Basic HMI Key Panels

SIPLUS HMI KP8/KP8F/KP32F

Overview





SIPLUS HMI KP8 PN, blank front

SIPLUS 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 SIL 2 or SIL 3)
- Functionally compatible with all standard PROFINET master CPUs, also from other manufacturers
- 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

Note:

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data

SIPLUS HMI KP8 PN

(extended temperature range and exposure to environmental substances)

Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces, 2 x parameterizable with STEP 7 V5.5 or higher

SIPLUS HMI KP8F PN

(extended temperature range and exposure to environmental substances)

Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, 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

6AG1688-3AF37-2AX0

6AG1688-3EH47-2AX0

6AG1688-3AY36-2AX0

Article No.

SIPLUS HMI KP32F PN

(extended temperature range and exposure to environmental substances)

Key Panel, 32 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, parameterizable with STEP 7 V5.5 or higher; including 8 fail-safe inputs. Can be used as 4 x SIL 2 or 2 x SIL 3

Blank front design

(Exposure to environmental substances)

For standard 22.5 mm operator controls, same mounting dimensions as KP8

Documentation

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

Accessories

6AG1688-3XY38-2AX0

http://support.automation.siemens.com/ WW/view/en/56652789

See SIMATIC HMI accessories

Operator panels Basic HMI Key Panels

SIPLUS HMI KP8/KP8F/KP32F

Article number	6AG1688-3AY36-2AX0 SIPLUS HMI KP8 PN	6AG1688-3AF37-2AX0 SIPLUS HMI KP8F PN	6AG1688-3EH47-2AX0 SIPLUS HMI KP32F PN
General information			
Product type designation	KP8 PN KP8F PN k		KP32F PN
Ambient conditions			
Ambient temperature during operation			
• min.	-40 °C; = Tmin; Startup @ -25 °C -20 °C; = Tmin (incl. condensation/frost) -2		-20 °C; = Tmin (incl. condensation/frost)
• max.	60 °C; = Tmax	55 °C; = Tmax	55 °C; = Tmax
Altitude during operation relating to sea level			
 Installation altitude above sea level, max. 		2 000 m	2 000 m
Ambient air temperature-barometric pressure-altitude	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m)	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m)
Relative humidity			
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
Resistance	ochiached conductor)	TOTAL MICHAELER	nonzonia motanation
Coolants and lubricants			
 Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems			
 to biologically active substances according to EN 60721-3-3 	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea			
 to biologically active substances according to EN 60721-3-6 	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology			
Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)		
 Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)		
Remark			
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating			
Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
Protection against fouling acc. to EN 60664-3 Military testing according to	Yes; Type 1 protection Ves: Discolaration of coating possible	Yes; Type 1 protection Yes: Discolaration of coating possible	Yes; Type 1 protection Ves: Discolaration of coating possible
 Military testing according to MIL-I-46058C, Amendment 7 Qualification and Performance of 	Yes; Discoloration of coating possible during service life Yes; Conformal coating, Class A	Yes; Discoloration of coating possible during service life Yes; Conformal coating, Class A	Yes; Discoloration of coating possible during service life Yes; Conformal coating, Class A
Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	res, comornal codting, class A	res, comorna coating, ciass A	res, comormal codung, class A

Operator panels Basic HMI **Basic Panels**

SIPLUS Basic Panels (2nd Generation)

Overview



With their fully developed HMI basic functions, 2nd Generation SIPLUS Basic Panels 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 barcode scanner, and supports the simple archiving of data on a USB flash drive.

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

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data

Article No.

