SIEMENS

Data sheet



SIPLUS HMI TP700 Comfort Outdoor M based on 6AV2124-0GC13-0AX0 with conformal coating, -30...+60 °C, Comfort Panel, 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 of WinCC Comfort V13 SP1. HSP

Figure similar

General information	
Product type designation	TP700 Comfort Outdoor
based on	6AV2124-0GC13-0AX0
Display	
Design of display	TFT, bonded, daylight-readable
Screen diagonal	7 in
Display width	152.4 mm
Display height	91.4 mm
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
Backlight dimmable	Yes; LED, can be dimmed manually or automatically
Control elements	
Keyboard fonts	
Function keys	
 Number of function keys 	0
 Number of function keys with LEDs 	0
 Keys with LED 	No
System keys	No
Numeric keyboard	Yes; Onscreen keyboard
alphanumeric keyboard	Yes; Onscreen keyboard
Touch operation	
Design as touch screen	Yes; analog, resistive
Expansions for operator control of the process	
 DP direct LEDs (LEDs as S7 output I/O) 	
— F1Fx	0
 Direct keys (keys as S7 input I/O) 	
— F1Fx	0
Direct keys (touch buttons as S7 input I/O)	32
Installation type/mounting	
Mounting position	vertical
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	35°
Supply voltage	

	DO
Type of supply voltage	DC; operation only with current-compensated reactors (2 x 82 mH) in the umbilical cables as close as possible to the supply terminals
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28 V
Input current	20 V
Current consumption (rated value)	0.7 A
	0.7 A 0.5 A²-s
Starting current inrush I²t	0.5 A~S
Power	47.14
Active power input, typ.	17 W
Processor	
Processor type	X86
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	12 Mbyte
Type of output	
Info LED	No
Power LED	No
Error LED	No
Acoustics	
• Buzzer	No
Speaker	Yes
Time of day	
Clock	
 Hardware clock (real-time) 	Yes
Software clock	No
• retentive	Yes; Back-up duration typically 6 weeks
 synchronizable 	Yes
Interfaces	
Number of industrial Ethernet interfaces	2
Number of RS 485 interfaces	1; RS 422 / 485 combined
Number of RS 422 interfaces	1
Number of RS 232 interfaces	0
Number of USB interfaces	2; USB 2.0; can only be used during commissioning and service
• USB Mini B	1; 5-pin; can only be used during commissioning and service
Number of 20 mA interfaces (TTY)	0
Number of parallel interfaces	0
Number of other interfaces	1; audio in/out; can only be used during commissioning and service
Number of SD card slots	2
With software interfaces	No
Industrial Ethernet	110
Industrial Ethernet status LED	2
Number of ports of the integrated switch	2
Protocols	2
PROFINET	Yes
Supports protocol for PROFINET IO	Yes
IRT	Yes
PROFIBUS EtherNet/ID	Yes
EtherNet/IP	Yes
MPI	Yes
Protocols (Ethernet)	
TODIID	N/
• TCP/IP	Yes
• DHCP	Yes
DHCP SNMP	Yes Yes
DHCPSNMPDCP	Yes Yes Yes
DHCPSNMPDCPLLDP	Yes Yes
 DHCP SNMP DCP LLDP WEB characteristics	Yes Yes Yes
DHCPSNMPDCPLLDP	Yes Yes Yes

