## **SIEMENS**

## **Data sheet**



SIPLUS HMI TP700 Comfort Outdoor based on 6AV2124-0GC13-0AX0 with conformal coating, -30...+60 °C, Comfort Panel, touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interfaces, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable as of WinCC Comfort V13 SP1, HSP

Figure similar

Product type designation  based on  6AV2124-GCC13-0AXQ  Display  Design of display  TFT  Screen diagonal 7 in  Display width 152.4 mm  Display width 152.4 mm  Number of colors Resolution (pixels)  • Horizontal image resolution • Vertical image resolution • Vertical image resolution • Werlical image resolution • Was pixel  Backlighting • MTBF backlighting (at 25 °C) • Backlight dimmable • Yes; LED, can be dimmed manually or automatically  Control elements  Keyboard forts • Function keys — Number of function keys with LEDs • Keys with LED • No • Kys with LED • No • System keys • Numeric keyboard • alphanumeric keyboard • alphanumeric keyboard  Touch operation • Design as touch screen  Expansions for operator control of the process • PD direct LEDs (LEDs as S7 output I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F1Fx • Direct keys (keys as S7 input I/O) — F2Fx • Direct keys (keys as S7 input I/O) — F2Fx • Direct keys (keys as S7 input I/O) — F2Fx • Direct keys (keys as S7 input I/O) — F2Fx • Direct keys (keys as S7 input I/O) — F2Fx • Direct keys (keys as S7 input I/O) — F2Fx • Direct keys (keys as S7 input I/O) — F2Fx • Direct keys (keys as S7 input I/O) — F2Fx • Direct keys (keys as S7 input I/	General information	
Display	Product type designation	TP700 Comfort Outdoor
Design of display	based on	6AV2124-0GC13-0AX0
Screen diagonal 7 in Display width 152.4 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 7es; 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 • aiphanumeric 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) 32  Installation type/mounting  Mounting in portrait format possible Yes  Mounting in portrait format possible Yes  maximum permissible angle of inclination without external ventilation	Display	
Display width 152.4 mm  Display height 91.4 mm  Number of colors 16.77.216  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  Mounting position vertical  Mounting position vertical  Mounting in portrait format possible Yes  Mounting in landscape format possible Yes  maximum permissible angle of inclination without external veriliation verticalising in portrait format possible Yes  maximum permissible angle of inclination without external veriliation verifical	Design of display	TFT
Display height 91.4 mm  Number of colors 16 777 216  Resolution (pixels)	Screen diagonal	7 in
Number of colors  Resolution (pixels)  Horizontal image resolution Vertical image resolution Nomber of colors  At 800 pixel  Vertical image resolution  At 800 pixel  At 8	Display width	152.4 mm
Resolution (pixels)  • Horizontal image resolution • Vertical image resolution • Vertical image resolution • Vertical image resolution  • MTBF backlighting (at 25 °C) • 50 000 h • Backlight dimmable  Control elements  Keyboard fonts  • Function keys  — Number of function keys  — Number of function keys  — Number of function keys with LEDs  • Keys with LED  • No  • System keys  • Numeric keyboard  • alphanumeric keyboard  Touch operation  • Design as touch screen  Expansions for operator control of the process  • DP direct LEDs (LEDs as \$7 output I/O)  — F1Fx  • Direct keys (keys as \$7 input I/O)  — F1Fx  • Direct keys (kouch buttons as \$7 input I/O)  — F1Fx  • Direct keys (kouch buttons as \$7 input I/O)  — F1Fx  • Output format possible  Mounting in portrait format possible  Mounting in landscape format possible  maximum permissible angle of inclination without external  ventical	Display height	91.4 mm
Horizontal image resolution Vertical image resolution  North Eacklighting  MTBF backlighting (at 25 °C) Backlight dimmable Yes; LED, can be dimmed manually or automatically  Control elements  Keyboard fonts  Function keys  North Hunder of function keys North Hunder of function keys with LEDs Keys with LED Keys with LED Keys with LED Keys with LED System keys North Nort	Number of colors	16 777 216
Vertical image resolution  Backlighting  MTBF backlighting (at 25 °C) Backlight dimmable Yes; LED, can be dimmed manually or automatically  Control elements  Keyboard fonts  Function keys Number of function keys No Number of function keys with LEDs Keys with LED No System keys No Numeric keyboard Pes; Onscreen keyboard Pes; Onscreen keyboard  Touch operation Design as touch screen Expansions for operator control of the process  Deflicet LEDs (LEDs as S7 output I/O) F1Fx Direct keys (keys as S7 input I/O) F1Fx Direct keys (touch buttons as S7 input I/O) Pirst laliation type/mounting  Mounting position  Ves Mounting in portrait format possible Mounting in landscape format possible  maximum permissible angle of inclination without external ventiliation  50 000 h  Wes; LED, can be dimmed manually or automatically  0 0  Pes; LED, can be dimmed manually or automatically  0 0  Pes; Cnscreen keyboard Pes; Onscreen keyboard  Pes; Onscreen keyboard  On	Resolution (pixels)	
Backlighting  MTBF backlight (at 25 °C) Backlight dimmable Yes; LED, can be dimmed manually or automatically  Control elements  Keyboard fonts Function keys Number of function keys No System keys Numeric keyboard Balanumeric keyboard Balanumeric keyboard Ses on Screen keyboard Pes; Onscreen keyboard Ses; Onscreen keyboard Yes; Onscreen keyboard Yes; Onscreen keyboard Yes; Analog-resistive  Expansions for operator control of the process DP direct LEDs (LEDs as S7 output I/O) F1Fx O Direct keys (keys as S7 input I/O) F1Fx O Direct keys (touch buttons as S7 input I/O) Yes; Onscreen keyboard O Ves; Analog-resistive  Expansions for operator control of the process O DP direct LEDs (LEDs as S7 output I/O) Signature (LEDs (keys as S7 input I/O) Vertical (Nounting In portrait format possible Yes) Mounting in portrait format possible Mounting in portrait format possible Mounting in portrait format possible Maximum permissible angle of inclination without external Vertical Mounting in portrait format possible Maximum permissible angle of inclination without external Vertical Mounting in portrait format possible Maximum permissible angle of inclination without external Mounting in portrait format possible Maximum permissible angle of inclination without external Mounting in portrait format possible Maximum permissible angle of inclination without external	<ul> <li>Horizontal image resolution</li> </ul>	800 pixel
MTBF backlighting (at 25 °C) Backlight dimmable  Mess LED, can be dimmed manually or automatically  Control elements  Keyboard fonts  Function keys  Number of function keys  No Keys with LED Keys W	Vertical image resolution	480 pixel
Backlight dimmable  Yes; LED, can be dimmed manually or automatically  Control elements  Keyboard fonts  Function keys  Number of function keys  No Keys with LED  No System keys No No System keys No Alphanumeric keyboard Pes; Onscreen keyboard  Touch operation  Design as touch screen  Expansions for operator control of the process  DP direct LEDs (LEDs as S7 output I/O)  -F1Fx  Direct keys (keys as S7 input I/O)  -F1Fx  Direct keys (keys as S7 input I/O)  -F1Fx  Direct keys (touch buttons as S7 input I/O)  -F1Fx  Mounting in portrait format possible Mounting in portrait format possible Mounting in landscape format possible maximum permissible angle of inclination without external vertical maximum permissible angle of inclination without external ventilation	Backlighting	
