# SIEMENS

| Data sheet | 6NH3112-0BA00-0XX0 |
|---|---|

| product type designation | **RTU3010C** |
|---|---|
| | SIMATIC RTU3010C compact low-power RTU; battery or solar-operated; connection ext. power supply 10.8 V to 28.8 V DC; connection of external modems; connection to TeleControl Server Basic, loadable protocols: DNP3, IEC 60870-5-104, SINAUT ST7 or MQTT, onboard I/Os: 8 DI, 4 DO, 4 AI; FTP client; configuration/diagnostics via web server; time-of-day synchronization; email; SD card slot. |

| | |
|---|---|
| operating mode | Standby mode (Sleep mode), Actualization mode, Communication mode |
| **transfer rate** | |
| transfer rate | |
| ● for Industrial Ethernet | 10 ... 100 Mbit/s |
| **interfaces** | |
| number of interfaces / according to Industrial Ethernet | 1 |
| number of electrical connections | |
| ● at the 1st interface / according to Industrial Ethernet | 1 |
| ● for power supply | 1 |
| number of slots | |
| ● for memory cards | 1 |
| type of electrical connection | |
| ● at the 1st interface / according to Industrial Ethernet | RJ45 port |
| type of electrical connection | |
| ● for power supply | 5-pole plugable terminal block |
| slot version | |
| ● of the memory card | SD 1.0, SD 1.1, SDHC, Siemens SMC |
| storage capacity / of the memory card / maximum | 32 Gibyte |
| design of the removable storage | |
| ● C-PLUG | No |
| **signal inputs/outputs** | |
| number of electrical connections / for digital input signals | 8 |
| type of electrical connection / for digital input signals | pluggable screw terminal block |
| digital input version | Suitable for open-drain transistor or switch, 2-wire-technique |
| number of electrical connections / as counter inputs / for digital input signals | 2 |
| pulse duration / at counter input / minimum | 0.1 ms |
| pulse frequency / at counter input / maximum | 5000 Hz |
| number of electrical connections / for digital output signals | 4 |
| type of electrical connection / for digital output signals | pluggable screw terminal block |
| digital output version | bistable relay, 2-wire-technique |
| output current / at digital output | 300 mA; Limiting continuous current |
| number of analog inputs / integrated | 4 |
| connector type / at the analog input | pluggable screw terminal block |
| type of analog input | 2-/3-/4-wire-technique |
| product function / parameterizable analog inputs | Yes; Current 0/4..20mA, Voltage 0..5/10V, Temperature (Pt1000) -80..+140°C |
| A/D resolution / at the analog input | 12 bit |
| **wireless technology** | |
| type of mobile wireless service | |

6/11/2023

| | |
|---|---|
| ● is supported / SMS | No |
| ● note | over external, IP-based router |
| **supply voltage, current consumption, power loss** | |
| type of voltage / of the supply voltage | DC |
| supply voltage / external / at DC | 12 ... 24 V |
| supply voltage / external / at DC / rated value | 10.8 ... 28.8 V |
| type of output voltage / for the supply of external devices | DC 12 V or 24 V |
| consumed current / note | without connected consumers |
| consumed current | |
| ● from external supply voltage / at 24 V DC | |
| — in standby mode / typical | 14 mA |
| — in update mode / typical | 35 mA |
| — in communication mode / typical | 55 mA |
| ● with battery operation / at 7.2 V DC | |
| — in standby mode / typical | 0.28 mA |
| — in update mode / typical | 71 mA |
| — in communication mode / typical | 125 mA |
| power loss [W] | without connected consumers |
| power loss [W] / with external supply voltage / at 24 V DC | |
| ● in standby mode / typical | 0.34 W |
| ● in update mode / typical | 0.85 W |
| ● in communication mode / typical | 1.25 W |
| power loss [W] / with battery operation / at 7.2 V DC | |
| ● in standby mode / typical | 0.002 W |
| ● in update mode / typical | 0.51 W |
| ● in communication mode / typical | 0.9 W |
| **ambient conditions** | |
| ambient temperature | |
| ● for vertical installation / during operation | -40 ... +60 °C |
| ● for horizontally arranged busbars / during operation | -40 ... +70 °C |
| ● during storage | -40 ... +70 °C |
| ● during transport | -40 ... +70 °C |
| relative humidity | |
| ● at 30 °C / without condensation / during operation / maximum | 95 % |
| protection class IP | IP20; IP68 with protective housing (see accessories) |
| **design, dimensions and weights** | |
| module format | Compact module |
| width | 130 mm |
| height | 100 mm |
| depth | 75 mm |
| net weight | 0.34 kg |
| fastening method | |
| ● 35 mm top hat DIN rail mounting | Yes |
| ● wall mounting | Yes |
| **product functions / cloud connectivity** | |
| protocol / is supported | |
| ● Message Queuing Telemetry Transport (MQTT) | Yes |
| product function / for cloud connectivity | |
| ● trigger management | Yes |
| ● time stamping | Yes |
| product feature / for cloud connectivity / buffered message frame memory | Yes |
| **performance data** | |
| number of users / email addresses / definable / maximum | 20 |
| number of user groups / definable / maximum | 10 |
| number of program block types | 42 |
| number of configurable program blocks | 48 |
| number of digital bit memories / maximum | 40 |
| number of analog bit memories / maximum | 24 |
| **performance data / IT functions** | |