SIPLUS HMI Basic Panels, Key and Touch
CIDLUC UMI ETDANO Poolo

PLUS HMI KTP400 Basic

For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -20 ... +60 °C

SIPLUS HMI KTP700 Basic

For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -20 ... +50 °C

SIPLUS HMI KTP700 Basic DP

For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -20 ... +50 °C

SIPLUS HMI KTP900 Basic

For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -20 ... +50 °C

SIPLUS HMI KTP1200 Basic

For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -10 ... +50 °C

SIPLUS HMI KTP1200 Basic DP

For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -10 ... +50 °C

Accessories

6AG1123-2DB03-2AX0

6AG1123-2GB03-2AX0

6AG1123-2GA03-2AX0

6AG1123-2JB03-2AX0

6AG1123-2MB03-2AX0

6AG1123-2MA03-2AX0

See SIMATIC Basic Panels 2nd Generation

Article number	6AG1123-2DB03-2AX0	6AG1123-2GB03-2AX0 6AG1123-2GA03-2AX0	
	SIPLUS HMI KTP400 BASIC	SIPLUS HMI KTP700 BASIC	SIPLUS HMI KTP700 BASIC DP
General information			
Product type designation	KTP400 Basic color PN	KTP700 Basic color PN	KTP700 Basic color DP
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	-20 °C; = Tmin	-20 °C	-20 °C; = Tmin
- For vertical installation, max.	60 °C; = Tmax	50 °C	50 °C
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m
Ambient air temperature-barometric pressure-altitude	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)

Basic HMI Basic Panels

SIPLUS Basic Panels (2nd Generation)

Article number	AG1123-2DB03-2AX0 6AG1123-2GB03-2AX0 6AG1123-2GA03-2AX0		6AG1123-2GA03-2AX0	
	SIPLUS HMI KTP400 BASIC	SIPLUS HMI KTP700 BASIC	SIPLUS HMI KTP700 BASIC DP	
Relative humidity				
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation/frost (no commissioning when condensation present), vertical mounting position	
Resistance				
Coolants and lubricants				
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	
Use in stationary industrial systems				
- to biologically active substances according to EN 60721-3-3	, , ,	ot spores (with the exception of fauna); C	'	
- to chemically active substances according to EN 60721-3-3	,	spray acc. to EN 60068-2-52 (severity de	,	
 to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 Incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	
Use on ships/at sea				
- to biologically active substances according to EN 60721-3-6		s (excluding fauna); Class 6B3 on reque		
 to chemically active substances according to EN 60721-3-6 	,	spray acc. to EN 60068-2-52 (severity de	,	
 to mechanically active substances according to EN 60721-3-6 	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	
Usage in industrial process technology				
Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	
 Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)			
Remark				
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	
Conformal coating				
 Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	
 Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection	
 Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	
 Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A 	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	
Article number	6AG1123-2JB03-2AX0 SIPLUS HMI KTP900 BASIC	6AG1123-2MB03-2AX0 SIPLUS HMI KTP1200 BASIC	6AG1123-2MA03-2AX0 SIPLUS HMI KTP1200 BASIC DP	
General information	30 5.1010	, , , , , , , , , , , , , , , , , , ,	200 27,0.0 2.	
Product type designation	KTP900 Basic color PN	KTP1200 Basic color PN	KTP1200 Basic color DP	
Ambient temperature during operation				
Operation (vertical installation)				
- For vertical installation, min.	-20 °C	-10 °C; = Tmin	-10 °C; = Tmin	
- For vertical installation, max.	50 °C	50 °C	50 °C	
Altitude during operation relating to				
sea level Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m	
Ambient air temperature-barometric pressure-altitude	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)	

Operator panels Basic HMI Basic Panels

SIPLUS Basic Panels (2nd Generation)

