

product type designation



RTU3011C

SIMATIC RTU3011C compact low-power RTU; battery or solar-operated; connection external power supply 10.8 V to 28.8 V DC; connection of external modem; GNSS; connection to TeleControl Server Basic; loadable protocols: DNP3, IEC 60870-5-104, SINAUT ST7 or MQTT; onboard I/Os: 8 DI, 8 DO, 4 AI; FTP client; configuration/diagnostics via web server; time synchronization; email; SD card slot. GNSS national approvals to be considered!

Technical Product Detail Page

<https://l.siemens.com/1P6NH3112-0BB00-0XX0>

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
- for power supply

1

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 pluggable terminal block

type of antenna

- at connection 2 / connectable

active GNSS antenna

slot version

- of the memory card

SD 1.0, SD 1.1, SDHC, Siemens SMC

storage capacity / of the memory card / maximum

32 Gbyte

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

8

type of electrical connection / for digital output signals

pluggable screw terminal block

digital output version

4DO bistable relay, 2-wire technology 4DO solid-state relay

output current / at digital output

300 mA; Limiting continuous current, with solid-state relays 60 mA

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 / is supported	
<ul style="list-style-type: none"> • SMS • 	No 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
supply voltage / for GPS antenna / maximum	3.8 V; Nominal 3.8 V (3.575 V @5 mA, 3.35 V @ 10 mA, 3.125 V @ 15 mA)
consumed current / note	without connected consumers
consumed current	
<ul style="list-style-type: none"> • from external supply voltage / at 24 V DC <ul style="list-style-type: none"> — in standby mode / typical — in update mode / typical — in communication mode / typical • with battery operation / at 7.2 V DC <ul style="list-style-type: none"> — in standby mode / typical — in update mode / typical — in communication mode / typical 	14 mA 35 mA 55 mA 0.28 mA 71 mA 125 mA
output current / for GPS antenna / maximum	15 mA
power loss [W]	without connected consumers
power loss [W] / with external supply voltage / at 24 V DC	
<ul style="list-style-type: none"> • in standby mode / typical • in update mode / typical • in communication mode / typical 	0.34 W 0.85 W 1.25 W
power loss [W] / with battery operation / at 7.2 V DC	
<ul style="list-style-type: none"> • in standby mode / typical • in update mode / typical • in communication mode / typical 	0.002 W 0.51 W 0.9 W
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> • for vertical installation / during operation • for horizontally arranged busbars / during operation • during storage • during transport 	-40 ... +60 °C -40 ... +70 °C -40 ... +70 °C -40 ... +70 °C
relative humidity	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • 35 mm DIN-rail mounting • wall mounting 	Yes Yes
product functions / cloud connectivity	
protocol / is supported	
<ul style="list-style-type: none"> • Message Queuing Telemetry Transport (MQTT) • HTTP 	Yes Yes
product function / for cloud connectivity	
<ul style="list-style-type: none"> • trigger management • time stamping 	Yes Yes
product feature / for cloud connectivity / buffered message	Yes

frame memory	
performance data	
number of users / email addresses / definable / maximum	20
number of user groups / definable / maximum	10
number of program block types	45
number of configurable program blocks	48
number of digital bit memories / maximum	48
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	
<ul style="list-style-type: none"> • password protection for Web applications • password protection for teleservice access • password protection for VPN • encrypted data transmission • switch-off of non-required services • SysLog 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
product functions / time	
protocol / is supported	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • from NTP-server • from GPS-signal • from control center • PC • manual setting 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
product functions / position detection	
product function	
<ul style="list-style-type: none"> • position detection with GPS • pass on position data 	<p>Yes</p> <p>Yes</p>
standards, specifications, approvals	
certificate of suitability / CE marking	Yes
certificate of suitability / UKCA marking	Yes
certificate of suitability / cULus approval	Yes
certificate of suitability / Regulatory Compliance Mark (RCM)	Yes
certificate of suitability / RoHS conformity	Yes
standards, specifications, approvals / hazardous environments / header	
certificate of suitability / ATEX	Yes
certificate of suitability / IECEx	Yes
certificate of suitability / ULhazloc approval	Yes
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
certificate of suitability / FM registration	Yes
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
<ul style="list-style-type: none"> • total • during manufacturing • during operation • after end of life 	<p>37.97 kg</p> <p>28.1 kg</p> <p>9.4 kg</p> <p>0.47 kg</p>
further information / internet links	
internet link	
<ul style="list-style-type: none"> • to website: Selection guide for cables and connectors • to web page: selection aid TIA Selection Tool • to website: Industrial communication • to web page: SiePortal • to website: Image database • to website: CAx-Download-Manager • to website: Industry Online Support 	<p>https://support.industry.siemens.com/cs/ww/en/view/109766358</p> <p>https://www.siemens.com/tstcloud</p> <p>https://www.siemens.com/simatic-net</p> <p>https://sieportal.siemens.com/</p> <p>https://www.automation.siemens.com/bilddb</p> <p>https://siemens.com/cax</p> <p>https://support.industry.siemens.com</p>
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

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Approvals / Certificates

General Product Approval



[China RoHS](#)



[Type Examination Certificate](#)

For use in hazardous locations

Radio Equipment Type Approval Certificate

Environment



[FM](#)



[Miscellaneous](#)



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