## **SIEMENS**

## **Data sheet**



SIPLUS HMI KTP1200 Basic DP based on 6AV2123-2MA03-0AX0 with conformal coating, -10...+50 °C, key/touch operation, 12" TFT display, 65536 colors PROFIBUS interface, configurable as of WinCC Basic V13/STEP 7 Basic V13, contains open source software, which is provided free of charge see enclosed CD-ROM

General information	
Product type designation	KTP1200 Basic color DP
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	12 in
Display width	261.1 mm
Display height	163.2 mm
Number of colors	65 536
Resolution (pixels)	
<ul> <li>Horizontal image resolution</li> </ul>	1 280 pixel
Vertical image resolution	800 pixel
Backlighting	
<ul> <li>MTBF backlighting (at 25 °C)</li> </ul>	20 000 h
Backlight dimmable	Yes
Control elements	
Keyboard fonts	
<ul> <li>Function keys</li> </ul>	
<ul> <li>Number of function keys</li> </ul>	10
<ul> <li>Number of function keys with LEDs</li> </ul>	0
<ul> <li>Keys with LED</li> </ul>	No
System keys	No
<ul> <li>Numeric keyboard</li> </ul>	Yes; Onscreen keyboard
alphanumeric keyboard	Yes; Onscreen keyboard
Touch operation	
Design as touch screen	Yes; Analog-resistive
Installation type/mounting	
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external	35°
ventilation	
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption (rated value)	550 mA
Starting current inrush I2t	0.2 A <sup>2</sup> ·s
Power	
Active power input, typ.	13.2 W

Dusassau	
Processor	ADM
Processor type	ARM
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	10 Mbyte
Type of output	
Acoustics	
Buzzer	Yes
Speaker	No
Time of day	
Clock	
<ul> <li>Hardware clock (real-time)</li> </ul>	Yes
<ul> <li>Software clock</li> </ul>	Yes
• retentive	Yes; Back-up duration typically 6 weeks
synchronizable	Yes
Interfaces	
Number of industrial Ethernet interfaces	0
Number of RS 485 interfaces	1
Number of RS 422 interfaces	1; together with RS 485
Number of RS 232 interfaces	0; with optional adapter
Number of USB interfaces	1; Up to 16 GB
Number of 20 mA interfaces (TTY)	0
Number of parallel interfaces	0
Number of other interfaces  Number of SD card slots	0
With software interfaces	0 No
Industrial Ethernet	NO
Industrial Ethernet status LED	0
Protocols	
PROFINET	Ne
Supports protocol for PROFINET IO	No No
IRT	No
PROFIBUS	Yes
EtherNet/IP	No
MPI	Yes
Protocols (Ethernet)	
• TCP/IP	No
• DHCP	No
• SNMP	No
• DCP	No
• LLDP	No
WEB characteristics	
• HTTP	No
• HTML	No
Redundancy mode	
Media redundancy	Ti di
— MRP	No
Further protocols	No
• CAN	No Voc: Madigan (MODDLIS DTLI)
MODBUS	Yes; Modicon (MODBUS RTU)
Interrupts/diagnostics/status information	
Diagnoses	Nie
Diagnostic information readable  EMC	No
Emission of radio interference acc. to EN 55 011	Voc
Limit class A, for use in industrial areas     Limit class B, for use in residential areas.	Yes
Limit class B, for use in residential areas	No
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20

** Enclosure Type 4 at the foot ** Pea ** Enclosure Type 4 at the foot ** Enclosure Type 4 at the foot ** Pea ** Enclosure Type 4 at the foot ** En	NEMA (front)	
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Operation (max, tilt angle, portrait format)  — At maximum tilt angle, max.  Ambient temperature during storage/fransportation  • min.  • max.  • Armbient air temperature-barometric pressure- altitude unique peration elating to sea level  • Installation altitude above sea level, max.  • Armbient air temperature-barometric pressure- altitude  • Installation altitude above sea level, max.  • Armbient air temperature-barometric pressure- altitude  • Installation altitude above sea level, max.  • Armbient air temperature-barometric pressure- altitude  • Installation altitude above sea level, max.  • Armbient air temperature-barometric pressure- altitude  • Installation altitude above sea level, max.  • Armbient air temperature-barometric pressure- altitude  • Installation altitude above sea level, max.  • Armbient air temperature-barometric pressure- altitude  • Installation altitude above sea level, max.  • Armbient air temperature-barometric pressure- altitude  • Installation altitude above sea level, max.  • Installation altitude above sea level, max.  • Installation altitude above sea level  • Installation altitude above sea l	•	
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Ambient air temperature during storage/transportation  • min. • max. • Antitude during operation relating to sea level • Installation altitude above sea level, max. • Ambient air temperature-barometric pressure-altitude  • With condensation, tested in accordance with IEC 60068-2-38, max.  Relative humidity • With condensation, tested in accordance with IEC 60068-2-38, max.  Resistance  Coolants and lubricants  — Resistant to commercially available coolants and lubricants  — Resistant to commercially available coolants and lubricants  — to biologically active substances according to EN 60721-3-3  — to chemically active substances according to EN 60721-3-3  — to nechanically active substances according to EN 60721-3-3  — to mechanically active substances according to EN 60721-3-3  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3	<ul> <li>At maximum tilt angle, min.</li> </ul>	-10 °C; = Tmin
min.     max.     Altitude during operation relating to sea level     Installation altitude above sea level, max.     Ambient air temperature-barometric pressure-altitude     altitude during operation relating to sea level     Installation altitude above sea level, max.     Ambient air temperature-barometric pressure-altitude     altitude		35 °C
