WattmonMEGA
Remote Monitoring & Control Solution

Specifications

Communication

- RS-485 Modbus RTU port for communication with up to 25 Slaves
- Modbus TCP Client mode for communication with up to 10 Servers
- Modbus TCP Server mode to interface with SCADA systems
- RS-232 Serial Port

Inputs & Outputs

- Dallas 1-Wire bus
- 3 Analog Inputs: 0-5V, 6-60V, 0-330V DC
- 4 Digital Inputs (3 with pulse counting)
- 4 Digital Outputs
- 1 Integrated 5A relay

Power

- Wide input voltage range: 6-60V DC
- High Efficiency DC-DC converter
- Low Power Consumption of < 2 Watts

Network

- 100 Mbit Ethernet
- 3G and 4G LTE (via external USB Stick)

Storage

- 512 KB RAM
- 16 GB MicroSD Card

Applications

- **Inverter Monitoring**
  Inspect generation and efficiency of grid-tie and hybrid inverters
- **AC Power Monitoring**
  Supervise load and performance of substations and mini-grids
- **Off-Grid Battery Monitoring**
  Observe battery voltage, current, SoC, charging trends and health over time
- **Zero Feed-In & DG Protection**
  Reduce active output power of multiple inverters to regulate energy generation

Characteristics

Cover Material	ABS Polycarbonate (FR - UL94V-0)
Base Material	ABS Noryl (FR - UL94V-0)
Degree of Protection	IP20 (Finger Protected)
Operating Temperature	0-65 °C
DIN Standard / Rail	DIN 43 880 / EN 50022
Dimensions (L x W x H)	130 x 70 x 75 mm
Weight	200 g

Introduction

The Wattmon hardware and software platform is the most flexible in the industry. It can be used for monitoring Grid-Tie, Hybrid and Off-Grid setups, Solar Water Pumping, Building Loads, and features a Zero Feed-In and DG Protection solution that is compatible with leading manufacturers.

The WattmonMEGA is a Modbus Master (Client in Modbus TCP) that can interface with up to 25 RTU Slaves and 10 TCP Servers. It may also be configured as a Modbus TCP Server to interface with a SCADA system. A quick configuration tool allows for the setting up of the device for a range of inverters, energy meters and sensors.

It supports the following data types:

- IEEE754 Float (Big and Little Endian)
- INT32 (Big and Little Endian)
- UINT32 (Big and Little Endian)
- INT16

Benefits

- **Versatile**
  Configurable by anyone using the built-in *EZConfig* function

- **Multilingual**
  Features an interface in English, Español, Deutsch, Français, हिन्दी, தமிழ்

- **Remotely Accessible**
  Log into the device remotely through the Wattmon Proxy server using a 3G/4G USB dongle or via Ethernet

- **Industry Compliant**
  Integrate new and existing devices over Modbus RTU/TCP with the on-board device driver creator

- **Local Storage**
  Securely store several years worth of data locally in CSV format and control who can view it

- **Programmable**
  Write scripts in the built-in editor using the uPHP language or the *Visual Script Builder*

Zero Feed-In & DG Protection

The Wattmon Power Control Solution can throttle the active power output of inverters on sites with no Net Metering or with Diesel Generators, securing against grid export or reverse-feeding and over-frequency damage. The supported brands are :

- ABB
- Delta
- Emerson
- Fronius
- Goodwe
- Growatt
- Huawei
- Ingeteam
- Kaco
- Kstar
- Polycab
- Refusol
- SofarSolar
- Schneider
- SMA
- SolarEdge
- Solis Ginlong
- Sungrow
- Zeversolar
- *and more...*

Energy Monitoring Solution (EMS)

The WattmonMEGA is capable of storing several years worth of data on the MicroSD card. It can also upload the logged data to the Wattmon Energy Monitoring Solution (EMS), a highly customizable cloud portal that displays real-time data in the form of graphs and widgets, allowing users to select the parameters they wish to monitor, and create separate accounts for individual clients.

Conformity

Emissions	CISPR 22, Class A CISPR 32, Class A
Electrostatic Discharge	IEC EN 61000-4-2
Electrical Fast Transient	IEC EN 61000-4-4
Surge Immunity	IEC EN 61000-4-5

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