Technical specifications

Article number	6AG1123-2JB03-2AX0	6AG1123-2MB03-2AX0	6AG1123-2MA03-2AX0	
	SIPLUS HMI KTP900 BASIC	SIPLUS HMI KTP1200 BASIC	SIPLUS HMI KTP1200 BASIC DP	
Relative humidity				
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation	100 %; RH incl. condensation/frost (no commissioning when condensation present), vertical mounting position	
Resistance				
Coolants and lubricants				
 Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	
Use in stationary industrial systems				
 to biologically active substances according to EN 60721-3-3 	Yes; Class 3B2 mold, fungus and dry r	ot spores (with the exception of fauna); (Class 3B3 on request	
 to chemically active substances according to EN 60721-3-3 	Yes; Class 3C4 (RH < 75 %) incl. salt s	pray acc. to EN 60068-2-52 (severity de	gree 3); *	
 to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	
Use on ships/at sea				
 to biologically active substances according to EN 60721-3-6 	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request			
 to chemically active substances according to EN 60721-3-6 	Yes; Class 6C3 (RH < 75 %) incl. salt s	pray acc. to EN 60068-2-52 (severity de	gree 3); *	
 to mechanically active substances according to EN 60721-3-6 	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	
Usage in industrial process technology				
 Against chemically active substances acc. to EN 60654-4 	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	
 Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 	Yes; Level GX group A/B (excluding triclass 3C4 permissible); level LC3 (salt	chlorethylene; harmful gas concentratior spray) and level LB3 (oil)	ns up to the limits of EN 60721-3-3	
Remark				
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	
Conformal coating				
Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	
 Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection	
 Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	
Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	

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.

Advanced HMI Panel-based Unified Comfort Panels

SIPLUS HMI Unified Comfort Panels Standard

Overview



SIPLUS HMI Unified Comfort Panels - standard devices

SIPLUS 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

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.

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data	Article No.
SIPLUS HMI Unified Comfort Panels	
Standard design	
SIPLUS HMI MTP700 Unified Comfort, with conformal coating	6AG1128-3GB06-4AX1
SIMATIC HMI MTP1000 Unified Comfort Panel, with conformal coating	6AG1128-3KB06-4AX1
SIMATIC HMI MTP1200 Unified Comfort Panel, with conformal coating	6AG1128-3MB06-4AX1
Accessories	
EDGE Runtime for SIMATIC Unified Comfort	6AV2170-2BA00-0AA0
Runtime software, single license, license key for download, without software and documentation, Class A, email address required for delivery	
Accessories	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Article number	6AG1128-3GB06-4AX1	6AG1128-3KB06-4AX1 6AG1128-3MB06-4AX1		
	SIPLUS HMI MTP700 Unified Comfort	SIPLUS HMI MTP1000 Unified Comfort	SIPLUS HMI MTP1200 Unified Comfort	
General information				
Product type designation	MTP700 Unified Comfort	MTP1000 Unified Comfort	MTP1200 Unified Comfort	
Ambient temperature during operation				
Operation (vertical installation)				
- For vertical installation, min.	0 °C; = Tmin	0 °C; = Tmin	0 °C; = Tmin	
- For vertical installation, max.	50 °C; = Tmax	50 °C; = Tmax	50 °C; = Tmax	
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m	
Ambient air temperature-barometric pressure-altitude	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)	

Operator panels Advanced HMI Panel-based Unified Comfort Panels

SIPLUS HMI Unified Comfort Panels Standard

Article number	6AG1128-3GB06-4AX1	6AG1128-3KB06-4AX1	6AG1128-3MB06-4AX1	
	SIPLUS HMI MTP700 Unified Comfort	SIPLUS HMI MTP1000 Unified Comfort	SIPLUS HMI MTP1200 Unified Comfort	
Relative humidity				
With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning when condensation present), horizontal at vertical mounting position	100 %; RH incl. condensation/frost (no commissioning when condensation present), horizontal at vertical mounting position	100 %; RH incl. condensation/frost (no commissioning when condensation present), horizontal at vertical mounting position	
Resistance				
Coolants and lubricants				
 Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	
Use in stationary industrial systems				
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	
 to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	
Use on ships/at sea				
 to biologically active substances according to EN 60721-3-6 	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)	
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	
 to mechanically active substances according to EN 60721-3-6 	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	
Usage in industrial process technology				
 Against chemically active substances acc. to EN 60654-4 	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	
 Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 	Yes; Level GX group A/B (excluding tric class 3C4 permissible); level LC3 (salt	chlorethylene; harmful gas concentration spray) and level LB3 (oil)	s up to the limits of EN 60721-3-3	
Remark				
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	
Conformal coating				
 Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	
 Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection	
 Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	
Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	

