



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 Communications via classic WANs 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	-25 ... +70 °C
• during storage	-40 ... +70 °C
• 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	
<ul style="list-style-type: none"> <li>with condensation / according to IEC 60068-2-38 / maximum</li> </ul>	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	
<ul style="list-style-type: none"> <li>conformity according to EN 60721-3-3</li> </ul>	Yes; Class 3B2 mold and fungal spores (excluding fauna), Class 3B3 on request
<ul style="list-style-type: none"> <li>conformity according to EN 60721-3-6</li> </ul>	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
resistance to chemically active substances	
<ul style="list-style-type: none"> <li>conformity according to EN 60721-3-3</li> </ul>	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.
<ul style="list-style-type: none"> <li>conformity according to EN 60721-3-6</li> </ul>	Yes
resistance to mechanically active substances	
<ul style="list-style-type: none"> <li>conformity according to EN 60721-3-3</li> </ul>	Yes; Class 3S4 incl. sand, dust. The supplied plug covers must remain in place over the unused interfaces during operation.
<ul style="list-style-type: none"> <li>conformity according to EN 60721-3-6</li> </ul>	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
<b>design, dimensions and weights</b>	
module format	Compact module S7-300 double width
width	80 mm
height	125 mm
depth	120 mm
net weight	0.4 kg
<b>product features, product functions, product components / general</b>	
wire length	
<ul style="list-style-type: none"> <li>with RS 232 interface / maximum</li> </ul>	6 m
<ul style="list-style-type: none"> <li>with RS 485 interface / maximum</li> </ul>	30 m
<b>performance data / S7 communication</b>	
number of possible connections / for S7 communication	
<ul style="list-style-type: none"> <li>maximum</li> </ul>	64
<ul style="list-style-type: none"> <li>with PG connections / maximum</li> </ul>	2
<ul style="list-style-type: none"> <li>with OP connections / maximum</li> </ul>	62
service	
<ul style="list-style-type: none"> <li>SINAUT ST7 via S7 communication</li> </ul>	Yes
<ul style="list-style-type: none"> <li>PG/OP communication</li> </ul>	Yes
<b>performance data / multi-protocol mode</b>	
number of active connections / with multi-protocol mode	128
<b>performance data / telecontrol</b>	
suitability for use	
<ul style="list-style-type: none"> <li>node station</li> </ul>	Yes
<ul style="list-style-type: none"> <li>substation</li> </ul>	Yes
<ul style="list-style-type: none"> <li>TIM control center</li> </ul>	Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>SINAUT ST1 protocol</li> </ul>	Yes
<ul style="list-style-type: none"> <li>SINAUT ST7 protocol</li> </ul>	Yes
storage capacity	
<ul style="list-style-type: none"> <li>note</li> </ul>	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"> <li>for SINAUT ST1 protocol with polling / 11 bit</li> </ul>	Yes
<ul style="list-style-type: none"> <li>for SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit</li> </ul>	Yes

<ul style="list-style-type: none"> <li>• for SINAUT ST7 protocol with multi-master polling / 10-bit</li> <li>• for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit</li> </ul>	Yes Yes
operating mode for scanning of data transmission <ul style="list-style-type: none"> <li>• with dedicated line/radio link / with SINAUT ST1 protocol</li> <li>• with dedicated line/radio link / with SINAUT ST7 protocol</li> <li>• with dial-up network / with SINAUT ST1 protocol</li> <li>• with dial-up network / with SINAUT ST7 protocol</li> </ul>	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"> <li>• for SINAUT ST1 protocol</li> <li>• for SINAUT ST7 protocol</li> </ul>	4 4
<b>product functions / management, configuration, engineering</b>	
configuration software <ul style="list-style-type: none"> <li>• required</li> <li>• for CPU configuring / required / SINAUT TD7 block library for CPU</li> <li>• for PG configuring / required / SINAUT ST7 configuration software for PG</li> </ul>	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
<b>product functions / security</b>	
operating mode / Virtual Private Network (VPN)	Yes
type of authentication / with Virtual Private Network / PSK	Yes
protocol <ul style="list-style-type: none"> <li>• with Virtual Private Network MSC / is supported</li> </ul>	TCP/IP
<b>product functions / time</b>	
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
<b>standards, specifications, approvals</b>	
reference code <ul style="list-style-type: none"> <li>• according to IEC 81346-2:2019</li> </ul>	KEC
<b>further information / internet links</b>	
internet link <ul style="list-style-type: none"> <li>• to website: Selection guide for cables and connectors</li> <li>• to web page: selection aid TIA Selection Tool</li> <li>• to website: Industrial communication</li> <li>• to web page: SiePortal</li> <li>• to website: Image database</li> <li>• to website: CAx-Download-Manager</li> <li>• to website: Industry Online Support</li> </ul>	<a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a> <a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a> <a href="https://www.siemens.com/simatic-net">https://www.siemens.com/simatic-net</a> <a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a> <a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a> <a href="https://siemens.com/cax">https://siemens.com/cax</a> <a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>
<b>security information</b>	
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<b>Approvals / Certificates</b>	
General Product Approval	EMV

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