

SIPLUS HMI TP1500 Basic Color PN for medial exposure with conformal coating based on 6AV6647-0AG11-3AX0

General information	
Product type designation	TP1500 Basic color PN
Display	
Design of display	TFT
Screen diagonal	15 in
Display width	304.1 mm
Display height	228.1 mm
Number of colors	256
Resolution (pixels)	
• Horizontal image resolution	1 024 Pixel
• Vertical image resolution	768 Pixel
Backlighting	
• MTBF backlighting (at 25 °C)	50 000 h
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
Installation type/mounting	
Mounting position	vertical
Rack mounting	No
Wall mounting/direct mounting	No
maximum permissible angle of inclination without external ventilation	35°
Supply voltage	
Type of supply voltage	DC
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V

Input current	
Starting current inrush I ² t	0.2 A ² ·s
Processor	
Processor type	RISC 32 bit
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	1 024 kbyte
Type of output	
Acoustics	Sound signal
Time of day	
Clock	
<ul style="list-style-type: none"> • Software clock 	Yes
Interfaces	
Number of industrial Ethernet interfaces	1
Number of RS 485 interfaces	0
Number of RS 422 interfaces	0
Number of RS 232 interfaces	0
Number of USB interfaces	0
Number of 20 mA interfaces (TTY)	0
Number of parallel interfaces	0
Number of other interfaces	0
With software interfaces	No
Industrial Ethernet	
<ul style="list-style-type: none"> • Industrial Ethernet status LED 	2
Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	No
PROFIBUS	No
MPI	No
Protocols (Ethernet)	
<ul style="list-style-type: none"> • TCP/IP • DHCP • SNMP • DCP • LLDP 	Yes
Further protocols	
<ul style="list-style-type: none"> • EtherNet/IP • MODBUS 	Yes
Degree and class of protection	

IP (at the front)	IP65
IP (rear)	IP20
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
<ul style="list-style-type: none"> • Operation (vertical installation) <ul style="list-style-type: none"> — For vertical installation, min. 0 °C; = Tmin — For vertical installation, max. 50 °C; = Tmax • Operation (max. tilt angle) <ul style="list-style-type: none"> — At maximum tilt angle, min. 0 °C; = Tmin — At maximum tilt angle, min. 40 °C; = Tmax 	
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • 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 ... (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	
<ul style="list-style-type: none"> • With condensation, tested in accordance with IEC 60068-2-38, max. 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) 	
Resistance	
Coolants and lubricants	
<ul style="list-style-type: none"> — Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
<ul style="list-style-type: none"> — 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 	<p>Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request</p> <p>Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</p> <p>Yes; Class 3S4 incl. sand, dust, *</p>
Use on ships/at sea	
<ul style="list-style-type: none"> — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 	<p>Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request</p> <p>Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</p> <p>Yes; Class 6S3 incl. sand, dust; *</p>
Remark	
<ul style="list-style-type: none"> — 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
- Protection against fouling acc. to EN 60664-3
- Military testing according to MIL-I-46058C, Amendment 7
- Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A

Yes; Class 2 for high reliability

Yes; Type 1 protection

Yes; Discoloration of coating possible during service life

Yes; Conformal coating, Class A

Configuration

Message indicator	Yes
Alarm system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes
Process value default (input) possible	Yes
Recipe management	Yes

Languages

Online languages	
• Number of online/runtime languages	5
Project languages	
• Languages per project	32

Functionality under WinCC (TIA Portal)

Libraries	Yes
Applications/options	none
• Web browser	No
• SIMATIC WinCC Sm@rtServer	No
Task planner	Yes
Help system	Yes
• Number of characters per info text	320
Message system	
• Number of alarm classes	32
• Bit messages	Yes
— Number of bit messages	200
• Analog messages	Yes
— Number of analog messages	15
• System messages HMI	Yes
• System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	No
• Number of characters per message	80
• Number of process values per message	8
• Message indicator	Yes
• Message buffer	Ring buffer (n x 256 entries), retentive, maintenance-free
— Number of entries	256
— Circulating buffer	Yes

Recipe management	
• Number of recipes	5
• Data records per recipe	20
• Entries per data record	20
• Size of internal recipe memory	40 kbyte
• Recipe memory expandable	No
Variables	
• Number of variables per device	500
• Number of variables per screen	30
• Limit values	Yes
• Multiplexing	Yes
• Structures	No
Images	
• Number of configurable images	50
• Permanent window/default	Yes; No permanent window can be configured
• Image selection by PLC	Yes
• Image number in the PLC	Yes
Complex image objects	
• Status/control	No
Lists	
• Number of text lists per project	150
• Number of graphics lists per project	100
Security	
• Number of user groups	50
• Number of user rights	32
• Password export/import	No
Character sets	
• Keyboard fonts	US American (English)
— US English	Yes
Transfer (upload/download)	
• MPI/PROFIBUS DP	No
• USB	No
• Ethernet	Yes
• using external storage medium	No
Process coupling	
• S7-200	Yes; Via CP
• S7-300/400	Yes
• WinAC	No
• SINUMERIK	No
• SIMOTION	No
• Allen Bradley (DF1)	No

• Mitsubishi (FX)	No
• OMRON (LINK/Multilink)	No
• Modicon (Modbus)	Yes; MODBUS TCP/IP protocol
Service tools/configuration aids	
• Backup/Restore manually	Yes
• Simulation	Yes
• Device switchover	Yes
Peripherals/Options	
Peripherals	none
Printer	No
SIMATIC HMI MM memory card: Multi Media Card	No
SIMATIC HMI SD memory card: Secure Digital memory card	No
USB memory	No
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
• Aluminum	No
Dimensions	
Width of the housing front	400 mm
Height of housing front	310 mm
Mounting cutout, width	367 mm
Mounting cutout, height	289 mm
Overall depth	60 mm
Weights	
Weight without packaging	4.2 kg
Weight incl. packaging	4.68 kg
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