## SIEMENS

## Data sheet

## 6AG1123-2JB03-2AX0

SIPLUS HMI KTP900 Basic Color PN based on 6AV2123-2JB03-0AX0 with conformal coating, -20...+50  $^\circ C$ , 9" TFT display, 65536 colors PROFINET interface



Figure similar

General information	
Product type designation	KTP900 Basic color PN
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	9 in
Display width	198 mm
Display height	111.7 mm
Number of colors	65 536
Resolution (pixels)	
<ul> <li>Horizontal image resolution</li> </ul>	800 pixel
Vertical image resolution	480 pixel
Backlighting	
<ul> <li>MTBF backlighting (at 25 °C)</li> </ul>	20 000 h
Backlight dimmable	Yes
Control elements	
Keyboard fonts	
<ul> <li>Function keys</li> </ul>	
<ul> <li>— Number of function keys</li> </ul>	8
<ul> <li>— Number of function keys with LEDs</li> </ul>	0
<ul> <li>Keys with LED</li> </ul>	No
<ul> <li>System keys</li> </ul>	No
<ul> <li>Numeric keyboard</li> </ul>	Yes; Onscreen keyboard
<ul> <li>alphanumeric keyboard</li> </ul>	Yes; Onscreen keyboard
Touch operation	
<ul> <li>Design as touch screen</li> </ul>	Yes; Analog-resistive
Installation type/mounting	
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 <sup>2</sup> t	0.2 A <sup>2</sup> ·s

Power	
Active power input, typ.	5.5 W
Processor	
Processor type	ARM
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	10 Mbyte
	TO MDyte
Type of output	
Acoustics	
• Buzzer	Yes
Speaker	No
Time of day	
Clock	
<ul> <li>Hardware clock (real-time)</li> </ul>	Yes
Software clock	Yes
retentive	Yes
synchronizable	Yes
Interfaces	
Number of industrial Ethernet interfaces	1
Number of RS 485 interfaces	0
Number of RS 422 interfaces	0
Number of RS 232 interfaces	0
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	2
Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	No
IRT	No
PROFIBUS	No
EtherNet/IP	Yes
MPI	No
	110
Protocols (Ethernet)	
• TCP/IP	Yes
• TCP/IP • DHCP	Yes Yes
• TCP/IP • DHCP • SNMP	Yes Yes Yes
• TCP/IP • DHCP • SNMP • DCP	Yes Yes Yes Yes
• TCP/IP • DHCP • SNMP • DCP • LLDP	Yes Yes Yes
TCP/IP     DHCP     SNMP     DCP     LLDP WEB characteristics	Yes Yes Yes Yes
TCP/IP     DHCP     SNMP     DCP     LLDP WEB characteristics     HTTP	Yes Yes Yes Yes Yes
TCP/IP     DHCP     SNMP     DCP     LLDP WEB characteristics     HTTP     HTML	Yes Yes Yes Yes
TCP/IP     DHCP     SNMP     DCP     LLDP     WEB characteristics     HTTP     HTML     Further protocols	Yes Yes Yes Yes No No
• TCP/IP • DHCP • SNMP • DCP • LLDP WEB characteristics • HTTP • HTML Further protocols • CAN	Yes Yes Yes Yes No No
TCP/IP     DHCP     SNMP     DCP     LLDP  WEB characteristics     HTTP     HTML  Further protocols     CAN     MODBUS	Yes Yes Yes Yes No No
TCP/IP     DHCP     SNMP     DCP     LLDP  WEB characteristics     HTTP     HTML  Further protocols     CAN     MODBUS  Interrupts/diagnostics/status information	Yes Yes Yes Yes No No
TCP/IP     DHCP     SNMP     DCP     LLDP     WEB characteristics     HTTP     HTML     Further protocols     CAN     MODBUS     Interrupts/diagnostics/status information     Diagnoses	Yes Yes Yes Yes No No No Yes; Modicon (MODBUS TCP/IP)
TCP/IP     DHCP     SNMP     DCP     LLDP  WEB characteristics     HTTP     HTML  Further protocols     CAN     MODBUS  Interrupts/diagnostics/status information Diagnoses     Diagnostic information readable	Yes Yes Yes Yes No No
TCP/IP     DHCP     SNMP     DCP     LLDP  WEB characteristics     HTTP     HTML  Further protocols     CAN     MODBUS  Interrupts/diagnostics/status information Diagnoses     Diagnostic information readable  EMC	Yes Yes Yes Yes No No No Yes; Modicon (MODBUS TCP/IP)
TCP/IP     DHCP     SNMP     DCP     LLDP  WEB characteristics     HTTP     HTML  Further protocols     CAN     MODBUS  Interrupts/diagnostics/status information Diagnoses     Diagnostic information readable  EMC Emission of radio interference acc. to EN 55 011	Yes Yes Yes Yes Yes No No No Yes; Modicon (MODBUS TCP/IP)
TCP/IP     DHCP     SNMP     DCP     LLDP     WEB characteristics     HTTP     HTML     Further protocols     CAN     MODBUS     Interrupts/diagnostics/status information     Diagnoses     Diagnostic information readable     EMC     Emission of radio interference acc. to EN 55 011     Limit class A, for use in industrial areas	Yes Yes Yes Yes Yes No No No Yes; Modicon (MODBUS TCP/IP)
<ul> <li>TCP/IP</li> <li>DHCP</li> <li>SNMP</li> <li>DCP</li> <li>LLDP</li> <li>WEB characteristics</li> <li>HTTP</li> <li>HTML</li> <li>Further protocols</li> <li>CAN</li> <li>MODBUS</li> <li>Interrupts/diagnostics/status information</li> <li>Diagnoses</li> <li>Diagnostic information readable</li> <li>EMC</li> <li>Emission of radio interference acc. to EN 55 011</li> <li>Limit class A, for use in industrial areas</li> <li>Limit class B, for use in residential areas</li> </ul>	Yes Yes Yes Yes Yes No No No Yes; Modicon (MODBUS TCP/IP)
TCP/IP     DHCP     SNMP     DCP     LLDP     WEB characteristics     HTTP     HTML     Further protocols     CAN     MODBUS     Interrupts/diagnostics/status information     Diagnoses     Diagnostic information readable     EMC     Emission of radio interference acc. to EN 55 011     Limit class A, for use in industrial areas	Yes Yes Yes Yes Yes No No No Yes; Modicon (MODBUS TCP/IP)

IP (rear)	IP20
NEMA (front)	
Enclosure Type 4 at the front	Yes
• Enclosure Type 4x at the front	Yes
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
Operation (vertical installation)	
— For vertical installation, min.	-20 °C
— For vertical installation, max.	50 °C
Operation (max. tilt angle)	
— At maximum tilt angle, min.	-20 °C
— At maximum tilt angle, max.	40 °C
Operation (vertical installation, portrait format)	
— For vertical installation, min.	-20 °C
— For vertical installation, max.	40 °C
Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	-20 °C
— At maximum tilt angle, max.	35 °C