Antitude during operation relating to sea level Installation altitude above sea level, max.  Antibient air temperature-barometric pressure-altitude  With condensation, tested in accordance with IEC 6008-2-33, max.  Relative humidity  With condensation, tested in accordance with IEC 6008-2-33, max.  Resistance  Coolants and lubricants  — Resistant to commercially available coolants and lubricants  — Resistant to commercially available coolants and lubricants  — to biologically active substances according to EN 60721-3-3  — to chemically active substances according to EN 60721-3-3  — to chemically 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  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60684-4  — Environmental conditions for process, measuring and control systems acc. to EN 60864-4  — Environmental conditions for process, measuring and control systems acc. to EN 60864-3  Milliary testing according to Mill-46088C, Amendiment 7  • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblie		20 °C
Altitude during operation relating to sea level Installation altitude above sea level, max. Ambient air temperature-barometric pressure-altitude  Immax - 10 K) at 795 hPa 658 hPa (+2 000 m) +3 500 m) // Tmin (Tmax - 20 K) at 658 hPa 589 hPa (+2 000 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa 450 hPa (+3 500 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa 450 hPa (+3 500 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa 450 hPa (+3 500 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa 450 hPa (+3 500 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa 450 hPa (+3 500 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa 450 hPa (+3 500 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa 450 hPa (+3 500 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +5 000 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 20 00 m) +6 000 m) // Tmin (Tmax - 20 K) at 68 hPa (-1 20 00 m) +6 000 m) // Tmin (Tmax - 20 K) at 68 hPa (-1 20 00 m) +6 00 m) // Tmin (Tmax - 20 K) at 68 hPa (-1 20 00 m) // Tmin Tmax at 1 140 hPa (-1 20 00 m) +6 00 m) // Tmin Tmax at 1 140 hPa (-1 20 00 m) // Tmin		
<ul> <li>Installation altitude above sea level, max.</li> <li>Ambient air temperature-barometric pressurealititude</li> <li>Ambient air temperature-barometric pressurealititude</li> <li>With condensation, tested in accordance with IEC 6008e-2-38, max.</li> <li>Resistance</li> <li>Coolants and lubricants</li> <li>— Resistant to commercially available coolants and lubricants</li> <li>Use in stationary industrial systems</li> <li>— to biologically active substances according to EN 60721-3-3</li> <li>— to mechanically active substances according to EN 60721-3-3</li> <li>Use on ships/at sea</li> <li>— to biologically active substances according to EN 60721-3-6</li> <li>— to chemically active substances according to EN 60721-3-6</li> <li>— to chemically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-5-6</li> <li>— to mechanically active substances according to EN 60721-5-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-1-8</li> <li>— EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-6</li> <li>— EN 60721-3-6</li> <li>— to mechanically active substances according to EN 60721-3-2</li> <li>— EN 60721-3-6</li> <li>— EN 60721-3-6</li> <li>— t</li></ul>		
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Relative humidity  • With condensation, tested in accordance with IEC 60068-2-38, max.  Resistance  Coolants and lubricants  — Resistant to commercially available coolants and lubricants  — 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 — to chemically active substances according to EN 60721-3-3 — to mechanically 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 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances according to EN 60721-3-6  Usage in industrial process technology — Paginst chemically active substances according to EN 60721-3-6  Usage in industrial process technology — Paginst chemically active substances according to EN 60721-3-6  Usage in industrial process technology — Paginst chemically active substances according to EN 60721-3-3 class 3C4 permissi	·	
Relative humidity  • With condensation, tested in accordance with IEC 60088-2-38, max.  Resistance  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  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 mechanically active substances according to EN 60721-3-1 (ass 863 incl. sand, dust; *  Yes; Class	altitude	
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Resistance 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 mechanically 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 mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances according to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies 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		
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 mechanically 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 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 6068-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 60684-3 • Military testing according to MIL-I-46058C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies		condensation present), vertical mounting position
- 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  Use on ships/at sea  - to biologically active substances according to EN 60721-3-6  - to mechanically active substances according to EN 60721-3-3 (ass 6B3 on request Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B2 mold and fungal spores (excluding f		