Keyboard fonts  • Function keys  — Number of function keys  — Number of function keys with LEDs  • Keys with LED  • Keys with LED  • No  • System keys  • Numeric keyboard  • alphanumeric keyboard  • alphanumeric keyboard  • Design as touch screen  Expansions for operator control of the process  • DP direct LEDs (LEDs as S7 output I/O)  — F1Fx  • Direct keys (keys as S7 input I/O)  — F1Fx  • Direct keys (touch buttons as S7 input I/O)  32  Installation type/mounting  Mounting in portrait format possible  Mounting in Inandscape format possible  maximum permissible angle of inclination without external ventical maximum permissible angle of inclination without external ventical maximum permissible angle of inclination without external ventical ven	<ul> <li>MTBF backlighting (at 25 °C)</li> </ul>	50 000 h
Function keys	Backlight dimmable	Yes; LED, can be dimmed manually or automatically
Function keys  Number of function keys  Number of function keys with LEDs  Keys with LED  No  System keys  No  Numeric keyboard  Alphanumeric keyboard  Design as touch screen  Expansions for operator control of the process  DP direct LEDs (LEDs as S7 output I/O)  F1Fx  Direct keys (keys as S7 input I/O)  F1Fx  Direct keys (kouch buttons as S7 input I/O)  F1Fx  No  Direct keys (touch buttons as S7 input I/O)  Yes  Mounting position  Vertical  Mounting in landscape format possible  maximum permissible angle of inclination without external  vertilation  O  Divent keys (and in portrait format possible and in portrait format possible and inclination without external vertical vertica	Control elements	
- 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  maximum permissible angle of inclination without external ventilation	Keyboard fonts	
Number of function keys with LEDs     Keys with LED     No     System keys     No     Numeric keyboard     Yes; Onscreen 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)	<ul> <li>Function keys</li> </ul>	
Keys with LED     System keys     No     Numeric keyboard     alphanumeric 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     O     Direct keys (keys as S7 input I/O)     -F1Fx     O     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  Yes; Onscreen keyboard  Yes; Onscreen keyboard  Yes; Analog-resistive  0  ves; Analog-resistive  0  ves; Analog-resistive  2  Yes  0  35°	<ul> <li>Number of function keys</li> </ul>	0
System keys Numeric keyboard Numeric keyboard Alphanumeric keyboard Yes; Onscreen keyboard  Touch operation Design as touch screen Pexpansions for operator control of the process  DP direct LEDs (LEDs as S7 output I/O) F1Fx  Direct keys (keys as S7 input I/O) F1Fx  Direct keys (touch buttons as S7 input I/O) Direct keys (touch buttons as S7 input I/O) Yes Mounting position Vertical Mounting in portrait format possible Mounting in landscape format possible Maximum permissible angle of inclination without external ventilation  No System Reyboard Yes; Onscreen keyboard Yes; Onscreen key	<ul> <li>Number of function keys with LEDs</li> </ul>	0
Numeric keyboard  alphanumeric keyboard  Yes; Onscreen keyboard  Touch operation  Design as touch screen  Expansions for operator control of the process  DP direct LEDs (LEDs as S7 output I/O)  —F1Fx  Direct keys (keys as S7 input I/O)  —F1Fx  Direct keys (touch buttons as S7 input I/O)  32  Installation type/mounting  Mounting position  Mounting in portrait format possible  Mounting in landscape format possible  maximum permissible angle of inclination without external ventilation  Yes; Onscreen keyboard  Output Jesus Je	<ul> <li>Keys with LED</li> </ul>	No
alphanumeric keyboard     Touch operation              Design as touch screen	System keys	No
Touch operation  Design as touch screen  Expansions for operator control of the process  DP direct LEDs (LEDs as S7 output I/O)  F1Fx  Direct keys (keys as S7 input I/O)  F1Fx  Direct keys (touch buttons as S7 input I/O)  F1Fx  Direct keys (touch buttons as S7 input I/O)  Vertical  Mounting position  Mounting in portrait format possible  Mounting in landscape format possible  Mounting in landscape format possible  Maximum permissible angle of inclination without external ventilation  Yes; Analog-resistive  Yes; Analog-resistive   Yes; Analog-resistive  Yes; Analog-resistive	Numeric keyboard	Yes; Onscreen keyboard
Design as touch screen  Expansions for operator control of the process      DP direct LEDs (LEDs as S7 output I/O)     — F1Fx      Direct keys (keys as S7 input I/O)     — F1Fx      Direct keys (touch buttons as S7 input I/O)  Installation type/mounting  Mounting position  Mounting in portrait format possible  Mounting in landscape format possible  Mounting in landscape format possible  Maximum permissible angle of inclination without external ventilation  Yes; Analog-resistive   Yes; Analog-resistive   Yes; Analog-resistive   Yes; Analog-resistive   Yes; Analog-resistive   Yes; Analog-resistive   Yes  35°	alphanumeric keyboard	Yes; Onscreen keyboard
Expansions for operator control of the process  • DP direct LEDs (LEDs as S7 output I/O)  —F1Fx  • Direct keys (keys as S7 input I/O)  —F1Fx  • Direct keys (touch buttons as S7 input I/O)  32  Installation type/mounting  Mounting position  Mounting in portrait format possible  Mounting in landscape format possible  maximum permissible angle of inclination without external ventilation  Yes  The process  Vertical  Yes  Mounting in landscape format possible  Yes  maximum permissible angle of inclination without external ventilation	Touch operation	
DP direct LEDs (LEDs as S7 output I/O)     — F1Fx	Design as touch screen	Yes; Analog-resistive
<ul> <li>— F1Fx</li> <li>● Direct keys (keys as S7 input I/O)</li> <li>— F1Fx</li> <li>● Direct keys (touch buttons as S7 input I/O)</li> <li>32</li> <li>Installation type/mounting</li> <li>Mounting position</li> <li>Mounting in portrait format possible</li> <li>Mounting in landscape format possible</li> <li>maximum permissible angle of inclination without external ventilation</li> <li>35°</li> </ul>	Expansions for operator control of the process	
Direct keys (keys as S7 input I/O)     — F1Fx	<ul> <li>DP direct LEDs (LEDs as S7 output I/O)</li> </ul>	
— 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°	— F1Fx	0
● Direct keys (touch buttons as S7 input I/O)  Installation type/mounting  Mounting position  Mounting in portrait format possible  Mounting in landscape format possible  Mounting in landscape format possible  maximum permissible angle of inclination without external ventilation  • Direct keys (touch buttons as S7 input I/O)  32  Installation type/mounting  Yes  Mounting in portrait format possible  Yes  maximum permissible angle of inclination without external ventilation	<ul> <li>Direct keys (keys as S7 input I/O)</li> </ul>	
Installation type/mounting  Mounting position  Mounting in portrait format possible  Mounting in landscape format possible  Mounting in landscape format possible  maximum permissible angle of inclination without external ventilation  Yes  35°	— F1Fx	0
Mounting position vertical  Mounting in portrait format possible Yes  Mounting in landscape format possible Yes  maximum permissible angle of inclination without external ventilation 35°		32
Mounting in portrait format possible  Mounting in landscape format possible  Mounting in landscape format possible  maximum permissible angle of inclination without external ventilation  Yes  35°	Installation type/mounting	
Mounting in landscape format possible  maximum permissible angle of inclination without external ventilation  Yes  35°	Mounting position	vertical
maximum permissible angle of inclination without external ventilation 35°	Mounting in portrait format possible	Yes
ventilation	Mounting in landscape format possible	Yes
Supply voltage		35°
	Supply voltage	