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
<ul> <li>Ambient air temperature-barometric pressure- altitude</li> </ul>	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 under condensation conditions)
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); *
<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	
<ul> <li>Against chemically active substances acc. to</li> </ul>	Yes; Class 3 (excluding trichlorethylene)
EN 60654-4	res, class 5 (excluding inchlorethylene)
	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)
EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible);
EN 60654-4 — 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);
EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA- 71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and	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) * The supplied plug covers must remain in place over the unused
EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA- 71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and 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) * The supplied plug covers must remain in place over the unused
EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA- 71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating • Coatings for printed circuit board assemblies acc. to	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) * The supplied plug covers must remain in place over the unused interfaces during operation!

## Amendment 7

• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A

Yes; Conformal coating, Class A

proprietary         Yes           • Windows CE         No           Configuration / Inactor         Yes           Alem system (incl. buffer and acknowledgment)         Yes           Process value defaul (mout) possible         Yes           Process value defaul (mout) possible         Yes           Readys management         Yes           Configuration software         -           Configuration software         -           • STEP 7 Professional (TA Portal)         Yes; via integrated WinCC Basic (TIA Portal)           • STEP 7 Professional (TA Portal)         Yes; via integrated WinCC Basic (TIA Portal)           • WinCC Exible Compact         No           • WinCC Exible Advanced         No           • WinCC Control (TIA Portal)         Yes           • Number of ontime/unime languages         10           Protect languages         10           • Number of ontime/unime languages         Yes           • Number of ontime/unime languages         10	Operating systems	
pre-installed operating system         No           Configuration / header         Yes           Atam system (incl. buffer and acknowledgment)         Yes           Process value display (output)         Yes           Oxfloardino software         Yes           Configuration (TA Portal)         Yes: via integrated WinCC Basic (TIA Portal)           • WinCC Exhibe Shandard         No           • WinCC Exhibe Shandard         No           • WinCC Confort (TA Portal)         Yes           • WinCC Ordesional (TIA Portal)         Yes           • WinCC Ordesional (TIA Portal)         Yes           • WinCC Ordesional (TIA Portal)         Yes           • Number of onimeruntime languages         10           Procest languages         10           • Numb	proprietary	Yes
Windows CE         No           Configuration / header         Message iniciator         Yes           Atem system (incl. buffer and acknowledgment)         Yes           Process value default (input) possible         Yes           Process value default (input) possible         Yes           Configuration software         Yes           • STEP 7 Basic (TIA Portal)         Yes; via integrated WinCC Basic (TIA Portal)           • WinCC Exible Standard         No           • WinCC Exible Sconget         No           • WinCC Exible Standard         No           • WinCC Chexible Advanced         No           • WinCC Chessional (TIA Portal)         Yes           • Languages per project		
Message indicator         Yes           Alam system (incl. buffer an dexhowledgment)         Yes           Process value deplay (output)         Yes           Process value deplay (output)         Yes           Configuration software         ************************************	Windows CE	No
Aum system (incl. tuffer and acknowledgment)         Yes           Process value display (output)         Yes           Process value display (output)         Yes           Recipe management         Yes           Configuration software         Yes           • STEP 7 Diasis (TIA Portal)         Yes: via integrated WinCC Basic (TIA Portal)           • STEP 7 Professional (TIA Portal)         Yes: via integrated WinCC Basic (TIA Portal)           • WinCC Excibe Standard         No           • WinCC Excibe Standard         No           • WinCC Comfect (TIA Portal)         Yes           • WinCC Forfessional (TIA Portal)         Yes           • Number of onlineFurtime languages         10           • Project languages         22           • Languages per project         32           • Languages per project         No           • Languages per project         No           • Number of onlineFurturime languages         Yes           • Number of onlineFurturime languages         Yes           • Number of characters per info text         500           Massage system         Yes	configuration / header	