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 — 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 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  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-1-46058C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies  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 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B3 incl. salt spray acc. to EN 60664-3 (severity degree 3); * Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 o		Yes; Incl. diesel and oil droplets in the air
- 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 mechanically 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 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - To mechanically active substances according to EN 60721-3-6  Usage in industrial process technology - Against chemically active substances acc. to EN 60654-4 - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  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-1-46058C, Amendment 7 - Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies		
EN 60721-3-3 — to chemically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 — to be chanically 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 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — To mechanically active substances according to EN 60624-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  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  From 60721-3-6  Yes; Class 383 on request Yes; Class 384 incl. sand, dust, *  Yes; Class 6B3 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B3 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B3 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B3 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B3 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B3 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B3 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B3 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B	•	Very Olers ODO shall formula and drough arrange (with the acception of
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 mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  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  — to biologically active substances according to Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B3 incl. sant, dust; *  Yes; Class 6B3 incl. sant, dust; *  Yes; Class 6B3 incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *  Yes; Class 6B3 incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *  Yes; Class 6B3 incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *  Yes; Class 6B3 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request  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 2 for l		
	— to chemically active substances according to	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52
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 mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 60864-3 • 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		· · · · · · · · · · · · · · · · · · ·
- 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 - to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology - Against chemically active substances acc. to EN 60654-4 - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies 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		Yes; Class 354 Incl. Sand, dust, "
request	Use on ships/at sea	
- to chemically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology - Against chemically active substances acc. to EN 60654-4 - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating		
- to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology - Against chemically active substances acc. to EN 60654-4 - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating		·
Usage in industrial process technology  — Against chemically active substances acc. to EN 60654-4  — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark  — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  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  Yes; Class 3 (excluding trichlorethylene)  Yes; Class 2 fon pinted excluding trichlorethylene)  Yes; Class 3 (excluding trichlorethylene)  Yes; Class 3 (excluding trichlorethylene)  Yes; Class 2 fon pinted excluding trichlorethylene)  Yes; Class 3 (excluding trichlorethylene)  Yes; Class 2 fon pinted excluding trichlorethylene)  * The supplied plug covers must remain in place over the unused interfaces during operation!  Yes; Class 2 for high reliability  Yes; Type 1 protection  Yes; Type 1 protection  Yes; Discoloration of coating possible during service life  Yes; Conformal coating, Class A		
Usage in industrial process technology  — Against chemically active substances acc. to EN 60654-4  — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark  — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  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		Yes; Class 653 Incl. sand, dust; *
- Against chemically active substances acc. to EN 60654-4  - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark  - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  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		
