

product type designation



Figure similar

TIM 4R-IE

SINAUT ST7, TIM 4R-IE communications module for SIMATIC S7-300, S7-400, PC; with two RS232/RS485 interfaces for SINAUT Communication via standard WAN networks and two RJ45 interfaces for SINAUT communication via IP-based networks (WAN or LAN).

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	0 ... 60 °C
• during storage	-40 ... +70 °C
• during transport	-40 ... +70 °C
relative humidity	

<ul style="list-style-type: none"> at 25 °C / without condensation / during operation / maximum 	95 %
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	
number of units <ul style="list-style-type: none"> note 	Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU
wire length <ul style="list-style-type: none"> with RS 232 interface / maximum with RS 485 interface / maximum 	6 m 30 m
performance data / S7 communication	
number of possible connections / for S7 communication <ul style="list-style-type: none"> maximum with PG connections / maximum with OP connections / maximum 	64 2 62
service <ul style="list-style-type: none"> SINAUT ST7 via S7 communication PG/OP communication 	Yes Yes
performance data / multi-protocol mode	
number of active connections / with multi-protocol mode	128
performance data / telecontrol	
suitability for use <ul style="list-style-type: none"> node station substation TIM control center 	Yes Yes Yes
protocol / is supported <ul style="list-style-type: none"> DNP3 SINAUT ST1 protocol SINAUT ST7 protocol 	No Yes Yes
product function / data buffering if connection is aborted	Yes; 56,000 data messages
storage capacity <ul style="list-style-type: none"> of S7 CPU work memory / for TD7onCPU mode data blocks on CPU / required of S7 CPU work memory / for TD7onTIM mode data blocks on TIM / required note 	20 Kibyte 0 Kibyte 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 <ul style="list-style-type: none"> for SINAUT ST1 protocol with polling / 11 bit for SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit for SINAUT ST7 protocol with multi-master polling / 10-bit for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit 	Yes Yes Yes Yes
operating mode for scanning of data transmission <ul style="list-style-type: none"> with dedicated line/radio link / with SINAUT ST1 protocol with dedicated line/radio link / with SINAUT ST7 protocol with dial-up network / with SINAUT ST1 protocol with dial-up network / with SINAUT ST7 protocol 	Polling, polling with time slot procedure Polling, polling with time slot procedure, multi-master polling with time slot procedure spontaneous spontaneous
hamming distance <ul style="list-style-type: none"> for SINAUT ST1 protocol for SINAUT ST7 protocol 	4 4
product functions / management, configuration, engineering	
configuration software	

<ul style="list-style-type: none"> • required • for CPU configuring / required / SINAUT TD7 block library for CPU • for PG configuring / required / SINAUT ST7 configuration software for PG 	SINAUT ST7 ES Yes 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 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	
<ul style="list-style-type: none"> • password protection for VPN • MSC client via GPRS modem with MSC capability 	Yes Yes
protocol	
<ul style="list-style-type: none"> • is supported / MSC protocol • with Virtual Private Network MSC / is supported 	Yes TCP/IP
key length / for MSC / with Virtual Private Network	128 bit
number of possible connections	
<ul style="list-style-type: none"> • as MSC client / with VPN connection • as MSC server / with VPN connection 	1 128
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
time synchronization	
<ul style="list-style-type: none"> • from NTP-server 	Yes
standards, specifications, approvals	
reference code	
<ul style="list-style-type: none"> • according to IEC 81346-2:2019 	KEC
further information / internet links	
internet link	
<ul style="list-style-type: none"> • to website: Selection guide for cables and connectors • to web page: selection aid TIA Selection Tool • to website: Industrial communication • to web page: SiePortal • to website: Image database • to website: CAX-Download-Manager • to website: Industry Online Support 	https://support.industry.siemens.com/cs/ww/en/view/109766358 https://www.siemens.com/tstcloud https://www.siemens.com/simatic-net https://sieportal.siemens.com/ https://www.automation.siemens.com/bilddb https://siemens.com/cax https://support.industry.siemens.com
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security information	<p>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)</p>
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