Aum system (incl. tuffer and acknowledgment)         Yes           Process value display (output)         Yes           Process value display (output)         Yes           Recipe management         Yes           Configuration software         Yes           • STEP 7 Diasis (TIA Portal)         Yes: via integrated WinCC Basic (TIA Portal)           • STEP 7 Professional (TIA Portal)         Yes: via integrated WinCC Basic (TIA Portal)           • WinCC Excibe Standard         No           • WinCC Excibe Standard         No           • WinCC Comfect (TIA Portal)         Yes           • WinCC Forfessional (TIA Portal)         Yes           • Number of onlineFurtime languages         10           • Project languages         22           • Languages per project         32           • Languages per project         No           • Languages per project         No           • Number of onlineFurturime languages         Yes           • Number of onlineFurturime languages         Yes           • Number of characters per info text         500           Massage system         Yes	Message indicator	Yes
Process value display (output)         Yes           Process value display (output)         Yes           Configuration software         Yes           Configuration software         Yes           STEP 7 Professional (TIA Portal)         Yes; via integrated WinCC Basic (TIA Portal)           • STEP 7 Professional (TIA Portal)         Yes; via integrated WinCC Basic (TIA Portal)           • WinCC Ravible Standard         No           • WinCC C Basic (TIA Portal)         Yes           • WinCC C Control (TIA Portal)         Yes           • WinCC C Advanced (TA Portal)         Yes           • WinCC C Control (TIA Portal)         Yes           • WinCC C Advanced (TA Portal)         Yes           • WinCC C Control (TIA Portal)         Yes           • WinCC Origings         10           Project Imaguages         10           • Languages per project         32           • Lunguages per project         32           • Lunguages per project         Yes           • Number of Visual Basic Scripts         No           • Number of alaro messages         32		
Process value default (input) possible         Yes           Recipe management         Yes           Configuration software         Yes, via integrated WinCC Basic (TIA Portal)           • STEP 7 Basic (TIA Portal)         Yes, via integrated WinCC Basic (TIA Portal)           • WinCC flexible Compact         No           • WinCC flexible Advanced         No           • WinCC flexible Advanced         No           • WinCC flexible Advanced         No           • WinCC Comfort (TIA Portal)         Yes           • WinCC Compassional (TIA Portal)         Yes           • Uninge of online/runnine languages         10           • Uninge of Visual Basic Scripts         No           • Languages per project         32           • Runder of Visual Basic Scripts         No           • Number of Visual Basic Scripts         No           • Number of advanciaters per info text         500           Messages system         Yes           • Number of alarciaters per ind text         500		Yes
Recipe management         Yes           Configuration software         • STEP 7 Basic (TIA Portal)         Yes; via integrated WinCC Basic (TIA Portal)           • STEP 7 Professional (TIA Portal)         Yes; via integrated WinCC Basic (TIA Portal)           • WinCC flexible Standard         No           • WinCC Basic (TIA Portal)         Yes; via integrated WinCC Basic (TIA Portal)           • WinCC Basic (TIA Portal)         Yes           • WinCC Comfort (TIA Portal)         Yes           • WinCC Comfort (TIA Portal)         Yes           • WinCC Advanced (TIA Portal)         Yes           • WinCC Confort (TIA Portal)         Yes           • WinCC Advanced (TIA Portal)         Yes           • WinCC Confort (TIA Portal)         Yes           • WinCC Professional (TIA Portal)         Yes           • Uningages         0           • Number of online/runtime languages         10           • Number of online/runtime languages         10           • Languages per project         32           • Languages per project         32           • Languages per project         92           • Longuages         Yes           • Number of olaracters per info text         500           Message system         • Number of alarn classes         32		Yes
• STEP 7 Basic (TIA Portal)     Yes; via integrated WinCC Basic (TIA Portal)       • STEP 7 Professional (TIA Portal)     Yes; via integrated WinCC Basic (TIA Portal)       • WinCC flexible Standard     No       • WinCC Carlot (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • WinCC Torlesional (TIA Portal)     Yes       • WinCC Torlesional (TIA Portal)     Yes       • Number of online/runtime languages     10       • Foreiget languages     10       • Longuages project     32       • Longuages project     32       • Longuages project     32       • Liberaries     Yes       • Number of Visuel Basic Scripts     No       • Task planner     Yes       • Number of characters per info text     500       Message stem     1000       • Number of alarm classes     32       • Bit messages     1000       • Analog messages     25       • Number of characters per message     80 <td>Recipe management</td> <td>Yes</td>	Recipe management	Yes
• STEP 7 Professional (TA Portal)     Yes; via integrated WinCC Basic (TIA Portal)       • WinCC flexible Advanced     No       • WinCC flexible Advanced     No       • WinCC Elexible Advanced     No       • WinCC Elexible Advanced     No       • WinCC Basic (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • WinCC Professional (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • WinCC Intervention Intervention     Yes       • Unice Professional (TA Portal)     Yes       • WinCC Intervention     Yes       • Unice of online/runnine languages     10       • Project Inspuages     10       • Languages per project     32       • Lindrovince (TA Portal)     Yes       • Under Vince (TA Portal)     Yes       • Number of Alamer     Yes       • Under of Visual Basic Scripts     No       • Task planner     Yes       • Unimber of characters per info text     500       • Number of analog messages     32       • Winder of analog messages     25       • Number of analog messages     25       • Number of analog messages     25       • System message State     80       • Number of analog messages     <	Configuration software	
