

Product type designation

PLUS SINAUT ST7, TIM 4R-IE

SIPLUS ST7 TIM 4R-IE -25...+70 °C with conformal coating based on 6NH7800-4BA00 . communication module for "SIMATIC S7-300, S7-400, C7, PC with two RS232/RS485 interfaces for SINAUT Communications via classic WANs and two RJ45 interfaces for SINAUT communication via IP-based networks (WAN or LAN)



Transmission rate

Transfer rate

- | | |
|---------------------------|--------------------|
| • for Industrial Ethernet | 10 ... 100 Mbit/s |
| • acc. to RS 232 | 50 ... 38400 bit/s |

Interfaces

Number of interfaces / acc. to Industrial Ethernet

2

Number of electrical connections

- | | |
|---|---|
| • for external data transmission / acc. to RS 232 | 2 |
| • for power supply | 1 |

Type of electrical connection

- | | |
|---|--|
| • of Industrial Ethernet interface | RJ45 port |
| • 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

Permitted ambient conditions

Ambient temperature	
• during operation	-25 ... +70 °C
• during storage	-40 ... +70 °C
• during transport	-40 ... +70 °C
Ambient condition / relating to ambient temperature - air pressure - installation altitude	-25 ... +70°C at 1080 hPa ... 795 hPa (-1000 m ... +2000 m) // -25 ... +60°C at 795 hPa ... 658 hPa (+2000 m ... +3500 m) // -25 ... +50°C at 658 hPa ... 540 hPa (+3500 m ... +5000 m)
Relative humidity / with condensation / maximum	100 %; r.F., incl. condensation/frost permitted (no commissioning in bedewed state)
Resistance to biologically active substances	
• conformity acc. to EN 60721-3-3	Yes; Compliance with EN 60721-3-3, Class 3B2 mold, fungus, and sponge spores (except fauna). The supplied plug covers must remain in place over the unused interfaces during operation!
Resistance to chemically active substances	
• conformity acc. to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3). The supplied plug covers must remain in place over the unused interfaces during operation!
Resistance to mechanically active substances	
• conformity acc. 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!
Protection class IP	IP20

Design, dimensions and weight

Module format	Compact module S7-300 double width
Width	80 mm
Height	125 mm
Depth	120 mm
Net weight	0.4 kg

Product properties, functions, 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

- | | |
|-----------------------|-----|
| • TCP/IP | Yes |
| • SINAUT ST1 protocol | Yes |
| • SINAUT ST7 protocol | Yes |

Storage capacity

- | | |
|--------|--|
| • 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 |
|---|---|

<ul style="list-style-type: none"> • 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, 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
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 functions / Security

Suitability for operation / Virtual Private Network	Yes
Type of authentication / with Virtual Private Network / PSK	Yes
Protocol <ul style="list-style-type: none"> • 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

Accessories

Further Information / Internet Links

Internet-Link <ul style="list-style-type: none"> • to website: Selector SIMATIC NET SELECTION TOOL • to website: Industrial communication • to website: Information and Download Center • to website: Image database • to website: CAx Download Manager 	http://www.siemens.com/snst http://www.siemens.com/simatic-net http://www.siemens.com/automation/net/catalog http://automation.siemens.com/bilddb http://www.siemens.com/cax
last modified:	05/16/2018