| | |
|---|---|
| number of possible connections | |
| ● as client / by means of FTP / maximum | 1 |
| number of entries / in the FTP buffer / maximum | 12 |
| number of possible connections | |
| ● as server / by means of HTTP / maximum | 2 |
| ● as server / by means of HTTPS / maximum | 2; http and https can be combined (max. number of 2 connections cannot be exceeded). |
| ● as email client / maximum | 1 |
| number of free texts / for emails and SMS / maximum | 20 |
| number of characters / per free text for emails or SMS / maximum | 160 |
| number of entries / in the email buffer / maximum | 12 |

### performance data / telecontrol

| | |
|---|---|
| suitability for use | |
| ● node station | No |
| ● substation | Yes |
| ● TIM control center | No |
| control center connection | IEC 60870-5-104, DNP3-capable control stations, SINAUT ST7cc/sc, TeleControl Server Basic |
| ● by means of a permanent connection | supported |
| ● by means of demand-oriented connection | supported |
| protocol / is supported | |
| ● DNP3 | Yes |
| ● IEC 60870-5 | Yes |
| ● SINAUT ST7 protocol | Yes |
| product function / data buffering if connection is aborted | Yes; number of telegrams for: IEC 60870: approx. 5,000, DNP3: approx. 10,900, SINAUT ST7: approx. 7,700, TeleControl Server Basic: approx. 10.900 |
| data volume / as user data per station / in telecontrol mode / maximum | 256 Kibyte |
| product feature / buffered message frame memory | Yes |

### performance data / teleservice

| | |
|---|---|
| diagnostics function / online diagnostics with SIMATIC STEP 7 | No |
| product function | |
| ● program download with SIMATIC STEP 7 | No |
| ● remote firmware update | Yes |
| ● remote configuration | Yes |

### product functions / management, configuration, engineering

| | |
|---|---|
| configuration software | |
| ● required | No, configuration by using the integrated webserver |
| product function / gateway / for SIMATIC PDM | |
| ● with Modbus TCP | Yes |
| ● with HART-IP protocol | Yes |

### product functions / diagnostics

| | |
|---|---|
| product function / web-based diagnostics | Yes |

### product functions / security

| | |
|---|---|
| operating mode / Virtual Private Network (VPN) | Yes; OpenVPN client |
| product function / with VPN connection | OpenVPN |
| type of encryption algorithms / with VPN connection | AES-128, AES-256 |
| type of authentication procedure / with VPN connection | certificate based |
| type of authentication / with Virtual Private Network / PSK | No |
| type of hashing algorithms / with VPN connection | SHA-256 |
| number of possible connections / with VPN connection | 2; one simultaneous productive connection only |
| product function | |
| ● password protection for Web applications | Yes |
| ● password protection for teleservice access | Yes |
| ● password protection for VPN | Yes |
| ● encrypted data transmission | Yes |
| ● switch-off of non-required services | Yes |
| ● SysLog | Yes |

### product functions / time

| | |
|---|---|
| protocol / is supported | |
| ● NTP | Yes |

| | |
|---|---|
| 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 | 1.8 s |
| time synchronization | |
| ● from NTP-server | Yes |
| ● from control center | Yes |
| ● PC | Yes |
| ● manual setting | Yes |
| **standards, specifications, approvals / hazardous environments** | |
| certificate of suitability / CCC / for hazardous zone according to GB standard | Yes |
| ● as marking | Ex nA IIC T4 Gc |
| **further information / internet links** | |
| internet link | |
| ● to website: Industrial communication | http://www.siemens.com/simatic-net |
| ● to website: Industry Mall | https://mall.industry.siemens.com |
| ● to website: Information and Download Center | http://www.siemens.com/industry/infocenter |
| ● to website: Image database | http://automation.siemens.com/bilddb |
| ● to website: CAx-Download-Manager | http://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 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:**                                                6/7/2023 ⬀

6/11/2023