function keys,
handwheel, PROFINET/Industrial
Ethernet interface, USB,
acknowledgment button,
emergency stop button

6AV2145-6KM00-0AA0

Accessories

Connecting cable

- 2 m
- 5 m
- 8 m
- 10 m
- 15 m
- 20 m
- 25 m

6XV1440-4BH20
6XV1440-4BH50
6XV1440-4BH80
6XV1440-4BN10
6XV1440-4BN15
6XV1440-4BN20
6XV1440-4BN25

Connection boxes

- compact
- standard
- advanced

6AV2125-2AE03-0AX0
6AV2125-2AE13-0AX0
6AV2125-2AE23-0AX0

Wall-mounting bracket

6FC5348-0AA20-0AA0

Technical specifications

Article number	6AV2145-6KM00-0AA0 IWP10F Mobile WebClient
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
FM approval	No
RCM (formerly C-TICK)	Yes
KC approval	No
EAC (formerly Gost-R)	No
CCC	No
Suitable for safety functions	Yes
Marine approval	No
Highest safety class achievable in safety mode	
• Performance level according to ISO 13849-1	PLe
• SIL acc. to IEC 61508	SIL 3
Ambient conditions	
Free fall	
• Fall height, max.	1.2 m
Ambient temperature during operation	
• min.	0 °C
• max.	45 °C
Relative humidity	
• Operation, max.	95 %; no condensation

Article number	6AV2145-6KM00-0AA0 IWP10F Mobile WebClient
Languages	
Online languages	
• Number of online/runtime languages	5; de, en, fr, it, es
Functionality under WinCC (TIA Portal)	
Variables	
• Number of variables per screen	200
Peripherals/Options	
USB memory	Yes; USB storage medium can be connected
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
Weights	
Weight (without packaging)	1.5 kg

More information

More information is available on the internet at
<https://support.industry.siemens.com/cs/pd/1663536?pdti=pi&dl=de&pnid=29635&lc=com-eng>

Operator panels

Advanced HMI PC-based

Advanced HMI PC-based

Overview

SIMATIC Advanced HMI – efficient realization of even the most demanding and sophisticated HMI tasks

A PC-based system is recommended if the production places particularly high demands on the quantity and type of information to be processed and documented.

It offers the appropriate options for sufficient storage space, processor performance and data connection. The user can either opt for a centralized solution in which the visualization and PC are combined in a single unit, or for a distributed solution with an industrial monitor as Thin Client.

SIMATIC Industrial Panel PCs

The most complex visualization and control tasks can be realized centrally on the machine with extremely compact industrial panel PCs. You can always find an optimum solution in our portfolio – from the embedded to the high-end industrial PC – to meet the many requirements of manufacturing and process automation.

SIMATIC IFP and SIMATIC ITC

Two innovative options are available for distributed control concepts. SIMATIC industrial monitors and Thin Clients are used as a desktop device for control rooms, as a built-in unit for operator panel or as PC-based visualization and control solution in which the operating unit is operated separately.

The following modules are available:

- Panel PC
- Industrial monitors and Thin Clients
- Software packages

Overview

The SIMATIC Basic Panel, Comfort Panel and Mobile Panel offer HMI functionality for the control systems:

- SIMATIC S7
- Non-Siemens controllers:
 - Allen Bradley
 - Mitsubishi
 - Modicon
 - Omron

For more detailed information, refer to the WinCC (TIA Portal) user manual, the "Windows-based systems communication" manual, or the WinCC (TIA Portal) online help.

OPC communication and HTTP communication are offered for Comfort Panels and Mobile Panels with an integrated Ethernet interface. Both OPC and HTTP communication can be used in parallel with the process links to SIMATIC S7 or non-Siemens PLCs.

Note:

Interface options for HMI devices: See the individual device descriptions.

OPC communication

OPC Data Access is an open standard for exchanging both local and remote variables between various applications via Industrial Ethernet.

HTTP communication for variable exchange between SIMATIC HMI systems

Communication based on HTTP message frames enables variables to be exchanged between SIMATIC HMI systems.