 HTML XML No CSS Active X JavaScript Java VM No Redundancy mode Media redundancy — MRP Yes Further protocols CAN No 	
● Java VM No Redundancy mode Media redundancy — MRP Yes Further protocols ● CAN No	
Redundancy mode Media redundancy — MRP Yes Further protocols • CAN No	
Media redundancy — MRP Yes Further protocols ● CAN No	
— MRP Yes Further protocols	
— MRP Yes Further protocols	
• CAN No	
MODBUS Yes	
EMC	
Emission of radio interference acc. to EN 55 011	
Limit class A, for use in industrial areas Yes	
Limit class B, for use in residential areas	
Degree and class of protection	
IP (at the front) IP66	
IP (rear) IP20	
NEMA (front)	
• Enclosure Type 4 at the front Yes	
• Enclosure Type 4x at the front Yes	
Standards, approvals, certificates	
Marine approval	
Compass working clearance 5 m	
Military use	
• conforms to MIL-STD-461G Yes; CE101, CE102, CS101, CS109, CS114, CS115, CS116, CS118,	RF101
RS101; requirements met for all platforms or installations according to of MIL-STD-461G	
— MIL-STD-461G, RE102 Yes; RE102 (radiated emissions, electric field); requirements met for th following platforms or installations according to Table V of MIL-STD-46 surface ship applications; submarine applications: internal to pressure aircraft and space system applications: fixed wing internal ≥ 25 meters tail; ground applications: Navy fixed & Air Force	31G: all hull;
— MIL-STD-461G, RS103 Yes; RS103 (radiated susceptibility, electric field); suitable for max. ele strength of 200 V/m; requirements met for all platforms or installations according to Table V and XI of MIL-STD-461G	ctric field
Ambient conditions	
Suited for indoor use Yes	
Suited for outdoor use Yes; Powder-coated, UV resistant	
Ambient temperature during operation	
Operation (vertical installation)	
— For vertical installation, min30 °C; = Tmin	
— For vertical installation, max. 60 °C; (55 °C, see entry ID: 64847814)	
Operation (max. tilt angle)	
— At maximum tilt angle, min30 °C; = Tmin	
— At maximum tilt angle, max. 50 °C; = Tmax	
Operation (vertical installation, portrait format)	
— For vertical installation, min30 °C; = Tmin	
— For vertical installation, max. 50 °C; = Tmax	
Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min30 °C; = Tmin	
— At maximum tilt angle, max. 45 °C; = Tmax	
Ambient temperature during storage/transportation	
◆ min. -30 °C	
● max. 70 °C	
Altitude during operation relating to sea level	
Installation altitude above sea level, max. 5 000 m	
• Ambient air temperature-barometric pressure-altitude Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin	
- 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax at 658 hPa 540 hPa (+3 500 m +5 000 m)	
- 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax	

Coolants and lubricants — Resistant to commercially available coolants and lubricants Use in stationary industrial systems — to biologically active substances according to EN 60721-3-3 — to chemically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6	Yes; Incl. diesel and oil droplets in the air Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 3S4 incl. sand, dust, *
lubricants Use in stationary industrial systems — to biologically active substances according to EN 60721-3-3 — to chemically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 3S4 incl. sand, dust, *
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60721-3-3 — to chemically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6	Class 3B3 on request Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 3S4 incl. sand, dust, *
60721-3-3 — to mechanically active substances according to EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6	degree 3); * Yes; Class 3S4 incl. sand, dust, *
60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6	
to biologically active substances according to EN 60721-3-6 to chemically active substances according to EN 60721-3-6	
60721-3-6 — to chemically active substances according to EN 60721-3-6	
60721-3-6	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
to manhomically active systems	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; *
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!
Conformal coating	
Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability
Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection
 Military testing according to MIL-I-46058C, Amendment 7 	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
Operating systems	
proprietary	No
pre-installed operating system	
Windows CE	Yes
configuration / header	
Message indicator	Yes
Alarm system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes
Process value default (input) possible	Yes
Recipe management	Yes
Configuration software	No
STEP 7 Basic (TIA Portal) OTER 7 Parfaceignal (TIA Portal)	No
STEP 7 Professional (TIA Portal) Micoo (Fig. 11) - Operation (TIA Portal)	No
WinCC flexible Compact	No
WinCC flexible Standard	No
WinCC flexible Advanced	No
WinCC Basic (TIA Portal)	No
WinCC Comfort (TIA Portal)	Yes; WinCC V13 SP1 Update 7 + HSP or higher
WinCC Advanced (TIA Portal)	Yes; WinCC V13 SP1 Update 7 + HSP or higher
WinCC Professional (TIA Portal)	Yes; WinCC V13 SP1 Update 7 + HSP or higher
Languages Online languages	
 Number of online/runtime languages 	32
Project languages	
Project languages	20
Languages Languages per project	32
, , ,	32
Languages per project	Yes
Languages per project Functionality under WinCC (TIA Portal)	