• WinCC flexible Compact     No       • WinCC flexible Standard     No       • WinCC Ensible Advanced     No       • WinCC Basic (TIA Portal)     Yes       • WinCC Confort (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • WinCC Confort (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • Unicc Advanced (TIA Portal)     Yes       • Number of online/nurtime languages     10       • Languages     10       • Languages per project     32       • Languages per project     32       • Languages per project     32       • Number of visual Basic Scripts     No       • Task planner     Yes       • Number of characters per info text     500       Message system     Yes       • Number of characters per info text     500       Messages system     1000       • Number of alarm classes     32       • Bit messages     1000       • Analog messages     25       • System messages HMI     Yes       • System messages HMI     Yes       • Number of characters per message     80       • Number of characters per message     80       • Number of characters per message     80       • Number of characters per message	STEP 7 Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)
• WinCC flexible Standard     No       • WinCC Elexible Advanced     No       • WinCC Elexible Advanced     No       • WinCC Comfort (TIA Portal)     Yes       • WinCC Confessional (TIA Portal)     Yes       • WinCC Professional (TIA Portal)     Yes       • WinCC Professional (TIA Portal)     Yes       • Number of online/runtime tanguages     10       Project languages     10       Project languages per project     32       • Languages per project     32       Functionality under WinCC (TIA Portal)     Yes       Libraries     Yes       Number of Visual Basic Scripts     No       Task planner     Yes       • Number of characters per info text     500       Message system     1000       • Number of characters per info text     500       Message system     1000       • Number of analog messages     25       • S7 alam number procedure     No       • System messages HMI     Yes       • Number of characters per message     80       • Number of process values per message     80       • Number of process values per message     80 </td <td>STEP 7 Professional (TIA Portal)</td> <td>Yes; via integrated WinCC Basic (TIA Portal)</td>	STEP 7 Professional (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)
• WinCC flexible Advanced     No       • WinCC Basic (TIA Portal)     Yes       • WinCC Confort (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • WinCC Professional (TIA Portal)     Yes       • Number of nineruntime languages     10       Project languages     10       • Languages project     32       Functionality under WinCC (TIA Portal)     Yes       Libraries     Yes       Number of Nisual Basic Scripts     No       Task planner     Yes       Help system     Yes       • Number of characters per info text     500       Messages system     1000       • Number of alaring classes     32       • Differences     Yes       • Number of analog messages     1000       • Analog messages     1000       • Analog messages     25       • System event, more (SIMATIC S7, SINUMERIK, S	WinCC flexible Compact	No
• WinCC Basic (TIA Porta)     Yes       • WinCC Contort (TIA Porta)     Yes       • WinCC Context (TIA Porta)     Yes       • WinCC Professional (TIA Porta)     Yes       • Canguages	WinCC flexible Standard	No
• WinCC Comfort (TIA Portal)     Yes       • WinCC Advanced (TIA Portal)     Yes       • UnicC Corbiessional (TIA Portal)     Yes       Languages     10       Project languages     10       • Lumber of online/runime languages     10       Project languages     22       Functionality under WinCC (TIA Portal)     Yes       Libraries     Yes       Number of Visual Basic Scripts     No       Task planner     Yes       • time-controlled     No       • task-controlled     Yes       • Number of harracters per info text     500       Message system     32       • Number of analog messages     32       • System messages HMI     Yes       • Number of characters per message     80       • Number of characters per message     80       • Number of characters per message     8       • Acknowledgment groups     Yes       • Number of characters per message     8       • Acknowledgment groups     Yes </td <td>WinCC flexible Advanced</td> <td>No</td>	WinCC flexible Advanced	No
• WinCC Advanced (TIA Portal)       Yes         • WinCC Professional (TIA Portal)       Yes         Ianguages       0         • Number of online/runtime languages       10         • Project languages       22         • Languages per project       32         Functionality under WinCC (TIA Portal)       Ves         Libraries       Yes         Number of Visual Basic Scripts       No         Task planner       Yes         • Linges system       Yes         • Number of characters per info text       500         Message system       1000         • Number of alarm classes       32         • Bit messages       1000         • Analog messages       25         • System rop codure       No         • System mevent, more (SIMATIC S7, SINUMERIK, SiMATIC S7-1200 and S7-1500 SIMATIC	WinCC Basic (TIA Portal)	Yes
