SIEMENS

Data sheet 6NH7800-3CA00

product type designation	**TIM 3V-IE Advanced**



- - spare part - - SINAUT ST7, TIM 3V-IE Advanced communications module for SIMATIC S7-300 with an RS232 interface for SINAUT communication via a classic WAN and an RJ45 interface for SINAUT communication via an IP-based network (WAN or LAN).

Technical Product Detail Page	https://i.siemens.com/1P6NH7800-3CA00
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	1
number of electrical connections	
● for external data transmission / according to RS 232	1
● 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)
● for power supply	2-pole plugable terminal block
design of the removable storage	
● C-PLUG	No
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
relative symmetrical tolerance / at DC	
● at 5 V	5 %
relative positive tolerance / at DC / at 24 V	5 %
relative negative tolerance / at DC / at 24 V	5 %
consumed current	
● from backplane bus / at DC / at 24 V / maximum	0.2 A
● from external supply voltage / at DC / at 24 V / maximum	0.2 A
power loss [W]	5.8 W
product extension / optional / backup battery	No
ambient conditions	
ambient temperature	
● during operation	0 ... 60 °C
● during storage	-40 ... +70 °C
● during transport	-40 ... +70 °C
relative humidity	

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● at 25 °C / without condensation / during operation / maximum	95 %
protection class IP	IP20
design, dimensions and weights	
module format	Compact module S7-300 single width
width	40 mm
height	125 mm
depth	120 mm
net weight	0.25 kg
product features, product functions, product components / general	
number of units	
● note	Number of TIMs per S7-300: multiple, number depends on the connection resources of the S7-300 CPU
wire length	
● with RS 232 interface / maximum	6 m
performance data / S7 communication	
number of possible connections / for S7 communication	
● maximum	24
● with PG connections / maximum	4
● with OP connections / maximum	20
service	
● SINAUT ST7 via S7 communication	Yes
● PG/OP communication	Yes
performance data / multi-protocol mode	
number of active connections / with multi-protocol mode	24
performance data / telecontrol	
suitability for use	
● node station	Yes
● substation	Yes
● TIM control center	Yes
● note	RS232 and Industrial Ethernet can be operated in parallel
protocol / is supported	
● DNP3	No
● SINAUT ST1 protocol	Yes
● SINAUT ST7 protocol	Yes
product function / data buffering if connection is aborted	Yes; 32,000 data messages
storage capacity	
● of S7 CPU work memory / for TD7onCPU mode data blocks on CPU / required	20 Kibyte
● of S7 CPU work memory / for TD7onTIM mode data blocks on TIM / required	0 Kibyte
● 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	No
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	

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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 the TIM
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
product functions / security	
operating mode / Virtual Private Network (VPN)	Yes
type of authentication / with Virtual Private Network / PSK	Yes
product function	
● password protection for VPN	Yes
● MSC client via GPRS modem with MSC capability	Yes
protocol	
● is supported / MSC protocol	Yes
● with Virtual Private Network MSC / is supported	TCP/IP
key length / for MSC / with Virtual Private Network	128 bit
number of possible connections	
● as MSC client / with VPN connection	1
● as MSC server / with VPN connection	0
standards, specifications, approvals	
certificate of suitability / CE marking	Yes
certificate of suitability / UKCA marking	Yes
certificate of suitability / KC approval	Yes
certificate of suitability / Regulatory Compliance Mark (RCM)	Yes
certificate of suitability / RoHS conformity	Yes
standards, specifications, approvals / hazardous environments / header	
certificate of suitability / ATEX	Yes
certificate of suitability / IECEx	Yes
certificate of suitability / ULhazloc approval	Yes
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
certificate of suitability / FM registration	Yes
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 https://www.siemens.com/cert. (V4.7)
Approvals / Certificates	

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General Product Approval					
EG-Konf.	Declaration of Conformity	UKCA	CCC	China RoHS	UL

General Product Approval	EMV	For use in hazardous locations			
RCM	KC	ATEX	IECEx	FM	CCC-Ex

For use in hazardous locations
UL

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