Advanced HMI Panel-based Comfort Panels

SIPLUS Comfort Panels Standard

Overview



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

Note:

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data	Article No.
SIPLUS HMI Comfort Panels, Touch	
SIPLUS HMI TP700 Comfort	6AG1124-0GC01-4AX0
SIPLUS HMI TP900 Comfort	6AG1124-0JC01-4AX0
SIPLUS HMI TP1200 Comfort	6AG1124-0MC01-4AX0
SIPLUS HMI TP1500 Comfort	6AG1124-0QC02-4AX1
SIPLUS HMI TP1900 Comfort	6AG1124-0UC02-4AX1
SIPLUS HMI TP2200 Comfort	6AG1124-0XC02-4AX1
SIPLUS HMI Comfort Panels, Keys	
SIPLUS HMI KP700 Comfort	6AG1124-1GC01-4AX0
SIPLUS HMI KP900 Comfort	6AG1124-1JC01-4AX0
SIPLUS HMI KP1200 Comfort	6AG1124-1MC01-4AX0
SIPLUS HMI KP1500 Comfort	6AG1124-1QC02-4AX1
Accessories	See HMI accessories

Advanced HMI Panel-based Comfort Panels

SIPLUS Comfort Panels Standard

Article number	6AG1124-0GC01-4AX0 SIPLUS HMI TP700 COMFORT	6AG1124-0JC01-4AX0 SIPLUS HMI TP900 COMFORT	6AG1124-0MC01-4AX0 SIPLUS HMI TP1200 COMFORT	
General information	SIFLOS HIVII 1F700 COIVIFON1 SIFLOS HIVII 1F900 COIVIFON1		SII EOSTIIVII IT 1200 COIVII OITI	
Product type designation	TP700 Comfort	TP900 Comfort	TP1200 Comfort	
Ambient temperature during operation				
Operation (vertical installation)				
- For vertical installation, min.	0 °C; = Tmin	0 °C; = Tmin	0 °C; = Tmin	
- For vertical installation, max.	50 °C; = Tmax	50 °C; = Tmax	50 °C; = Tmax	
Altitude during operation relating to sea level				
 Installation altitude above sea level, max. 	5 000 m	5 000 m	5 000 m	
Ambient air temperature-barometric pressure-altitude	Tmin Tmax at 1 140 hPa 795 hPa (Tmin (Tmax - 10 K) at 795 hPa 658 Tmin (Tmax -20 K) at 658 hPa 540	3 hPa (+2 000 m +3 500 m) //		
Relative humidity				
With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no	commissioning under condensation con	ditions)	
Resistance				
Coolants and lubricants				
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	
Use in stationary industrial systems				
to biologically active substances according to EN 60721-3-3	, ,	ot spores (with the exception of fauna); (•	
 to chemically active substances according to EN 60721-3-3 	,	pray acc. to EN 60068-2-52 (severity de	,,	
 to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	
Use on ships/at sea				
- to biologically active substances according to EN 60721-3-6		s (excluding fauna); Class 6B3 on reque		
to chemically active substances according to EN 60721-3-6	,	pray acc. to EN 60068-2-52 (severity de	, , , , , , , , , , , , , , , , , , ,	
to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	
Usage in industrial process technology				
 Against chemically active substances acc. to EN 60654-4 	Yes; Class 3 (excluding trichlorethylene	e)		
 Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 	Yes; Level GX group A/B (excluding tric class 3C4 permissible); level LC3 (salt	chlorethylene; harmful gas concentratior spray) and level LB3 (oil)	ns up to the limits of EN 60721-3-3	
Remark				
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 	emain in place over the unused remain in place over the unused		* The supplied plug covers must remain in place over the unused interfaces during operation!	
Conformal coating				
 Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	
 Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection	
 Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	
Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	