• WinCC Professional (TIA Portal)       Yes         Languages       0         • Number of online/nuttime languages       10         • Number of online/nuttime languages       10         • Languages per project       32         • Languages per project       32         Functionality undar WinCC (TIA Portal)       Ves         Libraries       Yes         Number of Visual Basic Scripts       No         Task planner       Yes         • time-controlled       No         • slak-controlled       Yes         • Number of characters per info text       500         Message system       Yes         • Number of bit messages       1000         • Analog messages       25         • S7 alarm number procedure       No         • System messages HMI       Yes         • Number of characters per message       80         • Number of characters per message       80         • Number of characters per message       80         • Mumber of characters per message       80         • Number of character		Yes
Languages         Online languages         • Number of online/runtime languages         • Languages project         • Languages project         22         Functionality under WinCC (TIA Portal)         Libraries       Yes         Number of Visual Basic Scripts       No         Task planner       Yes         • line-controlled       No         • task-controlled       Yes         • Number of characters per info text       500         Message system       Yes         • Number of bit messages       1000         • Analog messages       1000         • Analog messages       25         • S7 alarm number procedure       No         • System messages HMI       Yes         • Number of characters per message       80         • Number of process values per message       80         • Number of process values per message       8         • Acknowledgment groups       Yes         • Message buffer       Yes         • Number of entrices       256         • Circulating buffer       Yes         • Number of entrices       256         • Circulating buffer       Yes         • Message buffer       Y	WinCC Advanced (TIA Portal)	Yes
Online languages       10         Project languages or elanguages per project       32         Functionality under WinCC (TIA Portal)       10         Libraries       Yes         Number of Visual Basic Scripts       No         Task planner       Yes         • Libraries       No         Task planner       Yes         • time-controlled       No         • task-controlled       Yes         • Number of characters per info text       500         Message system       Yes         • Number of alarm classes       32         • Bit messages       1000         • Analog messages       25         • S7 alarm number procedure       No         • System messages HMI       Yes         • Number of characters per message       80         • Number of process values per message       80         • Number of process values per message       80         • Number of process values per message       80         • Number of entrites       256         - Circulating buffer       Yes         • Message buffer       Yes         • Number of entrites       256         - Circulating buffer       Yes         • Message buffer <td><ul> <li>WinCC Professional (TIA Portal)</li> </ul></td> <td>Yes</td>	<ul> <li>WinCC Professional (TIA Portal)</li> </ul>	Yes
• Number of online/runtime languages       10         Project languages       -         • Languages per project       32         Functionality under VinCC (TIA Portal)       -         Libraries       Yes         Number of Visual Basic Scripts       No         Task planner       Yes         • lime-controlled       No         • lime-controlled       No         • lime-controlled       Yes         • Number of characters per info text       500         Message system       Yes         • Number of datam classes       32         • Bit messages       1000         • Analog messages       25         • Number of analog messages       25         • System messages HMI       Yes         • Number of characters per message       80         • Number of characters per message       80         • Number of characters per message       80         • Number of characters per message       8         • Acknowledgment groups       Yes         • Message indicator       Yes         • Message indicator       Yes         • Message indicator       Yes         • Message indicator       Yes         • Message indicator <td>Languages</td> <td></td>	Languages	
• Number of online/runtime languages       10         Project languages       -         • Languages per project       32         Functionality under VinCC (TIA Portal)       -         Libraries       Yes         Number of Visual Basic Scripts       No         Task planner       Yes         • lime-controlled       No         • lime-controlled       No         • lime-controlled       Yes         • Number of characters per info text       500         Message system       Yes         • Number of datam classes       32         • Bit messages       1000         • Analog messages       25         • Number of analog messages       25         • System messages HMI       Yes         • Number of characters per message       80         • Number of characters per message       80         • Number of characters per message       80         • Number of characters per message       8         • Acknowledgment groups       Yes         • Message indicator       Yes         • Message indicator       Yes         • Message indicator       Yes         • Message indicator       Yes         • Message indicator <td></td> <td></td>		
Project languages         • Languages per project       32         Functionality under WinCC (TIA Portal)          Libraries       Yes         Number of Visual Basic Scripts       No         Task planner       Yes         • time-controlled       No         • task-controlled       Yes         • Number of characters per info text       500         Message system       •         • Number of alarm classes       32         • Bit messages       1 000         • Analog messages       25         • Number of bit messages       1 000         • Analog messages       25         • System messages HMI       Yes         • System messages HMI       Yes         • Number of actacters per message       80         • Number of characters per message       80         • Number of process values per message       8         • Acknowledgment groups       Yes         • Message buffer       Yes         • Mumber of entries       256         • Circulating buffer       Yes         • Message buffer       Yes         • Message buffer       Yes         • Message buffer       Yes         • Mu		10
