

Product type designation

TIM 4R-IE DNP3

TIM 4R-IE DNP3 communication module for SIMATIC S7-300, S7-400, PC; with two RS232/RS485 Interfaces for DNP3-Communication via standard WAN and two RJ45 interfaces for DNP3 communication via IP-based networks (WAN or LAN)



Transfer rate

Transfer rate

- for Industrial Ethernet
- acc. to RS 232

10 ... 100 Mbit/s

9600 ... 115200 bit/s

Interfaces

Number of interfaces / acc. to Industrial Ethernet

2

Number of electrical connections

- for external data transmission / acc. to RS 232
- for power supply

2

1

Type of electrical connection

- of Industrial Ethernet interface

RJ45 port

Type of electrical connection

- at interface 1 / for external data transmission
- at interface 2 / for external data transmission
- for power supply

9 pin Sub-D-connector, RS232 switchable to RS485

9-pole D-sub connector, RS232 can be switched to RS485

2-pole pluggable 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	
<ul style="list-style-type: none"> • from backplane bus / at DC / at 24 V / maximum 	0.2 A
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • typical 	100 µA
<ul style="list-style-type: none"> • maximum 	160 µA

Ambient conditions

Ambient temperature	
<ul style="list-style-type: none"> • during operation 	0 ... 60 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +70 °C
<ul style="list-style-type: none"> • 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 TIMs per S7-300 / S7-400: 1
Wire length	
<ul style="list-style-type: none"> • with RS 232 interface / maximum 	6 m
<ul style="list-style-type: none"> • with RS 485 interface / maximum 	30 m

Performance data / S7 communication

Number of possible connections / for S7 communication	
<ul style="list-style-type: none"> • maximum 	5; only via LAN
<ul style="list-style-type: none"> • with PG connections / maximum 	2

<ul style="list-style-type: none"> • with OP connections / maximum 	1
Service	
<ul style="list-style-type: none"> • PG/OP communication 	Yes

Performance data / telecontrol

Suitability for use	
<ul style="list-style-type: none"> • Node station 	Yes
<ul style="list-style-type: none"> • substation 	Yes
<ul style="list-style-type: none"> • TIM control center 	Yes
Protocol / is supported	
<ul style="list-style-type: none"> • DNP3 	Yes
<ul style="list-style-type: none"> • SINAUT ST1 protocol 	No
<ul style="list-style-type: none"> • SINAUT ST7 protocol 	No
<ul style="list-style-type: none"> • Modbus RTU 	Yes
Product function / data buffering if connection is aborted	Yes; 200,000 data points with one master
Number of DNP3 masters	
<ul style="list-style-type: none"> • for Ethernet / maximum 	8
<ul style="list-style-type: none"> • with RS 232 interface / maximum 	1
Number of Modbus RTU slaves / maximum	1

Product functions / management, configuration, engineering

Configuration software	
<ul style="list-style-type: none"> • required 	SINAUT ST7 ES
Storage location / of TIM configuration data	on the CPU or TIM

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

Further information / Internet-Links

Internet-Link	
<ul style="list-style-type: none"> • to website: Selector SIMATIC NET SELECTION TOOL 	http://www.siemens.com/snst
<ul style="list-style-type: none"> • to website: Industrial communication 	http://www.siemens.com/simatic-net
<ul style="list-style-type: none"> • to website: Industry Mall 	https://mall.industry.siemens.com
<ul style="list-style-type: none"> • to website: Information and Download Center 	http://www.siemens.com/industry/infocenter
<ul style="list-style-type: none"> • to website: Image database 	http://automation.siemens.com/bilddb
<ul style="list-style-type: none"> • to website: CAx Download Manager 	http://www.siemens.com/cax
<ul style="list-style-type: none"> • to website: Industry Online Support 	https://support.industry.siemens.com

Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this in mind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates. For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action (e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit <http://www.siemens.com/industrialsecurity>. To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit <http://support.automation.siemens.com>. (V3.4)

last modified:

05/12/2020