Type of supply voltage	DC
Type of supply voltage	DC 24 V
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)	0.7 A
Starting current inrush I²t	0.5 A²·s
Power	
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
<ul><li>synchronizable</li></ul>	Yes
Interfaces	
Number of industrial Ethernet interfaces	2
Number of RS 485 interfaces	1; RS 422 / 485 combined
Number of RS 422 interfaces	1
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Number of RS 232 interfaces	0
Number of RS 232 interfaces  Number of USB interfaces	2; USB 2.0
Number of USB interfaces	2; USB 2.0
Number of USB interfaces  • USB Mini B	2; USB 2.0 1; 5-pole
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)	2; USB 2.0 1; 5-pole 0
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces	2; USB 2.0 1; 5-pole 0
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces	2; USB 2.0 1; 5-pole 0 0
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots	2; USB 2.0 1; 5-pole 0 0 0 2
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces	2; USB 2.0 1; 5-pole 0 0 0 2
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet	2; USB 2.0 1; 5-pole 0 0 0 2 No
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED	2; USB 2.0 1; 5-pole 0 0 0 2 No
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch	2; USB 2.0 1; 5-pole 0 0 0 2 No
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols	2; USB 2.0 1; 5-pole 0 0 0 2 No
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET	2; USB 2.0 1; 5-pole 0 0 0 2 No 2 Yes
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO	2; USB 2.0 1; 5-pole 0 0 0 2 No  2 2 Yes Yes
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT	2; USB 2.0 1; 5-pole 0 0 0 2 No  Yes Yes Yes
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS	2; USB 2.0 1; 5-pole 0 0 0 2 No  Yes Yes Yes Yes Yes
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP	2; USB 2.0 1; 5-pole 0 0 0 2 No  2 Yes Yes Yes Yes Yes Yes Yes
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP  MPI	2; USB 2.0 1; 5-pole 0 0 0 2 No  2 Yes Yes Yes Yes Yes Yes Yes
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP  MPI  Protocols (Ethernet)	2; USB 2.0 1; 5-pole 0 0 0 2 No 2 No  Yes Yes Yes Yes Yes Yes Yes Yes Yes
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP  MPI  Protocols (Ethernet)  • TCP/IP	2; USB 2.0 1; 5-pole 0 0 0 2 No 2 No  Yes Yes Yes Yes Yes Yes Yes Yes Yes
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP  MPI  Protocols (Ethernet)  • TCP/IP  • DHCP	2; USB 2.0 1; 5-pole 0 0 0 2 No 2 No  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP  MPI  Protocols (Ethernet)  • TCP/IP  • DHCP  • SNMP	2; USB 2.0 1; 5-pole 0 0 0 0 2 No 2 Yes
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP  MPI  Protocols (Ethernet)  • TCP/IP  • DHCP  • SNMP  • DCP  • LLDP	2; USB 2.0 1; 5-pole 0 0 0 0 2 No  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP  MPI  Protocols (Ethernet)  • TCP/IP  • DHCP  • SNMP  • DCP  • LLDP  WEB characteristics	2; USB 2.0 1; 5-pole 0 0 0 0 2 No 2 No  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP  MPI  Protocols (Ethernet)  • TCP/IP  • DHCP  • SNMP  • DCP  • LLDP  WEB characteristics  • HTTP	2; USB 2.0 1; 5-pole 0 0 0 0 2 No 2 No  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Number of USB interfaces  • USB Mini B  Number of 20 mA interfaces (TTY)  Number of parallel interfaces  Number of other interfaces  Number of SD card slots  With software interfaces  Industrial Ethernet  • Industrial Ethernet status LED  • Number of ports of the integrated switch  Protocols  PROFINET  Supports protocol for PROFINET IO  IRT  PROFIBUS  EtherNet/IP  MPI  Protocols (Ethernet)  • TCP/IP  • DHCP  • SNMP  • DCP  • LLDP  WEB characteristics	2; USB 2.0 1; 5-pole 0 0 0 0 2 No 2 No  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

