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Data sheet 6AV2128-3GB06-0AX1



SIMATIC HMI MTP700, Unified Comfort Panel, touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16, contains open-source software, which is provided free of charge see enclosed DVD

General information	
Product type designation	MTP700 Unified Comfort
Display	
Design of display	TFT
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; At 25°C
● Backlight dimmable	Yes; 5-100 %
Control elements	
Keyboard fonts	
● Numeric keyboard	Yes; Onscreen keyboard
● alphanumeric keyboard	Yes; Onscreen keyboard
Touch operation	
● Design as touch screen	Yes
● Design as multi-touch screen	Yes
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	
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)	0.45 A
Current consumption, max.	1 A
Starting current inrush I²t	0.5 A²·s
Memory	
Flash	Yes
RAM	Yes
Type of output	

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Acoustics	
● Buzzer	Yes
● Speaker	No
Time of day	
Clock	
● Hardware clock (real-time)	Yes
● Software clock	Yes
● retentive	Yes; Back-up duration typically 6 weeks
● synchronizable	Yes
Interfaces	
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined
Number of RS 422 interfaces	0; together with RS 485
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2
Industrial Ethernet	
● Industrial Ethernet status LED	2
● Number of ports of the integrated switch	2
Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	No
Protocols (Ethernet)	
● TCP/IP	Yes
● DHCP	Yes
● SNMP	Yes
● DCP	Yes
● LLDP	Yes
Redundancy mode	
Media redundancy	
— MRP	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	No
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
● Enclosure Type 4x at the front	Yes
● Enclosure Type 12 at the front	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
CCC	Yes
Use in hazardous areas	
● ATEX Zone 2	Yes
● ATEX Zone 22	Yes
● IECEx Zone 2	Yes
● IECEx Zone 22	Yes
● cULus Class I Zone 2, Division 2	Yes
● cULus Class II Division 2	Yes
● FM Class I Division 2	Yes
● FM Class II Division 2	Yes
Marine approval	
● Germanischer Lloyd (GL)	No; included in DNV
● American Bureau of Shipping (ABS)	Yes
● Bureau Veritas (BV)	Yes

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● Det Norske Veritas (DNV)	Yes
● Korean Register of Shipping (KRS)	Yes
● Lloyds Register of Shipping (LRS)	Yes
● Nippon Kaiji Kyokai (Class NK)	Yes
● Chinese Classification Society (CCS)	Yes
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
Operation (vertical installation)	
— For vertical installation, min.	0 °C
— For vertical installation, max.	50 °C
Operation (max. tilt angle)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	40 °C
Operation (vertical installation, portrait format)	
— For vertical installation, min.	0 °C
— For vertical installation, max.	40 °C
Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	35 °C
Ambient temperature during storage/transportation	
● min.	-20 °C
● max.	60 °C
Relative humidity	
● Operation, max.	90 %; no condensation
Operating systems	
proprietary	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	
● WinCC Unified Comfort Engineering (TIA Portal)	Yes
● WinCC Unified PC Engineering (TIA Portal)	Yes
Languages	
Online languages	
● Number of online/runtime languages	32
Project languages	
● Languages per project	32
Functionality under WinCC Unified	
Libraries	Yes
Applications/options	
● Writer	Yes
● Calc	Yes
● Web browser	Yes
● PDF Viewer	Yes
● Media Player	Yes
● SIMATIC WinCC Sm@rtServer	Yes
● SIMATIC WinCC Audit	Yes
● Unified Collaboration	Yes
Number of Visual Basic Scripts	No
JavaScript	Yes
Task planner	
● time-controlled	Yes
● task-controlled	Yes
Help system	
● Number of characters per info text	70

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● Number of message texts per message	10
functionality under WinCC Unified / alarm system / header	
● Number of alarm classes	32
● Bit messages	
— Number of bit messages	9 000
● Analog messages	
— Number of analog messages	300
● S7 alarm number procedure	Yes
● System messages HMI	Yes
● System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	Yes
● Number of characters per message	512
● Number of process values per message	10
● Acknowledgment groups	Yes
● Message indicator	No
● Message buffer	Yes; Configured as alarm archive
— Circulating buffer	Yes
— retentive	Yes
— maintenance-free	Yes
Parameter set management (recipes)	
● Number of parameter set types	750
● Parameter sets per parameter set type	2 000
● Entries per parameter set	1 000
● Size of internal parameter set memory	12 Mbyte
● Parameter set memory expandable	Yes
functionality under WinCC Unified / variables / header	
● Number of variables per device	8 000
● Number of variables per screen	600
● Limit values	Yes
● Structures	Yes
● Arrays	Yes
functionality under WinCC Unified / screens / header	
● Number of configurable images	1 200
● Faceplate	Yes
Image objects	
● Number of objects per image	800
● Picture window	Yes
● Text fields	Yes
● I/O fields	Yes
● Graphic I/O fields (graphics list)	Yes
● Symbolic I/O fields (text list)	Yes
● Scalable Vector Graphics (SVG)	Yes
● Date/time fields	Yes
● Checkbox	Yes
● Option button	Yes
● Switches	Yes
● Buttons	Yes
● Graphic display	Yes
● Icons	Yes
● Custom web display	Yes
● Geometric objects	Yes
functionality under WinCC Unified / complex screen objects / header	
● Number of complex objects per screen	40
● Alarm view	Yes
● Trend view	Yes
● User view	Yes
● Status/control	No
● Parameter set display	Yes
● HTML browser	Yes
● Bar graphs	Yes
● Sliders	Yes

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● Pointer instruments	Yes
● Analog/digital clock	Yes
functionality under WinCC Unified / lists / header	
● Number of text lists per project	750
● Number of entries per text list	750
● Number of graphics lists per project	750
● Number of entries per graphics list	750
functionality under WinCC Unified / archiving / header	
● Number of archives per device	50
● Number of entries per archive	500 000
● Message archive	Yes
● Process value archive	Yes
● type of archiving / for WinCC Unified	
— Sequential archive	Yes
— Short-term archive	Yes
● storage location / of archiving / for WinCC Unified	
— Memory card	Yes
— storage location / of archiving / for WinCC Unified / USB mass storage	Yes
— Ethernet	No
Security	
● Number of roles	50
● Number of function rights	0; V16
● Number of users	200
● Password export/import	Yes
● Central user administration	Yes; as of WinCC V17
functionality under WinCC Unified / transfer (upload/download) / header	
● USB	No
● Ethernet	Yes
● using external storage medium	Yes; as of WinCC Unified V17
Process coupling	
● S7-1200	Yes
● S7-1500	Yes
● S7-200	No
● S7-300/400	Yes
● Number of S7 connections	16
● LOGO!	No
● SIMOTION	No
● OPC UA Client	Yes
● OPC UA Server	Yes
● Software Controller/Open Controller	Yes
functionality under WinCC Unified / service tools/configuration tools / header	
● Backup/Restore manually	Yes
● Backup/Restore automatically	Yes
● Simulation	Yes
● Device switchover	Yes
Peripherals/Options	
Peripherals	Printer, barcode reader
Printer	Yes
SIMATIC HMI MM memory card: Multi Media Card	No
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	No
Mechanics/material	
Enclosure material (front)	
● Aluminum	Yes
Dimensions	
Width of the housing front	214 mm

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Height of housing front	158 mm
Mounting cutout, width	197 mm
Mounting cutout, height	141 mm
Overall depth	64 mm
Weights	
Weight (without packaging)	1.4 kg

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