• Languages per project     32       Functionality under WinCC (TIA Portal)       Libraries     Yes       Number of Visual Basic Scripts     No       Task planner     Yes       • time-controlled     No       • task-controlled     Yes       • Number of characters per info text     500       Message system     Yes       • Number of alarm classes     32       • Bit messages     -       - Number of alarm classes     32       • Bit messages     1000       • Analog messages     25       - Number of analog messages     25       • System event, more (SIMATIC S7, SINUMERIK, SIMOTION,, )     Yes, System message buffer of the SIMATIC S7-1200 and S7-1500       • Number of characters per message     80       • Number of process values per message     8       • Number of process values per message     8       • Number of entries     256       - Circulating buffer     Yes       • Message indicator     Yes       • Message buffer     Yes       - Number of entries     256       - Circulating buffer     Yes       • Message buffer     Yes       • Message buffer     Yes       • Message buffer     Yes       • Message buffer     Yes       •		
Functionality under WinCC (TIA Portal)         Libraries       Yes         Number of Visual Basic Scripts       No         Task planner       Yes         • time-controlled       No         • time-controlled       No         • time-controlled       Yes         • time-controlled       Yes         • Number of characters per info text       500         Message system       Yes         • Number of alarm classes       32         • Bit messages       1000         • Analog messages       25         • S7 alarn number procedure       No         • System veret, more (SIMATIC S7, SINUMERIK, SIMOTION,)       Yes; System message buffer of the SIMATIC S7-1200 and S7-1500         • Number of characters per message       80         • Number of process values per message       8         • Acknowledgment groups       Yes         • Message buffer       Yes         • Message indicator       Yes         • Message indicator       Yes         • Message indicator       Yes         • Message buffer       Yes         • Message buffer       Yes         • Circulating buffer       Yes         • Circulating buffer       Yes		32
Libraries       Yes         Number of Visual Basic Scripts       No         Task planner       Yes         • time-controlled       No         • task-controlled       Yes         • Number of characters per info text       500         Message system       Yes         • Number of alarm classes       32         • Bit messages       1000         • Analog messages       25         • S7 alarm number procedure       No         • System revel, more (SIMATIC S7, SINUMERIK, SIMOTION,)       Yes; System message buffer of the SIMATIC S7-1200 and S7-1500         • Number of characters per message       8         • Aknowledgment groups       Yes         • Number of entries       256         • Criculating buffer       Yes         • Message indicator       Yes         • Message buffer       Yes         • Message buffer       Yes         • Circulating buffer       Yes         • Circulating buffer       Yes         • Message indicator       Yes         • Message buffer       Yes         • Message indicator       Yes         • Circulating buffer       Yes         • Circulating buffer       Yes         •		
Number of Visual Basic Scripts         No           Task planner         Yes           • time-controlled         No           • task-controlled         Yes           Help system         Yes           • Number of characters per info text         500           Message system         Solo           • Number of alarm classes         32           • Bit messages         1000           • Analog messages         1000           • Analog messages         25           • S7 alarm number procedure         No           • System messages HMI         Yes           • System messages HMI         Yes           • System messages HMI         Yes           • System ovent, more (SIMATIC S7, SINUMERIK, SIMOTION,)         Yes; System message buffer of the SIMATIC S7-1200 and S7-1500           SIMOTION,)         Number of characters per message         80           • Number of process values per message         8           • Acknowledgment groups         Yes           • Message buffer         Yes           • Circulating		Yes
Task planner       Yes         • time-controlled       No         • task-controlled       Yes         Help system       Yes         • Number of characters per info text       500         Message system       Yes         • Number of alarn classes       32         • Bit messages       1000         • Analog messages       2         - Number of bit messages       1000         • Analog messages       25         • S7 alarn number procedure       No         • System event, more (SIMATIC S7, SINUMERIK, SIMOTION,)       Yes; System message buffer of the SIMATIC S7-1200 and S7-1500         • Number of characters per message       80         • Number of process values per message       8         • Acknowledgment groups       Yes         • Message buffer       Yes         • Mumber of entries       256         • Circulating buffer       Yes         • Number of entries       256         • Circulating buffer       Yes         • reentive       Yes         • maint		