• XML	No
• CSS	Yes
• Active X	No
JavaScript	Yes
• Java VM	No
Redundancy mode	
Media redundancy	
MRP	Yes
Further protocols	
• CAN	No
• MODBUS	Yes
EMC	
Emission of radio interference acc. to EN 55 011	
<ul> <li>Limit class A, for use in industrial areas</li> </ul>	Yes
<ul> <li>Limit class B, for use in residential areas</li> </ul>	No
Degree and class of protection	
IP (at the front)	IP66
IP (rear)	IP20
NEMA (front)	
<ul> <li>Enclosure Type 4 at the front</li> </ul>	Yes
Enclosure Type 4x at the front	Yes
Standards, approvals, certificates	
Marine approval	
Compass working clearance	5 m
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	Yes; Powder-coated, UV resistant
Ambient temperature during operation	
Operation (vertical installation)	
<ul> <li>For vertical installation, min.</li> </ul>	-30 °C; = Tmin
<ul> <li>For vertical installation, max.</li> </ul>	60 °C; (55 °C, see entry ID: 64847814)
Operation (max. tilt angle)	
<ul> <li>At maximum tilt angle, min.</li> </ul>	-30 °C; = Tmin
— At maximum tilt angle, max.	50 °C; = Tmax
Operation (vertical installation, portrait format)	
<ul> <li>For vertical installation, min.</li> </ul>	-30 °C; = Tmin
— For vertical installation, max.	50 °C; = Tmax
Operation (max. tilt angle, portrait format)	
<ul> <li>At maximum tilt angle, min.</li> </ul>	-30 °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	
<ul> <li>Installation altitude above sea level, max.</li> </ul>	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	
<ul> <li>Resistant to commercially available coolants and lubricants</li> </ul>	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
<ul> <li>to biologically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
<ul> <li>to chemically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); $^{\star}$
<ul> <li>to mechanically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	