<ul> <li>— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04</li> <li>Remark</li> <li>— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04</li> <li>* The supplied plug covers must remain in place over the unused interfaces during operation!</li> <li>* Conformal coating</li> <li>* Coatings for printed circuit board assemblies acc. to EN 61086</li> <li>* Protection against fouling acc. to EN 60664-3</li> <li>* Military testing according to MIL-I-46058C, Amendment 7</li> <li>* Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies</li> </ul> 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) * The supplied plug covers must remain in place over the unused interfaces during operation! Yes; Class 2 for high reliability Yes; Type 1 protection Yes; Discoloration of coating possible during service life Yes; Conformal coating, Class A	Against chemically active substances acc. to	Yes; Class 3 (excluding trichlorethylene)
measuring and control systems acc. to ANSI/ISA-71.04 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  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  concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)  * The supplied plug covers must remain in place over the unused interfaces during operation!  Yes; Class 2 for high reliability  Yes; Type 1 protection  Yes; Discoloration of coating possible during service life  Yes; Conformal coating, Class A		Voc. Lovel CV group A/P (ovaluding triple path data harmful and
Remark		
<ul> <li>Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04</li> <li>Conformal coating         <ul> <li>Coatings for printed circuit board assemblies acc. to EN 61086</li> <li>Protection against fouling acc. to EN 60664-3</li> <li>Military testing according to MIL-I-46058C, Amendment 7</li> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies</li> <li>* The supplied plug covers must remain in place over the unused interfaces during operation!</li> <li>* The supplied plug covers must remain in place over the unused interfaces during operation!</li> <li>Yes; Class 2 for high reliability</li></ul></li></ul>	71.04	
conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 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 interfaces during operation!  Yes; Class 2 for high reliability  Yes; Type 1 protection  Yes; Discoloration of coating possible during service life  Yes; Conformal coating, Class A		* The conclude house constant
ANSI/ISA-71.04  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  Yes; Class 2 for high reliability  Yes; Type 1 protection  Yes; Discoloration of coating possible during service life  Yes; Conformal coating, Class A		
<ul> <li>Coatings for printed circuit board assemblies acc. to EN 61086</li> <li>Protection against fouling acc. to EN 60664-3</li> <li>Military testing according to MIL-I-46058C, Amendment 7</li> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies</li> <li>Yes; Class 2 for high reliability</li> <li>Yes; Type 1 protection</li> <li>Yes; Discoloration of coating possible during service life</li> <li>Yes; Conformal coating, Class A</li> </ul>	ANSI/ISA-71.04	
<ul> <li>EN 61086</li> <li>Protection against fouling acc. to EN 60664-3</li> <li>Military testing according to MIL-I-46058C, Amendment 7</li> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies</li> <li>Yes; Type 1 protection</li> <li>Yes; Discoloration of coating possible during service life</li> <li>Yes; Conformal coating, Class A</li> </ul>		V 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
<ul> <li>Protection against fouling acc. to EN 60664-3</li> <li>Military testing according to MIL-I-46058C, Amendment 7</li> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies</li> <li>Yes; Type 1 protection</li> <li>Yes; Discoloration of coating possible during service life</li> <li>Yes; Conformal coating, Class A</li> </ul>		Yes; Class 2 for high reliability
<ul> <li>Military testing according to MIL-I-46058C, Amendment 7</li> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies</li> <li>Yes; Discoloration of coating possible during service life</li> <li>Yes; Conformal coating, Class A</li> </ul>		Yes; Type 1 protection
<ul> <li>Qualification and Performance of Electrical</li> <li>Insulating Compound for Printed Board Assemblies</li> </ul> Yes; Conformal coating, Class A	<ul> <li>Military testing according to MIL-I-46058C,</li> </ul>	
Insulating Compound for Printed Board Assemblies		
		Yes; Conformal coating, Class A
-		

Operating systems	
proprietary	Yes
pre-installed operating system	
Windows CE	No
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	
STEP 7 Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)
<ul> <li>STEP 7 Professional (TIA Portal)</li> </ul>	Yes; via integrated WinCC Basic (TIA Portal)
<ul> <li>WinCC flexible Compact</li> </ul>	No
<ul> <li>WinCC flexible Standard</li> </ul>	No
<ul> <li>WinCC flexible Advanced</li> </ul>	No
<ul> <li>WinCC Basic (TIA Portal)</li> </ul>	Yes
<ul> <li>WinCC Comfort (TIA Portal)</li> </ul>	Yes
<ul> <li>WinCC Advanced (TIA Portal)</li> </ul>	Yes
WinCC Professional (TIA Portal)	Yes
Languages	
Online languages	
<ul> <li>Number of online/runtime languages</li> </ul>	10
Project languages	
Languages per project	32
Functionality under WinCC (TIA Portal)	
Libraries	Yes
Applications/options	
<ul> <li>Web browser</li> </ul>	Yes
Number of Visual Basic Scripts	No
Task planner	Yes
<ul><li>time-controlled</li></ul>	No
<ul><li>task-controlled</li></ul>	Yes
Help system	Yes
Number of characters per info text	500
Message system	
<ul> <li>Number of alarm classes</li> </ul>	32
Bit messages	
Number of bit messages	1 000
Analog messages	
Number of analog messages     S7 clarm number procedure	25 No.