Communication standard	SIMATIC HMI			
Version	Comfort Panel	Mobile Panel 177 PN/ 277	Mobile Panel KTPx00	WinCC Runtime Advanced
OPC Data Access V2.05a + OPC UA Data Access V1.01 + OPC Data Access XML V1.00				
OPC DA client (COM/DCOM)	–	–	–	•
OPC DA server (COM/DCOM)	–	–	–	•
OPC UA DA client	•	–	•	•
OPC UA DA server	•	–	•	•
HTTP communication for variable exchange between SIMATIC HMI systems				
HTTP client	•	•	•	•
HTTP server	•	•	•	•

- System interface possible
- System interface not possible

Operator panels

System interfaces with WinCC (TIA Portal)

SIMATIC S7

Overview

The following types of interface are differentiated in respect of the link between the SIMATIC Panels and SIMATIC S7 controllers:

- **PROFINET interface:**
Coupling of SIMATIC Panel to SIMATIC S7 controllers via Industrial Ethernet TCP/IP using the integrated PROFINET interface of the CPU or, alternatively, a PROFINET interface module.
- **MPI/PROFIBUS interface:**
Coupling of SIMATIC Panel to SIMATIC S7 controllers via MPI/PROFIBUS using the integrated MPI/PROFIBUS interface of the CPU or the integrated PPI interface of the CPU in the case of S7-200 or, alternatively, a PROFIBUS interface module in the case of S7-1200, S7-1500, S7-300 and S7-400.
- **PPI interface:**
Coupling of SIMATIC Panel to SIMATIC S7-200 via PPI network using the integrated PPI interface of the CPU.

The maximum possible number of S7 connections of one CPU is determined by its performance capacity (see Catalog ST 70); from the point of view of the SIMATIC Panel, the following restrictions apply:

- Basic Panel, Comfort Panel 4", Mobile Panel 177: max. 4 connections
- Comfort Panels from 7" to 22" (incl. Outdoor), Mobile Panel 2nd Generation: max. 8 connections
- Mobile Panel 277: max. 6 connections
- PC with WinCC Runtime Advanced: max. 8 connections

PPI interface

The PPI interface is a point-to-point connection between a SIMATIC Panel (PPI master) or alternatively a PG (PPI master) and an S7-200 (PPI slave).

MPI/PROFIBUS interface or PROFINET interface

The corresponding multipoint-enabled SIMATIC Panel and SIMATIC S7 communication interfaces are used.

The following are possible:

- Interface between one or more SIMATIC Panels (MPI master) and one or more S7-1200/S7-1500/S7-300/S7-400s or WinAC (MPI master) (possible network topology: MPI/PROFIBUS or Industrial Ethernet TCP/IP)
- Interface between one or more SIMATIC Panels (MPI master) and one or more S7-200s (MPI slave)¹⁾ (possible network topology: PPI, MPI/PROFIBUS)

Unlike PPI connections, MPI connections are static connections that are set up during run-up and then monitored.

In principle this type of information exchange between SIMATIC Panels and SIMATIC S7 is independent of the network used, PPI, MPI/PROFIBUS or Industrial Ethernet: SIMATIC Panels are S7 clients and SIMATIC S7 CPUs are S7 servers.

Controller	SIMATIC HMI					
Target hardware (PROTOCOL) (physics)	Basic Panel	Comfort Panel	Mobile Panel 177 DP / PN ¹⁾	Mobile Panel 277 ¹⁾	KTPx00(F) Mobile ¹⁾	WinCC Runtime Advanced
SIMATIC S7-1200²⁾						
over Ethernet (TCP/IP)	• ³⁾	•	• ³⁾	•	•	•
over MPI or PROFIBUS network	• ⁴⁾	•	• ³⁾	•	—	• ⁵⁾
SIMATIC S7-1500²⁾						
over Ethernet (TCP/IP)	• ³⁾	•	• ³⁾	•	•	•
over PROFIBUS network	• ³⁾	•	• ³⁾	•	—	• ⁵⁾
SIMATIC S7-300, -400, WinAC²⁾						
over Ethernet (TCP/IP)	• ³⁾	•	• ³⁾	•	•	•
over MPI or PROFIBUS network	•	•	• ⁴⁾	•	—	• ⁵⁾
SIMATIC S7-200²⁾						
over Ethernet (TCP/IP) (MPI protocol)	• ³⁾	•	• ³⁾	•	•	•
over MPI or PROFIBUS network	• ⁴⁾	• ⁶⁾	• ⁴⁾ ⁶⁾	• ⁶⁾	—	• ⁵⁾ ⁶⁾
over PPI network (MPI protocol)	• ⁴⁾	—	•	—	—	—
over PPI network (PPI protocol)	—	• ⁷⁾	• ⁷⁾	• ⁷⁾	—	• ⁵⁾ ⁷⁾

- System interface possible
- System interface not possible

¹⁾ Mobile Panel connection via special connecting cable and connection box (see Mobile Panels), see Manual for cable assignment

²⁾ Controllers can be combined as desired

³⁾ Basic Panel PN and Mobile Panel 177 PN only

⁴⁾ Basic Panel DP and Mobile Panel 177 DP only

⁵⁾ Connection via integrated MPI/PROFIBUS interface; in the case of a standard PC, a communications processor (CP) is to be used (e.g. CP 5612/5622)

⁶⁾ Only on passive S7-200

⁷⁾ Can be interfaced via PPI to max. 1 x S7-200 (PPI); network operation (parallel PG, etc.) is possible

Note:

For detailed information on cable assignment, refer to WinCC Online Help.