Operator panels Advanced HMI Panel-based Comfort Panels

SIPLUS Comfort Panels Standard

Article number	6AG1124-0QC02-4AX1 SIPLUS HMI TP1500 Comfort	6AG1124-0UC02-4AX1 SIPLUS HMI TP1900 Comfort	6AG1124-0XC02-4AX1 SIPLUS HMI TP2200 Comfort
General information			
Product type designation	TP1500 Comfort	TP1900 Comfort	TP2200 Comfort
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C; = Tmin	0 °C; = Tmin
- For vertical installation, max.	50 °C; (55 °C, see entry ID: 64847814)	45 °C; = Tmax	45 °C; = Tmax
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m
Ambient air temperature-barometric pressure-altitude	Tmin Tmax at 1 140 hPa 795 hPa (Tmin (Tmax - 10 K) at 795 hPa 658 Tmin (Tmax -20 K) at 658 hPa 540	3 hPa (+2 000 m +3 500 m) //	
Relative humidity			
With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no	commissioning under condensation con	ditions)
Resistance			
Coolants and lubricants			
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems			
 to biologically active substances according to EN 60721-3-3 	Yes; Class 3B2 mold, fungus and dry ro	ot spores (with the exception of fauna); C	Class 3B3 on request
 to chemically active substances according to EN 60721-3-3 	Yes; Class 3C4 (RH < 75 %) incl. salt s	pray acc. to EN 60068-2-52 (severity de	gree 3); *
 to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea			
 to biologically active substances according to EN 60721-3-6 	Yes; Class 6B2 mold and fungal spores	s (excluding fauna); Class 6B3 on reque	st
 to chemically active substances according to EN 60721-3-6 	,	pray acc. to EN 60068-2-52 (severity de	gree 3); *
 to mechanically active substances according to EN 60721-3-6 	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology			
 Against chemically active substances acc. to EN 60654-4 	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)
 Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 	Yes; Level GX group A/B (excluding tric class 3C4 permissible); level LC3 (salt	chlorethylene; harmful gas concentration spray) and level LB3 (oil)	s up to the limits of EN 60721-3-3
Remark			
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating			
 Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
 Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
 Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

Advanced HMI Panel-based Comfort Panels

SIPLUS Comfort Panels Standard

Article number	6AG1124-1GC01-4AX0	6AG1124-1JC01-4AX0	6AG1124-1MC01-4AX0	6AG1124-1QC02-4AX1
, w. 6.6		SIPLUS HMI KP900 Comfort		SIPLUS HMI KP1500 Comfort
General information				
Product type designation	KP700 Comfort	KP900 Comfort	KP1200 Comfort	KP1500 Comfort
Ambient temperature during operation				
Operation (vertical installation)				
- For vertical installation, min.	0 °C; = Tmin	0 °C; = Tmin	0 °C; = Tmin	0 °C
- For vertical installation, max.	50 °C; = Tmax	50 °C; = Tmax	50 °C; = Tmax	50 °C; (55 °C, see entry
August 1 de la companya de la compan				ID: 64847814)
Altitude during operation relating to sea level				
 Installation altitude above sea level, max. 	5 000 m	5 000 m	5 000 m	5 000 m
Ambient air temperature-barometric pressure-altitude	Tmin (Tmax - 10 K) at 795	795 hPa (-1 000 m +2 000 hPa 658 hPa (+2 000 m + nPa 540 hPa (+3 500 m +	+3 [′] 500 m) //	
Relative humidity				
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation	n/frost (no commissioning unde	er condensation conditions)	
Resistance				
Coolants and lubricants				
 Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems				
 to biologically active substances according to EN 60721-3-3 	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request			on request
- to chemically active substances according to EN 60721-3-3	,	incl. salt spray acc. to EN 600	, , , , , ,	
to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	Vac. Class CD2 mold and fun	and appears (avaluating forms).	Class CD2 as request	
- to biologically active substances according to EN 60721-3-6		gal spores (excluding fauna);	·	
to chemically active substances according to EN 60721-3-6	,	incl. salt spray acc. to EN 600	, , , , , , , , , , , , , , , , , , , ,	
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology				
 Against chemically active substances acc. to EN 60654-4 	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)
 Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 		cluding trichlorethylene; harmf LC3 (salt spray) and level LB3	ful gas concentrations up to the (3 (oil)	e limits of EN 60721-3-3
Remark				
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 	* The supplied plug covers m	oust remain in place over the u	nused interfaces during opera	ition!
Conformal coating				
 Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
 Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
 Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

