SIEMENS

Data sheet 6AV2123-3DB32-0AW0



SIMATIC HMI MTP400, Unified Basic Panel, touch operation, 4" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Basic V18 Update 3, contains open-source software, which is provided free of charge see enclosed Blu-ray

General information	
Product type designation	MTP400 Unified Basic
Display	
Design of display	TFT
Screen diagonal	4.3 in
Display width	93.6 mm
Display height	56.2 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)	20 000 h; At 25°C
● Backlight dimmable	Yes; 10 ... 100%
Control elements	
Keyboard	
● Numeric keyboard	Yes; Onscreen keyboard
● alphanumeric keyboard	Yes; Onscreen keyboard
Touch operation	
● Design as touch screen	Yes
● Design as multi-touch screen	Yes
● Monitor keyboard	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)	0.16 A
current consumption (for rated value of supply voltage), min.	0.14 A
current consumption (for rated value of supply voltage), max.	0.47 A
Current consumption, max.	0.63 A; at 19.2 V
Starting current inrush I²t	0.45 A²·s

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Power	
Active power input, typ.	3.8 W
Processor	
Processor type	ARM
Storage	
Flash	Yes
RAM	Yes
Type of output	
Acoustics	
● Buzzer	No
● 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	1; Gigabit Ethernet (IE/PN), RJ45
Number of RS 485 interfaces	0
Number of RS 422 interfaces	0
Number of USB interfaces	2; USB 2.0
Number of SD card slots	0
Industrial Ethernet	
● Industrial Ethernet status LED	2
● Number of ports of the integrated switch	1
Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	No
MPI	No
Protocols (Ethernet)	
● TCP/IP	Yes
● DHCP	Yes
● SNMP	Yes
● DCP	Yes
● LLDP	Yes
Redundancy mode	
Media redundancy	
— MRP	No
Further protocols	
● CAN	No
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)	NEMA 4, NEMA 4x (when installed)
● Enclosure Type 4 at the front	Yes
● Enclosure Type 4x at the front	Yes
● Enclosure Type 12 at the front	No
Standards, approvals, certificates	
CE mark	Yes
UKCA mark	Yes
cULus	Yes
FM approval	No
RCM (formerly C-TICK)	Yes

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KC approval	Yes
EAC (formerly Gost-R)	No
CCC	No
Ecological footprint	
● environmental product declaration	Yes
Global warming potential	
— global warming potential, (total) [CO2 eq]	89.7 kg
— global warming potential, (during production) [CO2 eq]	16.2 kg
— global warming potential, (during operation) [CO2 eq]	74.4 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-1.09 kg
Use in hazardous areas	
● ATEX Zone 2	No
● ATEX Zone 22	No
● IECEx Zone 2	No
● IECEx Zone 22	No
● cULus Class I Zone 2, Division 2	No
● cULus Class II Division 2	No
● FM Class I Division 2	No
● FM Class II Division 2	No
Marine approval	
● Germanischer Lloyd (GL)	No; included in DNV
● American Bureau of Shipping (ABS)	Yes; in preparation
● Bureau Veritas (BV)	Yes; in preparation
● 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	
Message indicator	Yes
Alarm system (incl. buffer and acknowledgment)	Yes
Recipe management	Yes
Configuration software	
● WinCC Advanced (TIA Portal)	Yes

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● WinCC Professional (TIA Portal)	Yes
● WinCC Unified Basic Engineering (TIA Portal)	Yes
● 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	No
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
● Number of message texts per message	10
Message system	
● Number of alarm classes	32
● Bit messages	
— Number of bit messages	2 000
● Analog messages	
— Number of analog messages	100
● S7 alarm number procedure	Yes
● System messages HMI	Yes
● System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...)	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	250
● Parameter sets per parameter set type	250
● Entries per parameter set	250
● Size of internal parameter set memory	5 Mbyte
● Parameter set memory expandable	Yes
Variables	
● Number of variables per device	1 000
● Number of variables per screen	300
● Limit values	Yes
● Structures	Yes
● Arrays	Yes
Images	
● Number of configurable images	300
● Faceplate	Yes
Image objects	
● Number of objects per image	600
● Picture window	Yes
● Text fields	Yes
● I/O fields	Yes
● Graphic I/O fields (graphics list)	Yes

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● 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	No
● Geometric objects	Yes
Complex image objects	
● Number of complex objects per screen	5
● Alarm view	Yes
● Trend view	Yes
● User view	Yes
● Status/control	Yes
● Parameter set display	Yes
● HTML browser	Yes
● Bar graphs	Yes
● Sliders	Yes
● Pointer instruments	Yes
● Analog/digital clock	Yes
Lists	
● Number of text lists per project	300
● Number of entries per text list	250
● Number of graphics lists per project	100
● Number of entries per graphics list	250
Archiving	
● Number of archives per device	10
● Number of entries per archive	50 000
● Message archive	Yes
● Process value archive	Yes
● Archiving methods	
— Sequential archive	Yes
— Short-term archive	Yes
● Memory location	
— Memory card	No
— USB memory	Yes
— Ethernet	No
Security	
● Number of roles	50
● Number of function rights	20; V18
● Number of users	200
● Password export/import	Yes
● Central user administration	Yes
Transfer (upload/download)	
● USB	Yes
● Ethernet	Yes
● using external storage medium	Yes
Process coupling	
● S7-1200	Yes
● S7-1500	Yes
● S7-200	No
● S7-300/400	Yes
● Number of S7 connections	8
● LOGO!	Yes; as of WinCC Unified V20
● SIMOTION	No
● OPC UA Client	Yes

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● OPC UA Server	No
● Software Controller/Open Controller	No
Service tools/configuration aids	
● Backup/Restore manually	Yes
● Backup/Restore automatically	No
● Simulation	Yes
● Device switchover	Yes
Peripherals/Options	
Peripherals	Barcode reader
Printer	No
SIMATIC HMI MM memory card: Multi Media Card	No
SIMATIC HMI SD memory card: Secure Digital memory card	No
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)	
● Plastic	Yes
Dimensions	
Width of the housing front	140 mm
Height of housing front	116 mm
Mounting cutout, width	123 mm
Mounting cutout, height	99 mm
mounting depth	36 mm
Weights	
Weight (without packaging)	0.45 kg
Weight (with packaging)	0.53 kg

Classifications

	Version	Classification
eClass	16	27-33-02-01
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	10	EC001412
ETIM	9	EC001412
ETIM	8	EC001412
ETIM	7	EC001412

Approvals / Certificates

General Product Approval	Maritime application












Maritime application

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	DNV	LRS	NK / Nippon Kaiji Kyokai	RINA	CCS (China Classification Society)

Maritime application	Environment
KR (Korean Register of Shipping)	

last modified: 6/18/2026

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