Overview

SIMATIC Basic Panels, Comfort Panels and Mobile Panels, as well as the SIMATIC HMI software package for PC WinCC Runtime Advanced support the following protocols for linking the control systems of other manufacturers:

- Allen Bradley
 - Ethernet IP protocol
 - DF1 protocol
- Mitsubishi
 - MC TCP/IP protocol
 - FX protocol
- Modicon
 - Modbus TCP/IP protocol
 - Modbus RTU protocol
- Omron
 - Link/Multi Link protocol

The following table contains more detailed information.

Connection overview

Controller	SIMATIC HMI					
Target hardware (PROTOCOL) (physics)	Basic Panel	Comfort Panel Outdoor	Mobile Panel 177 DP ¹⁾ Mobile Panel 177 PN ¹⁾	Mobile Panel 277 ¹⁾	KTPx00(F) Mobile	WinCC Runtime Advanced
Allen Bradley (Ethernet IP)						
via Ethernet TCP/IP network to max. 4 x controllers ²⁾	• 3)	•	• 3)	•	•	•
• ControlLogix 1756-L6x, -L6xS with Ethernet module 1756-ENBT						
• GuardLogix System						
• CompactLogix 1769-L2xE, -L3xE						
• CompactLogix 1769-L4x with Ethernet module 1768-ENBT						
• SLC 5/05						
• MicroLogix 1100, 1400						
Allen Bradley (DF1)						
to max. 1 x controller	• 4) 5)	• 4)	• 4) 5)	• 4)	—	• 6)
• SLC 5/03, /04, /05						
• MicroLogix (RS 232)						
to max. 1 x controller	• 4) 5)	• 4)	• 4) 5)	• 4)	—	• 7)
• PLC5/11, /20, /30, /40, /60, /80 (RS 232)						
via KF2 gateway and DH+ network to max. 4 x controllers ²⁾	• 4) 5)	• 4)	• 4) 5)	• 4)	—	• 7) 8)
• SLC 5/04						
• PLC5/11, /20, /30, /40, /60, /80 (RS 232)						
via KF2 gateway and DH+ network to max. 4 x controllers ²⁾	• 5)	•	• 5)	•	—	—
• SLC 5/04						
• PLC5/11, /20, /30, /40, /60, /80 (RS 422)						
via KF3 gateway and DH485 network to max. 4 x controllers ²⁾	• 4) 5)	• 4)	• 4) 5)	• 4)	—	• 7) 8)
• SLC 500						
• MicroLogix (RS 232)						

- System interface possible
- System interface not possible

¹⁾ Mobile Panel connection via special connecting cable and connection box (see Mobile Panels), see Manual for cable assignment

²⁾ The following listed controllers can be combined as required

³⁾ Basic Panel PN and Mobile Panel 177 PN only

⁴⁾ The RS 422/RS 232 adapter 6AV6671-8XE00-0AX0 is required for Basic Panels and Comfort Panels

⁵⁾ Basic Panel DP and Mobile Panel 177 DP only

⁶⁾ Connection via Allen Bradley PC cable 1747 CP3

⁷⁾ Connection via Allen Bradley PC cable 1784 CP10

⁸⁾ For connection to KF2/KF3 gateway, a gender-changer (25-pin socket/25-pin socket) is required on the gateway side

Note:

For detailed information on cable assignment, refer to WinCC Online Help; see also

<http://support.automation.siemens.com/WW/view/en/29034071>.

Operator panels

System interfaces with WinCC (TIA Portal)

Controllers from other manufacturers

Overview

Controller	SIMATIC HMI					
Target hardware (PROTOCOL) (physics)	Basic Panel	Comfort Panel Outdoor	Mobile Panel 177 DP ¹⁾ Mobile Panel 177 PN ¹⁾	Mobile Panel 277	KTPx00(F) Mobile	WinCC Runtime Advanced
Mitsubishi (MC TCP/IP) via Ethernet IP network to max. 4 x controllers ²⁾ • FX series FX3G, FX3U, FX3UC with Ethernet module FX3U ENET, • Series Q with Ethernet module QJ71E71-100 • iQ series/QnUD QnUDEH	• ³⁾	•	• ³⁾	•	•	•
Mitsubishi FX (serial) to max. 1 x controller FX series FX1N, FX2N (RS 232)	• ⁴⁾	•	• ⁴⁾	•	–	• ⁵⁾

• System interface possible

- System interface not possible

¹⁾ Mobile Panel connection via special connecting cable and connection box (see Mobile Panels), see Manual for cable assignment

²⁾ The following listed controllers can be combined as required

³⁾ Basic Panel PN and Mobile Panel 177 PN only

⁴⁾ Basic Panel DP and Mobile Panel 177 DP only

⁵⁾ Connection using a Mitsubishi PC cable SC-09 with integrated level converter RS 232/RS 422

Note:

For detailed information on cable assignment, refer to WinCC Online Help; see also

<http://support.automation.siemens.com/WW/view/en/29034071>.

