

SIPLUS HMI MTP400, Unified Basic Panel, based on 6AV2123-3DB32-0AW0 with conformal coating -20 ...+50 °C 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
based on	6AV2123-3DB32-0AW0
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 I ² t	0.45 A ² ·s
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 parallel interfaces	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
IRT	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	
Ecological footprint	
• environmental product declaration	Yes

Global warming potential	
— global warming potential, (total) [CO ₂ eq]	89.7 kg
— global warming potential, (during production) [CO ₂ eq]	16.2 kg
— global warming potential, (during operation) [CO ₂ eq]	74.4 kg
— global warming potential, (after end of life cycle) [CO ₂ eq]	-1.09 kg
Ambient conditions	
Ambient temperature during operation	
• At cold restart, min.	0 °C
Operation (vertical installation)	
— For vertical installation, min.	-20 °C; = Tmin; Startup @ 0 °C
— For vertical installation, max.	50 °C; = Tmax
Operation (max. tilt angle)	
— At maximum tilt angle, min.	-20 °C; = Tmin; Startup @ 0 °C
— At maximum tilt angle, max.	40 °C; = Tmax
Operation (vertical installation, portrait format)	
— For vertical installation, min.	-20 °C; = Tmin; Startup @ 0 °C
— For vertical installation, max.	40 °C; = Tmax
Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	-20 °C; = Tmin; Startup @ 0 °C
— At maximum tilt angle, max.	35 °C; = Tmax
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
Resistance	
Coolants and lubricants	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	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	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating	
• Coatings for printed circuit board assemblies acc. to EN	Yes; Class 2 for high reliability

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- Protection against fouling acc. to EN 60664-3
- Military testing according to MIL-I-46058C, Amendment 7
- Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A

Yes; Type 1 protection
 Yes; Discoloration of coating possible during service life
 Yes; Conformal coating, Class A

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
- 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
• 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	0; 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; over Modbus		
• SIMOTION	No		
• OPC UA Client	Yes		
• 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	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			



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