Operator panels Advanced HMI Panel-based Comfort Panels

SIPLUS Comfort Panels Standard

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

Advanced HMI Panel-based Comfort Panels

SIPLUS Comfort Panels Outdoor

Overview



SIPLUS 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)
- Many 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 SIPLUS HMI 7" Comfort Panel Outdoor corresponds to a SIPLUS HMI 7" Comfort Panel Standard, the SIPLUS HMI 15" Comfort Panel Outdoor corresponds to a SIPLUS HMI 12" Comfort Panel Standard in respect of performance, functionality and quantity structure.

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

Note:

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data

Article No.

SIPLUS HMI Comfort Outdoor

SIPLUS HMI TP700 Comfort Panel Outdoor

For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -30 ... +60 °C

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

SIPLUS HMI TP700 Comfort Outdoor M

Conformity with the MIL-STD-461G standard: MIL-STD-461G RE102 and MIL-STD-461G RE103.

SIPLUS HMI TP1500 Comfort Panel Outdoor

For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -30 ... +60 °C

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

SIPLUS HMI TP1500 Comfort Outdoor M

Conformity with the MIL-STD-461G standard: MIL-STD-461G RE102 and MIL-STD-461G RE103.

Accessories

6AG1124-0GC13-2AX0

6AG1124-0GC13-2AM0

6AG1124-0QC13-2AX0

6AG1124-0QC13-2AM0

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

Operator panels Advanced HMI Panel-based Comfort Panels

SIPLUS Comfort Panels Outdoor

Article number	6AG1124-0GC13-2AX0	6AG1124-0GC13-2AM0	6AG1124-0QC13-2AX0	6AG1124-0QC13-2AM0
		SIPLUS HMI TP700 Comfort Outdoor M		SIPLUS HMI TP1500 Comfort Outdoor M
General information				
Product type designation	TP700 Comfort Outdoor	TP700 Comfort Outdoor	TP1500 Outdoor	TP1500 Outdoor
Ambient temperature during operation				
Operation (vertical installation)				
- For vertical installation, min.	-30 °C; = Tmin	-30 °C; = Tmin	-30 °C; = Tmin	-30 °C; = Tmin
- For vertical installation, max.	60 °C; (55 °C, see entry ID: 64847814)	60 °C; (55 °C, see entry ID: 64847814)	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. 	5 000 m	5 000 m	5 000 m	5 000 m
Ambient air temperature-barometric pressure-altitude	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)			
Relative humidity				
With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning when condensation present), vertical mounting position			
Resistance				
Coolants and lubricants				
 Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems				
 to biologically active substances according to EN 60721-3-3 	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request			
 to chemically active substances according to EN 60721-3-3 	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *			
 to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea				
 to biologically active substances according to EN 60721-3-6 	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request			
 to chemically active substances according to EN 60721-3-6 	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *			
 to mechanically active substances according to EN 60721-3-6 	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology				
Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)
 Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)			
Remark				
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 	* The supplied plug covers must remain in place over the unused interfaces during operation!			
Conformal coating				
 Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
 Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
 Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

Advanced HMI Panel-based Comfort Panels

SIPLUS Comfort Panels Outdoor

More information

More information is available on the Internet at:

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

Note:

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

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

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