Controller	SIMATIC HMI					
Target hardware (PROTOCOL) (physics)	Basic Panel	Comfort Panel Outdoor	Mobile Panel 177 DP ¹⁾ Mobile Panel 177 PN ¹⁾	Mobile Panel 277	KTPx00(F) Mobile	WinCC Runtime Advanced
Modicon (MODBUS TCP/IP) via MODBUS TCP/IP network to max. 4 x controllers ²⁾ • Concept Quantum, Unity Quantum • Momentum • Premium (TSX57) • TSX Micro (TSX37) • Modicon M340 20x0 (except 2010) via TCP/IP Modbus Plus Bridge 174 CEV 200 40 and MODBUS PLUS network to max. 4 x controllers ²⁾ • Concept Quantum, Unity Quantum • Momentum • Compact	• ³⁾ • ³⁾	• •	• ³⁾ • ³⁾	• •	• •	• •
Modicon (MODBUS RTU) to max. 1 x controller • Concept Quantum • Momentum • Compact (RS 232) via bridge BM85-000 or PLC with bridge functionality and MODBUS PLUS network to max. 4 x controllers ²⁾ • Concept Quantum • Compact (RS 232)	• ⁴⁾ ⁵⁾ • ⁴⁾ ⁵⁾	• ⁴⁾ • ⁴⁾	• ⁴⁾ ⁵⁾ • ⁴⁾ ⁵⁾	• ⁴⁾ • ⁴⁾	– –	• •

• System interface possible

- System interface not possible

¹⁾ Mobile Panel connection via special connecting cable and connection box (see Mobile Panels), see Manual for cable assignment

²⁾ The following listed controllers can be combined as required

³⁾ Basic Panel PN and Mobile Panel 177 PN only

⁴⁾ The RS 422/RS 232 adapter 6AV6671-8XE00-0AX0 is required for Basic Panels and Mobile Panels

⁵⁾ Basic Panel DP and Mobile Panel 177 DP only

Note:

For detailed information on cable assignment, refer to WinCC Online Help; see also

<http://support.automation.siemens.com/WW/view/en/29034071>.

Overview

Controller Target hardware (PROTOCOL) (physics)	SIMATIC HMI					
	Basic Panel	Comfort Panel Outdoor	Mobile Panel 177 DP ¹⁾ Mobile Panel 177 PN ¹⁾	Mobile Panel 277	KTPx00(F) Mobile	WinCC Runtime Advanced
Omron (Link/Multi Link)						
to max. 1 x controller • CP1L, CP1H, CP1E • CJ1M, CJ1H, CJ1G • CJ2H • CS1G, CS1H, CS1D • CP2MC (RS 232)	–	• ³⁾	• ^{3) 4)}	• ³⁾	–	•
via converter NT-AL001 and RS 422 network to max. 4 x controllers ²⁾ • CP1L, CP1H, CP1E • CJ1M, CJ1H, CJ1G • CJ2H • CS1G, CS1H, CS1D • CP2MC (RS 232)	–	• ³⁾	• ^{3) 4)}	• ³⁾	–	•
via RS 422 network to max. 4 x controllers ²⁾ • CP1L, CP1H, CP1E • CJ1M, CJ1H, CJ1G (RS 422)	• ⁴⁾	•	• ⁴⁾	• ⁴⁾	–	–
via RS422 network to max. 4 x controllers ²⁾ • CJ2H • CS1G, CS1H, CS1D • CP2MC (RS 422)	–	–	• ⁴⁾	• ⁴⁾	–	–

• System interface possible

– System interface not possible

¹⁾ Mobile Panel connection via special connecting cable and connection box
(see Mobile Panels), see Manual for cable assignment

²⁾ The controllers listed below can be combined in any way required;
connection via RS 422 interface of the controller or via RS 422 module

³⁾ The RS 422/RS 232 adapter 6AV6671-8XE00-0AX0 is required for
Basic Panels and Mobile Panels

⁴⁾ Basic Panel DP and Mobile Panel 177 DP only

Note:

For detailed information on cable assignment,
refer to WinCC Online Help; see also

<http://support.automation.siemens.com/WW/view/en/29034071>.