Converter RS485 to LoRa

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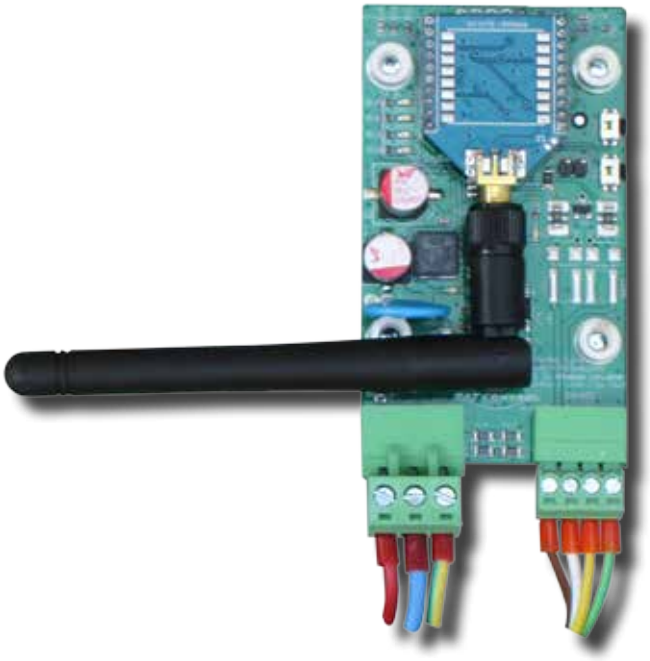
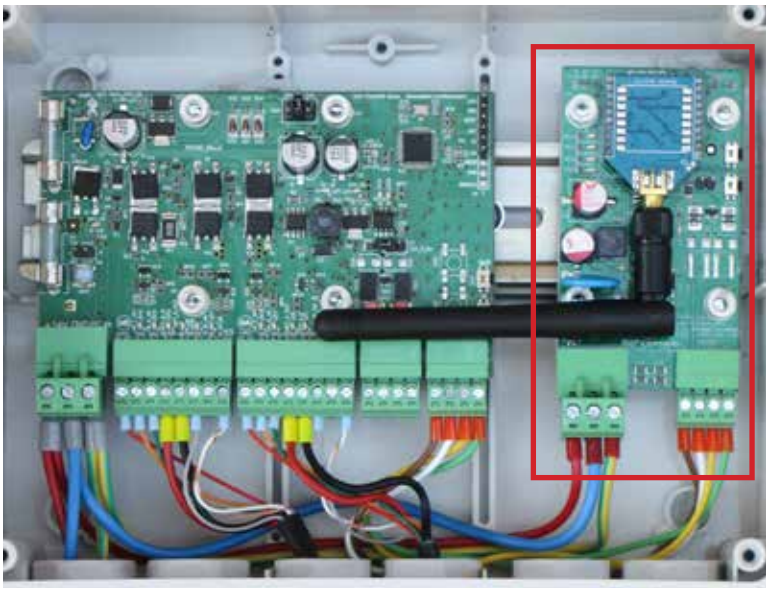
**Converter RS485 to LoRa LR01 WL. com. modul,
DIN rail TIV49A_R3 w antenna, CONV-RS4852LORA**

Code: 0447





Converter RS485 to Lora for Single or Dual Axis Tracking

The Converter RS485 to LoRa wireless, DIN rail, TIV49A_R3, with antenna 433MHz is used for replacement of wire communication to a wireless radio communication. This converter acts as communication interface and converts RS485 communication into LoRa wireless network. On the other side this module convert wireless LoRa radio signals back to wired signals. It can work as a master-coordinator on Sigma side, also as a slave-router and endpoint on Nano / Quark / Micro / Pico side. The installation is easy, assembly and connection concept is not complicated.

Module is ideally suited to convert the wire communication into wireless in middle-sized and large on-grid solar power plants. It's benefit is to use it due to lightning strikes, due to too high potential voltage differences between sectors of solar power plant and because of too long distances of cables. Consequently also because of the costs of laying the cables into the ground and cables itself.

Overview

Professional use
- Drive and positioning of Single or Dual Axis Solar Trackers
- Integration of Sat Control equipment into existing control-room technology
- Automatic update of firmware from Sigma via (OTA)

Flexible
- Data interface in accordance with the MODBUS communication standards in the field of automation technology
- Simple and fast installation, high reliability
- Possibility of replacing the LoRa and ZigBee interface without replacing the converter.
- Possibility of using converters for routing to out of Line-of-sight positioners

Reliable
- Direct communication with the Sigma Solar Server via RS485 Service Interface
- Meets the requirements of the EU Low-Voltage Directive for grid safety management
- LoRa Wireless network, easy installation which means no communication cables for installation on ground.
- Less chances of spreading damages due to lightning strike.

Made in Europe

Sat Control d.o.o.

Poženik 10, 4207 Cerklje na Gorenjskem, Slovenia, Phone: +386 4 281 62 00,
info@solar-motors.com, info@sat-control.com www.solar-motors.com, www.sat-control.com

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Technical Capabilities

Operation	
Geometrical Operation	Single / Dual Axis Positioner, Quark, Nano, Micro, Pico
Type	Sigma side as master, positioner side as slave
Communication	
Positioner communication	Serial MODBUS Wireless network with LoRa module
Wireless communication protocol – LoRa	433MHz physical layer protocol
Interfaces	
Max. number of controlled devices	up to 8 different positioners
Max. communication range	
Wireless range	1 km on open field, up to 5 hops via is 5 km
Power supply	
Power supply	External SMPS type (not included)
Input voltage	24 VDC +5% / -15%
Power consumption in idle	1 W
Environmental conditions in operation	
Ambient temperature	-30°C ... +80°C
Relative air humidity	0% ... 85%, non-condensing
General data	
Dimensions (L / W / H) in mm	92 / 45 / 25
Weight	55 g
Mounting location	Indoor
Mounting options	DIN rail mounting
Status display	LEDs for; power (3), com. (2)+ LoRa (2)
Signal power programabel	up to 0.1 W (20 dBm)
Manual buttons	2 (Binding, Reference)
Upgrading	In the field via Sigma trough Wireless mash network with LoRa module
Languages	
Language versions – manual	English
Features	
Warranty	2 years*
Certificates and approvals	www.solar-motors.com
Life Time	Min. 10 years; typical 20 years

* Optionally 5 or 10 years for additional payment.

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