• time-controlledNo• task-controlledYesHelp systemYes• Number of characters per info text500Message system•• Number of alarm classes32• Bit messages1 000• Analog messages25• Number of analog messages25• System messages HMIYes• System messages HMIYes• System messages HMIYes• System vent, more (SIMATIC S7, SINUMERIK, SIMOTION,)Yes; System message buffer of the SIMATIC S7-1200 and S7-1500• Number of process values per message8• Acknowledgment groupsYes• Message bufferYes• Message bufferYes• Message bufferYes• Number of entries256• Circulating bufferYes• Number of entries256• Circulating bufferYes• Number of entries256• Circulating bufferYes• maintenance-freeYes• maintenance-freeYes• maintenance-freeYes• Data records per recipe100		
• task-controlled         Yes           Help system         Yes           • Number of characters per info text         500           Message system         500           Message system         500           Mumber of alarn classes         32           Bit messages         -           - Number of bit messages         1000           • Analog messages         -           - Number of analog messages         25           • S7 alarn number procedure         No           • System event, more (SIMATIC S7, SINUMERIK, SIMOTION,)         Yes           • Number of characters per message         80           • Number of process values per message         8           • Acknowledgment groups         Yes           • Message buffer         Yes           • Mumber of entries         256           • Circulating buffer         Yes           • Message buffer         Yes           • Message buffer         Yes           • Number of entries         256           • Circulating buffer         Yes           • number of entries         256           • Circulating buffer         Yes           • maintenance-free         Yes           • maintenance-free		
Help system       Yes         • Number of characters per info text       500         Message system       500         • Number of alarm classes       32         • Bit messages       1000         • Analog messages       1000         • Analog messages       25         • S7 alarm number procedure       No         • System event, more (SIMATIC S7, SINUMERIK, SIMOTION,)       Yes; System message buffer of the SIMATIC S7-1200 and S7-1500         • Number of characters per message       80         • Number of process values per message       8         • Acknowledgment groups       Yes         • Message buffer       Yes         • Mumber of entries       256         • Circulating buffer       Yes         • Message buffer       Yes         • Mumber of entries       256         • Circulating buffer       Yes         • maintenance-free       Yes         • maintenance-free       Yes         • Data records per recipe       50		
Number of characters per info text         500           Message system         32           • Number of alarm classes         32           • Bit messages         1000           - Number of bit messages         1000           • Analog messages         -           - Number of analog messages         25           • S7 alarm number procedure         No           • System messages HMI         Yes           • System messages HMI         Yes; System message buffer of the SIMATIC S7-1200 and S7-1500           SIMOTION,)         80           • Number of characters per message         80           • Number of process values per message         80           • Acknowledgment groups         Yes           • Message indicator         Yes           • Message buffer         Yes           • Number of entries         256           • Circulating buffer         Yes           • Number of entries         256           • Circulating buffer         Yes           • netentive         Yes           • maintenance-free         Yes           • maintenance-free         Yes           • Data records per recipe         50           • Data records per recipe         100  <	Help system	Yes
Message system         • Number of alarm classes       32         • Bit messages       1000         • Analog messages       1000         • Analog messages       25         • S7 alarm number procedure       No         • System messages HMI       Yes         • System event, more (SIMATIC S7, SINUMERIK, SIMOTION,)       Yes, System message buffer of the SIMATIC S7-1200 and S7-1500         • Number of characters per message       80         • Number of process values per message       80         • Acknowledgment groups       Yes         • Message indicator       Yes         • Message buffer       Yes         • Mumber of entries       256         • Circulating buffer       Yes         • Message indicator       Yes         • Message buffer       Yes         • Message buffer       Yes         • Mumber of entries       256         • Circulating buffer       Yes         • maintenance-free       Yes         • maintenance-free       Yes         • Data records per recipe       50         • Data records per recipe       100		
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Number of bit messages1 000• Analog messages Number of analog messages25• S7 alarm number procedureNo• System messages HMIYes• System event, more (SIMATIC S7, SINUMERIK, SIMOTION,)Yes; System message buffer of the SIMATIC S7-1200 and S7-1500• Number of characters per message80• Number of process values per message80• Number of process values per message8• Acknowledgment groupsYes• Message indicatorYes- Number of entries256- Circulating bufferYes- Number of entries256- retentiveYes- maintenance-freeYes• Number of recipes50• Data records per recipe100	Bit messages	
• Analog messages25• Number of analog messages25• S7 alarm number procedureNo• System messages HMIYes• System nessages HMIYes; System message buffer of the SIMATIC S7-1200 and S7-1500• SiMOTION,)*• Number of characters per message80• Number of process values per message8• Acknowledgment groupsYes• Message indicatorYes• Message bufferYes• Mumber of entries256• Circulating bufferYes• number of entries256• retentiveYes• maintenance-freeYes• Number of recipes50• Data records per recipe100	-	1 000