<ul> <li>to biologically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request	
<ul> <li>to chemically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	
<ul> <li>to mechanically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6S3 incl. sand, dust; *	
Usage in industrial process technology		
Against chemically active substances acc. to EN	Yes; Class 3 (excluding trichlorethylene)	
60654-4		
<ul> <li>Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04</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)	
Remark		
<ul> <li>Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04</li> </ul>	* 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	Yes; Class 2 for high reliability	
<ul><li>61086</li><li>Protection against fouling acc. to EN 60664-3</li></ul>	Yes; Type 1 protection	
Military testing according to MIL-I-46058C, Amendment 7     Ouglification and Performance of Electrical Inculating	Yes; Discoloration of coating possible during service life	
<ul> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC- CC-830A</li> </ul>	Yes; Conformal coating, Class A	
Operating systems		
proprietary	No	
pre-installed operating system		
Windows CE	Yes	
configuration / header	T es	
	Vaa	
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)	No	
<ul> <li>STEP 7 Professional (TIA Portal)</li> </ul>	No	
<ul> <li>WinCC flexible Compact</li> </ul>	No	
WinCC flexible Standard	No	
<ul> <li>WinCC flexible Advanced</li> </ul>	No	
<ul> <li>WinCC Basic (TIA Portal)</li> </ul>	No	
<ul> <li>WinCC Comfort (TIA Portal)</li> </ul>	Yes	
<ul> <li>WinCC Advanced (TIA Portal)</li> </ul>	Yes	
<ul> <li>WinCC Professional (TIA Portal)</li> </ul>	Yes	
Languages		
Online languages		
Number of online/runtime languages	32	
Project languages		
Languages per project	32	
Functionality under WinCC (TIA Portal)		
Libraries	Yes	
Applications/options		
Web browser	Yes	
Pocket Word	Yes	
Pocket Excel	Yes	
PDF Viewer	Yes	
Media Player	Yes	
SIMATIC WinCC Sm@rtServer	Yes	
SIMATIC WINCC SM@rtserver     SIMATIC WinCC Audit	Yes	
	Yes	
Number of Visual Basic Scripts	165	
Task planner	Vee	
time-controlled     tests controlled	Yes	
• task-controlled	Yes	
Help system		