Pocket Kizel		
	Pocket Word	Yes
Media Player Yes	Pocket Excel	Yes
SIMATIC WINCS Audit	PDF Viewer	Yes
SIMATIC Vinco Base Scripts	Media Player	Yes
Number of Visual Basic Scripts Yes	 SIMATIC WinCC Sm@rtServer 	Yes
Task plamer	SIMATIC WinCC Audit	Yes
• Immo-controlled	Number of Visual Basic Scripts	Yes
Number of alarm classes 32	Task planner	
Number of alarm classes 32	• time-controlled	Yes
Number of alarm classes 32	task-controlled	Yes
Number of alarm classes 32	Message system	
Number of this messages - Analog messages - Analog messages - Number of analog messages - Number of procedure - System messages Hall - System event, more (SIMATIC S7, SINUMERIK, SINOTION,) - Number of characters per message - Number of process values per message - Number of process values per message - Acknowledgment groups - Yes - Message indicator - Yes - Message indicator - Yes - Mumber of recipes - Data records per recipe - Data records per recipe - Size of internal recipe memory - Size of internal recipe memory - Size of internal recipe memory - Recipe memory expandable - Number of variables per device - Number of variables per device - Number of variables per device - Number of orangues yes - Structures - Yes - Arrays - Wes - Arrays - Wes - Arrays - Wes - Arrays - Wes - Arrays - Ves - Arrays - Ves - Permenent window/default - Yes - Clobal image - Number of configurable images - Permenent window/default - Yes - Image encion by PLC - Image number in the PLC - Yes - Image encion by PLC - Ves - Image number in the PLC - Yes - Systems - Graphic I/O fields (graphics list) - Yes - Graphic display - Yes - Graphic objects per screen - Alarm view - Ves - Univer of complex objects per screen - Alarm view - Ves - Univer v	Number of alarm classes	32
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 Number of complex objects per screen Alarm view Trend view User view Yes Yes Yes	Limit values Multiplexing Structures Arrays Images Number of configurable images Permanent window/default Global image Image selection by PLC Image number in the PLC Image objects Number of objects per image Text fields I/O fields Graphic I/O fields (graphics list) Symbolic I/O fields (text list) Date/time fields Switches Buttons Graphic display Icons	Yes Yes Yes Yes Yes 500 Yes
 Alarm view Trend view User view Yes Yes Yes 	Limit values Multiplexing Structures Arrays Images Number of configurable images Permanent window/default Global image Image selection by PLC Image number in the PLC Image objects Number of objects per image Text fields I/O fields Graphic I/O fields (graphics list) Symbolic I/O fields (text list) Date/time fields Switches Buttons Graphic display Icons Geometric objects	Yes Yes Yes Yes Yes 500 Yes
Trend viewUser viewYes	Limit values Multiplexing Structures Arrays Images Number of configurable images Permanent window/default Global image Image selection by PLC Image number in the PLC Image objects Number of objects per image Text fields I/O fields Graphic I/O fields (graphics list) Symbolic I/O fields (text list) Date/time fields Switches Buttons Graphic display Icons Geometric objects	Yes Yes Yes Yes Yes 500 Yes
• User view Yes	Limit values Multiplexing Structures Arrays Images Number of configurable images Permanent window/default Global image Image selection by PLC Image number in the PLC Image objects Number of objects per image Text fields I/O fields Graphic I/O fields (graphics list) Symbolic I/O fields (text list) Date/time fields Switches Buttons Graphic display Icons Geometric objects Complex image objects	Yes Yes Yes Yes Yes 500 Yes
	 Limit values Multiplexing Structures Arrays Images Number of configurable images Permanent window/default Global image Image selection by PLC Image number in the PLC Image objects Number of objects per image Text fields I/O fields Graphic I/O fields (graphics list) Symbolic I/O fields (text list) Date/time fields Switches Buttons Graphic display Icons Geometric objects Complex image objects Number of complex objects per screen 	Yes Yes Yes Yes Yes 500 Yes
- Chatria landeral	 Limit values Multiplexing Structures Arrays Images Number of configurable images Permanent window/default Global image Image selection by PLC Image number in the PLC Image objects Number of objects per image Text fields I/O fields Graphic I/O fields (graphics list) Symbolic I/O fields (text list) Date/time fields Switches Buttons Graphic display Icons Geometric objects Complex image objects Number of complex objects per screen Alarm view 	Yes Yes Yes Yes Yes 500 Yes
Status/control Yes	Limit values Multiplexing Structures Arrays Images Number of configurable images Permanent window/default Global image Image selection by PLC Image number in the PLC Image objects Number of objects per image Text fields I/O fields Graphic I/O fields (graphics list) Symbolic I/O fields (text list) Date/time fields Switches Buttons Graphic display Icons Geometric objects Complex image objects Number of complex objects per screen Alarm view Trend view	Yes Yes Yes Yes Yes 500 Yes

