SIEMENS

Data sheet 6AG1800-4BA00-7AA0

product type designation	**SINAUT ST7, TIM 4R-IE**



spare part SIPLUS NET TIM 4R-IE based on 6NH7800-4BA00 with conformal coating, -25…+70 °C, communications module for SIMATIC S7-300, S7-400, C7, PC with two RS-232/RS-485 interfaces for SINAUT communication via classic wide area networks and two RJ45 interfaces for SINAUT communication via IP-based networks (WAN or LAN)

product brand name	SIPLUS
Technical Product Detail Page	https://i.siemens.com/1P6AG1800-4BA00-7AA0
transfer rate	
transfer rate	
● for Industrial Ethernet	10 ... 100 Mbit/s
● according to RS 232	50 ... 38400 bit/s
interfaces	
number of interfaces / according to Industrial Ethernet	2
number of electrical connections	
● for external data transmission / according to RS 232	2
● for power supply	1
type of electrical connection	
● of Industrial Ethernet interface	RJ45 port
type of electrical connection	
● at interface 1 / for external data transmission	9 pin Sub-D-connector, RS232 switchable to RS485
● at interface 2 / for external data transmission	9-pole D-sub connector, RS232 can be switched to RS485
● for power supply	2-pole plugable terminal block
design of the removable storage	
● C-PLUG	Yes
supply voltage, current consumption, power loss	
type of voltage / of the supply voltage	DC
supply voltage	24 V
supply voltage	20.4 ... 28.8 V
supply voltage / external / at DC / rated value	24 V
supply voltage / external / at DC / rated value	20.4 ... 28.8 V
consumed current	
● from backplane bus / at DC / at 24 V / maximum	0.2 A
● from external supply voltage / at DC / at 24 V / maximum	0.17 A
power loss [W]	4.6 W
product extension / optional / backup battery	Yes
type of battery	Lithium AA / 3.6 V / 2.3 Ah
backup current	
● typical	100 µA
● maximum	160 µA
ambient conditions	
ambient temperature	
● during operation	-25 ... +70 °C
● during storage	-40 ... +70 °C

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● during transport	-40 ... +70 °C
installation altitude / at height above sea level / maximum	5000 m
ambient condition / relating to ambient temperature - air pressure - installation 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 / according to IEC 60068-2-38 / maximum	100 %; RH including condensation/frost (no commissioning when condensation is present), horizontal installation
chemical resistance / to commercially available cooling lubricants	Yes; incl. airborne diesel and oil droplets
resistance to biologically active substances	
● conformity according to EN 60721-3-3	Yes; Class 3B2 mold and fungal spores (excluding fauna), Class 3B3 on request
● conformity according to EN 60721-3-6	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
resistance to chemically active substances	
● conformity according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray in accordance with EN 60068-2-52 (Severity 3). The supplied plug covers must remain in place on the unused interfaces during operation.
● conformity according to EN 60721-3-6	Yes
resistance to mechanically active substances	
● conformity according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust. The supplied plug covers must remain in place over the unused interfaces during operation.
● conformity according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust. The supplied plug covers must remain in place over the unused interfaces during operation.
coating / for equipped printed circuit board / according to EN 61086	Yes; Class 2 for high availability
type of coating / protection against pollution according to EN 60664-3	Yes; Protection of the type 1
type of test / of the coating / according to MIL-I-46058C	Yes; Coating discoloration during service life possible
product conformity / of the coating / Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, class A
protection class IP	IP20
design, dimensions and weights	
module format	Compact module S7-300 double width
width	80 mm
height	125 mm
depth	120 mm
net weight	0.4 kg
product features, product functions, product components / general	
wire length	
● with RS 232 interface / maximum	6 m
● with RS 485 interface / maximum	30 m
performance data / S7 communication	
number of possible connections / for S7 communication	
● maximum	64
● with PG connections / maximum	2
● with OP connections / maximum	62
service	
● SINAUT ST7 via S7 communication	Yes
● PG/OP communication	Yes
performance data / multi-protocol mode	
number of active connections / with multi-protocol mode	128
performance data / telecontrol	
suitability for use	
● node station	Yes
● substation	Yes
● TIM control center	Yes
protocol / is supported	
● SINAUT ST1 protocol	Yes
● SINAUT ST7 protocol	Yes
storage capacity	

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● note	TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case
product feature / buffered message frame memory	Yes
transmission format	
● for SINAUT ST1 protocol with polling / 11 bit	Yes
● for SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit	Yes
● for SINAUT ST7 protocol with multi-master polling / 10-bit	Yes
● for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit	Yes
operating mode for scanning of data transmission	
● with dedicated line/radio link / with SINAUT ST1 protocol	Polling, polling with time slot procedure
● with dedicated line/radio link / with SINAUT ST7 protocol	Polling, polling with time slot procedure, multi-master polling with time slot procedure
● with dial-up network / with SINAUT ST1 protocol	spontaneous
● with dial-up network / with SINAUT ST7 protocol	spontaneous
hamming distance	
● for SINAUT ST1 protocol	4
● for SINAUT ST7 protocol	4
product functions / management, configuration, engineering	
configuration software	
● required	SINAUT ST7 ES
● for CPU configuring / required / SINAUT TD7 block library for CPU	Yes
● for PG configuring / required / SINAUT ST7 configuration software for PG	Yes
storage location / of TIM configuration data	on internal TIM flash memory, or on TIM in optional C-PLUG, or on MMC of the S7-300 CPU if TIM installed in S7-300 controller
product functions / security	
operating mode / Virtual Private Network (VPN)	Yes
type of authentication / with Virtual Private Network / PSK	Yes
protocol	
● with Virtual Private Network MSC / is supported	TCP/IP
product functions / time	
product component / hardware real time clock	Yes
product feature / hardware real time clock w. battery backup	Yes
accuracy / of the hardware real time clock / per day / maximum	4 s
further information / internet links	
internet link	
● to website: Selection guide for cables and connectors	https://support.industry.siemens.com/cs/ww/en/view/109766358
● to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
● to website: Industrial communication	https://www.siemens.com/simatic-net
● to web page: SiePortal	https://sieportal.siemens.com/
● to website: Image database	https://www.automation.siemens.com/bilddb
● to website: CAx-Download-Manager	https://siemens.com/cax
● to website: Industry Online Support	https://support.industry.siemens.com
security information	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement - and continuously maintain - a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under

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