Number of characters per info text	70
Message system	
Number of alarm classes	32
Bit messages	
— Number of bit messages	4 000
Analog messages	
<ul> <li>Number of analog messages</li> </ul>	200
<ul> <li>S7 alarm number procedure</li> </ul>	Yes
<ul> <li>System messages HMI</li> </ul>	Yes
<ul> <li>System event, more (SIMATIC S7, SINUMERIK, SIMOTION,)</li> </ul>	Yes
<ul> <li>Number of characters per message</li> </ul>	80
<ul> <li>Number of process values per message</li> </ul>	8
<ul> <li>Acknowledgment groups</li> </ul>	Yes
Message indicator	Yes
Message buffer	
— Number of entries	1 024
<ul><li>— Circulating buffer</li></ul>	Yes
— retentive	Yes
— maintenance-free	Yes
Recipe management	
Number of recipes	300
Data records per recipe	500
Entries per data record	1 000
Size of internal recipe memory      Design recovery expendable.	2 Mbyte
Recipe memory expandable  Variables	Yes
	2.048
Number of variables per device     Number of variables per screen	2 048 400
<ul><li>Number of variables per screen</li><li>Limit values</li></ul>	Yes
	Yes
<ul><li>Multiplexing</li><li>Structures</li></ul>	Yes
Arrays	Yes
Images	
Number of configurable images	500
Permanent window/default	Yes
Global image	Yes
Image selection by PLC	Yes
Image number in the PLC	Yes
Image objects	
Number of objects per image	400
Text fields	Yes
• I/O fields	Yes
<ul> <li>Graphic I/O fields (graphics list)</li> </ul>	Yes
Symbolic I/O fields (text list)	Yes
Date/time fields	Yes
<ul><li>Switches</li></ul>	Yes
	. 55
Buttons	Yes
<ul><li>Buttons</li><li>Graphic display</li></ul>	
	Yes
Graphic display	Yes Yes
<ul> <li>Graphic display</li> <li>Icons</li> <li>Geometric objects</li> <li>Complex image objects</li> </ul>	Yes Yes Yes Yes Yes
<ul><li> Graphic display</li><li> Icons</li><li> Geometric objects</li></ul>	Yes Yes Yes Yes Yes Yes
<ul> <li>Graphic display</li> <li>Icons</li> <li>Geometric objects</li> <li>Complex image objects</li> </ul>	Yes Yes Yes Yes
<ul> <li>Graphic display</li> <li>Icons</li> <li>Geometric objects</li> <li>Complex image objects</li> <li>Number of complex objects per screen</li> </ul>	Yes Yes Yes Yes Yes Yes
<ul> <li>Graphic display</li> <li>Icons</li> <li>Geometric objects</li> <li>Complex image objects</li> <li>Number of complex objects per screen</li> <li>Alarm view</li> </ul>	Yes Yes Yes Yes Yes Yes
<ul> <li>Graphic display</li> <li>Icons</li> <li>Geometric objects</li> <li>Complex image objects</li> <li>Number of complex objects per screen</li> <li>Alarm view</li> <li>Trend view</li> </ul>	Yes Yes Yes Yes Yes Yes Yes
<ul> <li>Graphic display</li> <li>Icons</li> <li>Geometric objects</li> </ul> Complex image objects <ul> <li>Number of complex objects per screen</li> <li>Alarm view</li> <li>Trend view</li> <li>User view</li> <li>Status/control</li> <li>Sm@rtClient view</li> </ul>	Yes
<ul> <li>Graphic display</li> <li>Icons</li> <li>Geometric objects</li> </ul> Complex image objects <ul> <li>Number of complex objects per screen</li> <li>Alarm view</li> <li>Trend view</li> <li>User view</li> <li>Status/control</li> <li>Sm@rtClient view</li> <li>Recipe view</li> </ul>	Yes
<ul> <li>Graphic display</li> <li>Icons</li> <li>Geometric objects</li> </ul> Complex image objects <ul> <li>Number of complex objects per screen</li> <li>Alarm view</li> <li>Trend view</li> <li>User view</li> <li>Status/control</li> <li>Sm@rtClient view</li> </ul>	Yes

