Siemens 6AV2123-2GA03-0AX0

KTP700 Basic DP Panel

Siemens 6AV2123-2GA03-0AX0 is the SIMATIC HMI KTP700 Basic DP PROFIBUS DP operator panel, with a 7-inch color touchscreen and 8 function keys. It gives machine operators a local interface for process values, alarms and configured control actions.



Technical Specifications

Product Identity	
Manufacturer	Siemens AG
Complete order number	6AV2123-2GA03-0AX0
Product family	SIMATIC HMI Basic Panels, second generation
Product designation	KTP700 Basic DP PROFIBUS DP
Housing front (W × H)	214 × 158 mm
Mounting cutout (W × H)	198 × 142 mm, as listed in the current Siemens datasheet
Mounting depth	39 mm
Functional Configuration	
Display	7-inch TFT widescreen; LED backlighting
Resolution / colors	800 × 480 pixels / 65,536 colors
Active display area	154.1 × 85.9 mm
Operation	Analog resistive touchscreen and 8 function keys
Interfaces	1 RS422/RS485 interface; 1 USB interface; no Industrial Ethernet
Communication	PROFIBUS/MPI; Modicon Modbus RTU supported; no PROFINET or Modbus TCP/IP
Engineering software	Configurable from WinCC Basic V13 / STEP 7 Basic V13
Performance & Power	
Processor / user-data memory	ARM / 10 MB
Rated supply / permitted range	24 V DC / 19.2–28.8 V DC
Rated current / typical power	230 mA / 5.5 W
Project capacity	800 variables; 250 configurable screens; 50 recipes
Environment	
Protection	IP65 front / IP20 rear, subject to correct installation
Operating temperature, landscape	0–50 °C upright; 0–40 °C at maximum tilt
Operating temperature, portrait	0–40 °C upright; 0–35 °C at maximum tilt
Maximum inclination	35° from vertical
Storage / transport temperature	–20 to +60 °C

Selected original manufacturer pages follow on pages 3–6.

Compatibility & Selection Guide

Software and system compatibility. The 6AV2123-2GA03-0AX0 is configurable from WinCC Basic V13 / STEP 7 Basic V13 in TIA Portal. Siemens lists PROFIBUS/MPI communication and supported serial drivers including Modicon Modbus RTU. Select the controller interface and WinCC driver for the actual system; a listed controller family does not make an Ethernet-only connection compatible. Published project limits include 800 variables, 250 configurable screens and 50 recipes.

Wiring & Installation Reference

Power and interfaces

Power. DC24V X80 · Pin 1: +24 V DC (L+); pin 2: GND 24 V (M).

PROFIBUS / serial. RS422/RS485 X2 · X2: 9-pin RS422/RS485 interface. For PROFIBUS RS485, pin 3 is Data B (+) and pin 8 is Data A (–); use the appropriate connector and network settings.

USB. USB X60 · USB interface for supported storage and service peripherals.

Panel mounting and connection

Prepare the enclosure. Disconnect cabinet power and use qualified personnel. Provide access to the operating front and a protected rear enclosure.

Check the opening. Use the current Siemens datasheet cutout of 198 × 142 mm. The supporting material must be 2–6 mm thick, with a flat, stable sealing surface for the stated front protection.

Secure the panel. Insert the KTP700 Basic DP from the front and secure all 7 mounting clips. Do not exceed 0.2 N·m clip torque. Maintain the required ventilation space and orientation-dependent temperature limits.

Connect and check. Connect equipotential bonding, then the safely isolated DC supply, configuration PC and controller in the documented sequence. Verify polarity and secure cables against strain.

Installation precautions. Use an SELV/PELV supply. Power conductors may be up to 1.5 mm²; strip 6 mm and fit cable end sleeves. Isolate the supply while terminating. Connect the panel functional-earth point to the bonding rail with 4 mm² conductor. Cable shields do not replace the plant equipotential-bonding network; follow the manual for its sizing and routing.

View installation reference (PDF) · PDF page 2 | View dimensions reference (PDF) · PDF page 6

Manufacturer sources: Siemens data sheet 6AV2123-2GA03-0AX0 / SIMATIC HMI Basic Panels 2nd Generation Operating Instructions.

SIEMENS

Data sheet 6AV2123-2GA03-0AX0

SIMATIC HMI, KTP700 Basic DP, Basic Panel, Key/touch operation, 7" 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



General information	
Product type designation	KTP700 Basic color DP
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	7 in
Display width	154.1 mm
Display height	85.9 mm
Number of colors	65 536
Resolution (pixels)	
● Horizontal image resolution	800 pixel
● Vertical image resolution	480 pixel
Backlighting	
● MTBF backlighting (at 25 °C)	20 000 h
● Backlight dimmable	Yes
Control elements	
Keyboard	
● Function keys	
— Number of function keys	8
— 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
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)	230 mA
Starting current inrush I^2t	0.2 $A^2 \cdot s$

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Power	
Active power input, typ.	5.5 W
Processor	
Processor type	ARM
Storage	
Flash	Yes
RAM	Yes
Memory available for user data	10 Mbyte
Type of output	
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	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	0
Number of SD card slots	0
With software interfaces	No
Industrial Ethernet	
● Industrial Ethernet status LED	0
Protocols	
PROFINET	No
Supports protocol for PROFINET IO	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	
— MRP	No
Further protocols	
● CAN	No
● MODBUS	Yes; Modicon (MODBUS RTU)
Interrupts/diagnostics/status information	
Diagnoses	
● Diagnostic information readable	No
EMC	
Emission of radio interference acc. to EN 55 011	

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● 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 4 at the front	Yes
● Enclosure Type 4x at the front	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Ecological footprint	
● environmental product declaration	Yes
Global warming potential	
— global warming potential, (total) [CO2 eq]	85 kg
— global warming potential, (during production) [CO2 eq]	26.2 kg
— global warming potential, (during operation) [CO2 eq]	59.2 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.682 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 1	No
● cULus Class I Zone 2, Division 2	No
● FM Class I Division 2	No
Marine approval	
● Germanischer Lloyd (GL)	Yes
● American Bureau of Shipping (ABS)	Yes
● Bureau Veritas (BV)	Yes
● Det Norske Veritas (DNV)	Yes
● Lloyds Register of Shipping (LRS)	Yes
● Nippon Kaiji Kyokai (Class NK)	Yes
● Polski Rejestr Statkow (PRS)	No
● Chinese Classification Society (CCS)	No
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	

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Dimensions	
Width of the housing front	214 mm
Height of housing front	158 mm
Mounting cutout, width	198 mm
Mounting cutout, height	142 mm
mounting depth	39 mm

Weights	
Weight (without packaging)	800 g
Weight (with packaging)	1 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
IDEA	4	6607
UNSPSC	15	43-21-15-06

Approvals / Certificates

General Product Approval

Miscellaneous

Manufacturer Declaration

General Product Approval

China RoHS

Maritime application

Maritime application

NK / Nippon Kaiji Kyokai

CCS (China Classification Society)

KR (Korean Register of Shipping)

Environment

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