ConMod P1Modbus

Meter P1 to Modbus RTU/TCP converter

ConMod P1Modbus is a small-size industrial protocol converter for smart Meters with P1 interface output to convert meter data into industrial standard protocols Modbus RTU and Modbus TCP with interfaces RS485 and Wi-Fi (2,4GHz).

Designed to convert smart meter data into the most popular industrial protocol Modbus. The solution perfectly fits for integration with energy management systems, remote monitoring, SCADA systems etc.

ConMod P1Modbus is compatible with the DSMR interface and supports different versions and variations of data formats. Also, ConMod P1Modbus has a menu to show RAW data (P1 telegram) collected from the smart meters to enable comparison with converted data in Modbus registers.

ConMod P1Modbus is designed for industrial applications with cybersecurity in mind to be able to disable Wi-Fi communication and avoid illegal communication over Wi-Fi in critical infrastructure projects.

Features

- Easy configuration using Wi-Fi via smartphone or PC with Wi-Fi;
- Indication about P1 interface, RS485, and Wi-Fi data on the build in LEDs;
- Both Modbus RTU and Modbus TCP are available at the same time;
- Debug information about P1 telegram available with every data frame from Smart Meter;
- Support different meters with DSMR interfaces like SAGEMCOM and others;
- Easy to change Modbus Slave ID and serial communication speed;
- Built-in terminating resistors for RS485;
- Possibility to provide power for protocol converter from P1 interface as well from external power supply;
- External Wi-Fi antenna with SMA connector;
- Wi-Fi on/off switch;
- Communication port RS485, Wi-Fi (2,4GHz B/G/N);
- Modbus RTU, Modbus TCP protocols.

Applications

- Energy management systems
- Solar energy projects
- Wind energy projects
- Hydro energy projects
- Energy storage applications
- EV charging applications
- Energy sub-metering applications

Technical documentation

Ordering

ConMod P1Modbus

Meter P1 to Modbus RTU/TCP converter

P1 interface

P1 connector	RJ12 (P6C6)
DSMR versions	V4.0, V5, V5.0.2 *
P1 power	‹200mA @ 5VDC meter output *
Connectivity	0,5m 6pin cable with RJ12 connectors

RS485 interface

Standard	ANSI/TIA/EIA-485-A-1998
Wiring	2 Wire connection (A,B)
Protocol support	Modbus RTU Slave (default slave id: 1)
Baud rate	9600 – 115200 bps
Parity	NONE
Terminating resistors	120 Ohm (default disabled with a jumper inside)

WI-FI interface

Standard	IEEE 802.11b/g/n, Freq: 2,4GHz
Connector	SMA female
Protocol support	Modbus TCP Slave (default slave id: 1)
Output power	‹ 20dBm

Power supply

Auxiliary power supply	5-60VDC (full range)
	NOT insolated power supply
Overvoltage protection: 65VDC (+/-5%)
Reverse polarity protection: Yes
Power consumption	‹200mA @12 VDC

Operating conditions

Operating temperature	-25°C … 55°C
Storage temperature	-40°C … 85°C
Relative humidity	max. 95 % (non condensing)
Protection class	IP20

Dimensions

Installation type	DIN Rail mounting
Case height x width x depth	91 x 18 x 67 mm

Order Codes

ConMod P1Modbus	Smart Meter protocol P1 converter into Modbus RTU/TCP