Media Player	Yes
Bar graphs	Yes
<ul> <li>Sliders</li> </ul>	Yes
<ul> <li>Pointer instruments</li> </ul>	Yes
Analog/digital clock	Yes
Lists	
<ul> <li>Number of text lists per project</li> </ul>	500
<ul> <li>Number of entries per text list</li> </ul>	500
<ul> <li>Number of graphics lists per project</li> </ul>	500
<ul> <li>Number of entries per graphics list</li> </ul>	500
Archiving	
<ul> <li>Number of archives per device</li> </ul>	50
<ul> <li>Number of entries per archive</li> </ul>	20 000
Message archive	Yes
<ul> <li>Process value archive</li> </ul>	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	165
-	50
Number of user groups     Number of user rights	32
Number of user rights	
Number of users	50
Password export/import	Yes
SIMATIC Logon	Yes
Logging through printer	
• Alarms	Yes
<ul><li>Report (shift log)</li></ul>	Yes
Hardcopy	Yes
Electronic print to file	Yes; PDF, HTML
Character sets	
<ul> <li>Keyboard fonts</li> </ul>	
— US English	Yes
Transfer (upload/download)	
<ul> <li>MPI/PROFIBUS DP</li> </ul>	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
Allen Bradley (EtherNet/IP)	Yes
Allen Bradley (Etherney)     Allen Bradley (DF1)	Yes
Mitsubishi (MC TCP/IP)	Yes
Mitsubishi (FX)     OMPON (FINS TCP)	Yes
OMRON (FINS TCP)  OMBON (FINS TCP)	No Was
OMRON (LINK/Multilink)     Madisar (Madhus TOR(P))	Yes
Modicon (Modbus TCP/IP)	Yes

<ul><li>Modicon (Modbus)</li></ul>	Yes
OPC UA Client	Yes
OPC UA Server	Yes
Service tools/configuration aids	
<ul> <li>Backup/Restore manually</li> </ul>	Yes
<ul> <li>Backup/Restore automatically</li> </ul>	Yes
<ul> <li>Simulation</li> </ul>	Yes
<ul> <li>Device switchover</li> </ul>	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
SIMATIC IPC USB Flashdrive (USB stick)	Yes
SIMATIC HMI USB stick	Yes
Network camera	Yes
Mechanics/material	
Enclosure material (front)	
<ul><li>Plastic</li></ul>	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

1.7 kg

$\circ$		- 11		44	
9	たに	em	ica	шо	niel

Weight (with packaging)

	Version	Classification
eClass	14	27-33-02-01
eClass	12	27-33-02-01
eClass	9.1	27-33-02-01
eClass	9	27-33-02-01
eClass	8	27-24-23-02
eClass	7.1	27-24-23-02
eClass	6	27-24-23-02
ETIM	9	EC001412
ETIM	8	EC001412
ETIM	7	EC001412
IDEA	4	6607
UNSPSC	15	43-21-15-06

Approvals / Certificates

General Product Approval

Miscellaneous





Manufacturer Declaration



<u>KC</u>

EMV	For use in hazardous locations	Marine / Shipping
-----	--------------------------------	-------------------







CCC-Ex



last modified: 5/29/2024 🖸