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Sm@rtClient view	Yes
Recipe view	Yes
f(x) trend view	Yes
 System diagnostics view 	Yes
Media Player	Yes
HTML browser	Yes
PDF display	Yes
IP camera display	Yes; Webcam type see FAQs
Bar graphs	Yes
• Sliders	Yes
 Pointer instruments 	Yes
Analog/digital clock	Yes
Lists	
 Number of text lists per project 	500
 Number of entries per text list 	500
 Number of graphics lists per project 	500
Number of entries per graphics list	500
Archiving	
 Number of archives per device 	50
 Number of entries per archive 	20 000
Message archive	Yes
 Process value archive 	Yes
Archiving methods	
— Sequential archive	Yes
— Short-term archive	Yes
Memory location	
— Memory card	Yes
— USB memory	Yes
— Ethernet	Yes
Data storage format	
— CSV	Yes
— TXT	Yes
— RDB	Yes
Security	
Number of user groups	50
Number of user rights	32
Number of users	50
Password export/import	Yes
SIMATIC Logon	Yes
Logging through printer	165
	Voc
Alarms Poport (chiff log)	Yes
Report (shift log) Hardeony	Yes
Hardcopy Flactoria print to file	Yes
Electronic print to file Character parts	Yes; PDF, HTML
Character sets	
Keyboard fonts	V
— US English	Yes
Transfer (upload/download)	V
MPI/PROFIBUS DP	Yes
• USB	Yes
• Ethernet	Yes
using external storage medium	Yes; Backup/restore
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
WinAC	Yes
• SINUMERIK	Yes; with SINUMERIK option package
• SIMOTION	Yes

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Allen Bradley (EtherNet/IP)	Yes
Allen Bradley (DF1)	Yes
Mitsubishi (MC TCP/IP)	Yes
Mitsubishi (FX)	Yes
OMRON (FINS TCP)	No
 OMRON (LINK/Multilink) 	Yes
 Modicon (Modbus TCP/IP) 	Yes
Modicon (Modbus)	Yes
OPC UA Client	Yes
OPC UA Server	Yes
Service tools/configuration aids	
 Backup/Restore manually 	Yes
 Backup/Restore automatically 	Yes
 Simulation 	Yes
Device switchover	Yes
Peripherals/Options	
Printer	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	Yes
SIMATIC HMI CF memory card Compact Flash Card	No
USB memory	Yes; e.g. USB RFID reader, see FAQ entry ID: 99808171
SIMATIC IPC USB Flashdrive (USB stick)	Yes
SIMATIC HMI USB stick	Yes
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
Aluminum	Yes; Powder-coated, UV resistant
Stainless steel	No
Dimensions	
Width of the housing front	214 mm
Height of housing front	158 mm
Mounting cutout, width	197 mm
Mounting cutout, height	141 mm
Overall depth	67 mm
Weights	
Weight (without packaging)	1.5 kg
Weight (with packaging)	1.7 kg
Other	
Note:	Power, quantity structure and performance correspond to a standard 7" Comfort Panel

last modified: 5/29/2024 🖸