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• System messages HMIYes• System event, more (SIMATIC S7, SINUMERIK, SIMOTION,)Yes; System message buffer of the SIMATIC S7-1200 and S7-1500• Number of characters per message80• Number of process values per message8• Acknowledgment groupsYes• Message indicatorYes• Mumber of entries256- Circulating bufferYes- retentiveYes- maintenance-freeYes• Number of recipes50• Data records per recipe100		
System event, more (SIMATIC S7, SINUMERIK, SIMOTION,)Yes; System message buffer of the SIMATIC S7-1200 and S7-1500• Number of characters per message80• Number of process values per message8• Acknowledgment groupsYes• Message indicatorYes• Message bufferYes- Number of entries256- Circulating bufferYes- retentiveYes- maintenance-freeYes• Number of recipes50• Data records per recipe100		Yes
SIMOTION,)Image: Constraint of the state		
Number of process values per message8Acknowledgment groupsYesMessage indicatorYesMessage bufferYes- Number of entries256- Circulating bufferYes- retentiveYes- maintenance-freeYesRecipe managementYes- Number of recipes50- Data records per recipe100		
Acknowledgment groupsYes• Message indicatorYes• Message bufferYes- Number of entries256- Circulating bufferYes- retentiveYes- maintenance-freeYesRecipe management• Number of recipes50• Data records per recipe100	<ul> <li>Number of characters per message</li> </ul>	80
• Message indicatorYes• Message bufferYes- Number of entries256- Circulating bufferYes- retentiveYes- retentiveYes- maintenance-freeYesRecipe management• Number of recipes50• Data records per recipe100	<ul> <li>Number of process values per message</li> </ul>	8
• Message bufferYes- Number of entries256- Circulating bufferYes- retentiveYes- maintenance-freeYesRecipe managementYes• Number of recipes50• Data records per recipe100	<ul> <li>Acknowledgment groups</li> </ul>	Yes
- Number of entries256- Circulating bufferYes- retentiveYes- maintenance-freeYesRecipe management• Number of recipes50• Data records per recipe100	Message indicator	Yes
- Circulating bufferYes- retentiveYes- maintenance-freeYesRecipe management• Number of recipes50• Data records per recipe100	Message buffer	Yes
- retentive     Yes       - maintenance-free     Yes       Recipe management     Yes       • Number of recipes     50       • Data records per recipe     100	- Number of entries	256
- maintenance-free     Yes       Recipe management	— Circulating buffer	Yes
Recipe management       • Number of recipes     50       • Data records per recipe     100	retentive	Yes
• Number of recipes     50       • Data records per recipe     100	maintenance-free	Yes
Data records per recipe     100	Recipe management	
Entries per data record     100	<ul> <li>Data records per recipe</li> </ul>	100
	<ul> <li>Entries per data record</li> </ul>	100

<ul> <li>Size of internal recipe memory</li> </ul>	256 kbyte
Recipe memory expandable	No
Variables	
Number of variables per device	800
Number of variables per screen	100
Limit values	Yes
Multiplexing	Yes
Structures	No
Arrays	Yes
Images	
Number of configurable images	250
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	100
Text fields	Yes
I/O fields	Yes
Graphic I/O fields (graphics list)	Yes
Symbolic I/O fields (text list)	Yes
Date/time fields	Yes
Switches	Yes
Buttons	Yes
	Yes
<ul> <li>Graphic display</li> <li>Icons</li> </ul>	Yes
Geometric objects	Yes
Complex image objects	10
<ul> <li>Number of complex objects per screen</li> <li>Alarm view</li> </ul>	Yes
• Trend view	Yes
User view	Yes
Status/control	No
Sm@rtClient view	No
Recipe view	Yes
• f(x) trend view	
System diagnostics view	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
Media Player	No
Bar graphs	Yes
Sliders	No
Pointer instruments	No
Analog/digital clock	No
Lists	
Number of text lists per project	150
Number of entries per text list	100
<ul> <li>Number of graphics lists per project</li> </ul>	100
Number of entries per graphics list	100
Archiving	
Number of archives per device	2
Number of entries per archive	10 000
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
Data storage format	

— CSV	No
— TXT	Yes
- RDB	No
Security	NO
Number of user groups	50
Number of user rights	32
Number of users	50
Password export/import	Yes; Possible via ProSave
SIMATIC Logon	No
Character sets	
Keyboard fonts	
– US English	Yes
Transfer (upload/download)	165
MPI/PROFIBUS DP	No
• USB	No
Ethernet	Yes
using external storage medium	No
Process coupling	
• S7-1200	Yes
• S7-1200 • S7-1500	Yes
• \$7-1500 • \$7-200	Yes
• S7-200 • S7-300/400	Yes
• LOGO!	Yes
• WinAC	Yes
• SINUMERIK	No
• SINOMERIK	Yes
Allen Bradley (EtherNet/IP)	Yes
	No
<ul><li>Allen Bradley (DF1)</li><li>Mitsubishi (MC TCP/IP)</li></ul>	Yes
	No
• Mitsubishi (FX)	
	No
OMRON (LINK/Multilink)     Madiaan (Madhua TCD/ID)	No Yes
<ul><li>Modicon (Modbus TCP/IP)</li><li>Modicon (Modbus)</li></ul>	
	No
Service tools/configuration aids	Vas: Passible via ProSava
<ul> <li>Backup/Restore manually</li> <li>Backup/Restore automatically</li> </ul>	Yes; Possible via ProSave No
Simulation	Yes
Sinulation     Device switchover	Yes
	Tes
Peripherals/Options	
Printer	No
SIMATIC HMI MM memory card: Multi Media Card	No
SIMATIC HMI SD memory card: Secure Digital memory card	No
USB memory	Yes
Mechanics/material	
Enclosure material (front) <ul> <li>Plastic</li> </ul>	Yes
	No
<ul> <li>Aluminum</li> <li>Stainless steel</li> </ul>	No
Dimensions	007 mm
Width of the housing front	267 mm
Height of housing front	182 mm
Mounting cutout, width	251 mm
Mounting cutout, height	166 mm
Overall depth	55 mm
Weights	
Weight (without packaging)	1 130 g
Weight (with packaging)	1 393 g
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