



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!

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
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...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 top hat 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 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	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	
• 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 GPS-signal	Yes
• from control center	Yes
• PC	Yes
• manual setting	Yes
product functions / position detection	
product function	
• position detection with GPS	Yes
• pass on position data	Yes
standards, specifications, approvals	
reference code	
• according to IEC 81346-2:2019	KEB
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://siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com
security information	
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Approvals / Certificates	
General Product Approval	



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