# SIEMENS

**Data sheet**                                                **6NH7800-3BA00**

| product type designation | TIM 3V-IE |
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SINAUT ST7, TIM 3V-IE 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).

| 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 | |
| ● at 25 °C / without condensation / during operation / maximum | 95 % |

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| 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 | |
| ● per CPU / maximum | 1 |
| ● note | Number of TIM per S7-300 |
| wire length | |
| ● with RS 232 interface / maximum | 6 m |
| **performance data / S7 communication** | |
| number of possible connections / for S7 communication | |
| ● maximum | 8 |
| ● with PG connections / maximum | 2 |
| ● with OP connections / maximum | 8 |
| service | |
| ● SINAUT ST7 via S7 communication | Yes |
| ● PG/OP communication | Yes |
| **performance data / multi-protocol mode** | |
| number of active connections / with multi-protocol mode | 12 |
| **performance data / telecontrol** | |
| suitability for use | |
| ● node station | No |
| ● substation | Yes |
| ● TIM control center | No |
| ● note | RS232 and Industrial Ethernet can not 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; 16,000 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** | |
| configuration software | |
| ● required | SINAUT ST7 ES |
| ● for CPU configuring / required / SINAUT TD7 block library | Yes |

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| | |
|---|---|
| for CPU | |
| ● for PG configuring / required / SINAUT ST7 configuration software for PG | Yes |
| storage location / of TIM configuration data | on the TIM |

| **product functions / security** | |
|---|---|
| operating mode / Virtual Private Network (VPN) | Yes; VPN operation as MSC client with MSC protocol and password protection only possible in conjunction with GPRS modem with MSC capability |
| 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 | No |
| 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** | |
|---|---|
| reference code | |
| ● according to IEC 81346-2:2019 | KEC |

| **further information / internet links** | |
|---|---|
| internet link | |
| ● 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://www.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

### General Product Approval

| CE | UKCA | Declaration of Conformity | CCC | UL | RCM |
|---|---|---|---|---|---|
| EG-Konf. | | | CCC | UL | RCM |

| **EMV** | **For use in hazardous locations** | | |
|---|---|---|---|
| KC | ATEX | IECEx | FM | ATEX | CCC-Ex |

| **For use in hazardous locations** | **Environment** |
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[Confirmation](Confirmation)

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