S7 alarm number procedure     System manages HMI	No Voc
<ul><li>System messages HMI</li><li>System event, more (SIMATIC S7, SINUMERIK,</li></ul>	Yes Vec: System massage buffer of the SIMATIC S7 1200 and S7 1500
SIMOTION,)	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
Number of characters per message	80
Number of process values per message	8
Acknowledgment groups	Yes
Message indicator	Yes
Message buffer	
— Number of entries	256
<ul> <li>Circulating buffer</li> </ul>	Yes
— retentive	Yes
— maintenance-free	Yes
Recipe management	
<ul> <li>Number of recipes</li> </ul>	50
<ul> <li>Data records per recipe</li> </ul>	100
Entries per data record	100
<ul> <li>Size of internal recipe memory</li> </ul>	256 kbyte
Recipe memory expandable	No
Variables	
Number of variables per device	800
<ul> <li>Number of variables per screen</li> </ul>	100

	V.
Limit values	Yes
Multiplexing	Yes
Structures	No
• Arrays	Yes
Images	050
Number of configurable images	250
Permanent window/default	Yes
Global image	Yes
Image selection by PLC	Yes
Image number in the PLC	Yes
Image objects	400
Number of objects per image  Total folds	100
• Text fields	Yes
• I/O fields	Yes
Graphic I/O fields (graphics list)	Yes
Symbolic I/O fields (text list)	Yes
Date/time fields	Yes
• Switches	Yes
Buttons	Yes
Graphic display	Yes
• Icons	Yes
Geometric objects	Yes
Complex image objects	40
Number of complex objects per screen	10
Alarm view	Yes
• Trend view	Yes
User view	Yes
Status/control	No
<ul><li>Sm@rtClient view</li></ul>	No
Recipe view	Yes
<ul><li>f(x) trend view</li></ul>	No
<ul> <li>System diagnostics view</li> </ul>	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
Media Player	No
Bar graphs	Yes
• Sliders	No
<ul> <li>Pointer instruments</li> </ul>	No
Analog/digital clock	No
Lists	
<ul> <li>Number of text lists per project</li> </ul>	300
<ul> <li>Number of entries per text list</li> </ul>	100
<ul> <li>Number of graphics lists per project</li> </ul>	100
Number of entries per graphics list	100
Archiving	
<ul> <li>Number of archives per device</li> </ul>	2
<ul> <li>Number of entries per archive</li> </ul>	10 000
Message archive	Yes
<ul> <li>Process value archive</li> </ul>	Yes
<ul> <li>Archiving methods</li> </ul>	
<ul> <li>Sequential archive</li> </ul>	Yes
— Short-term archive	Yes
<ul> <li>Memory location</li> </ul>	
— Memory card	No
— USB memory	Yes
— Ethernet	No
Data storage format	
— CSV	No
— TXT	Yes
— RDB	No
Security	
<ul> <li>Number of user groups</li> </ul>	50
<ul> <li>Number of user rights</li> </ul>	32
<ul> <li>Number of users</li> </ul>	50
<ul> <li>Password export/import</li> </ul>	Yes
SIMATIC Logon	No

Character sets	
Character sets	
Keyboard fonts	V
— US English	Yes
Transfer (upload/download)	N.
MPI/PROFIBUS DP	Yes
• USB	No 
• Ethernet	No 
using external storage medium	No
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
• WinAC	Yes
SINUMERIK	Yes; No access to NCK data
• SIMOTION	Yes
<ul> <li>Allen Bradley (EtherNet/IP)</li> </ul>	No
<ul><li>Allen Bradley (DF1)</li></ul>	Yes
<ul> <li>Mitsubishi (MC TCP/IP)</li> </ul>	No
<ul><li>Mitsubishi (FX)</li></ul>	Yes
<ul><li>OMRON (FINS TCP)</li></ul>	No
<ul> <li>OMRON (LINK/Multilink)</li> </ul>	Yes
<ul> <li>Modicon (Modbus TCP/IP)</li> </ul>	No
Modicon (Modbus)	Yes
Service tools/configuration aids	
<ul> <li>Backup/Restore manually</li> </ul>	Yes
<ul> <li>Backup/Restore automatically</li> </ul>	No
<ul> <li>Simulation</li> </ul>	Yes
<ul> <li>Device switchover</li> </ul>	Yes
Peripherals/Options	
Printer	No
SIMATIC HMI MM memory card: Multi Media Card	No
SIMATIC HMI SD memory card: Secure Digital memory	No
card	
USB memory	Yes
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
Aluminum	No
Stainless steel	No
Dimensions	
Width of the housing front	330 mm
Height of housing front	245 mm
Mounting cutout, width	310 mm
Mounting cutout, height	221 mm
Overall depth	60 mm
Weights	
Weight (without packaging)	1 710 g
Weight (with packaging)	2.2 kg
	<del>9</del>
last modified:	10/8/2021 🖸