# Isolated Remote I/O and DAS

EnergoM-MWG1

【Features】

◆ Support up to 31 extension I/O models

◆ Four-way isolation eliminates potential ground loops between power, input, output, and network circuitry

◆ Auto detection the types and number of extension I/O models, address is as a continuous data buffer

◆ Support Modbus RTU, Modbus TCP/IP ,built in webserver convenient for maintenance and debug on-site

◆ Standard MODBUS RTU protocol ,Modbus TCP support 8 connections

◆ Terminal Bock & Rail bus redundant power

◆ Combine with various I/O models ideal for remote monitoring, distributed control, or SCADA applications

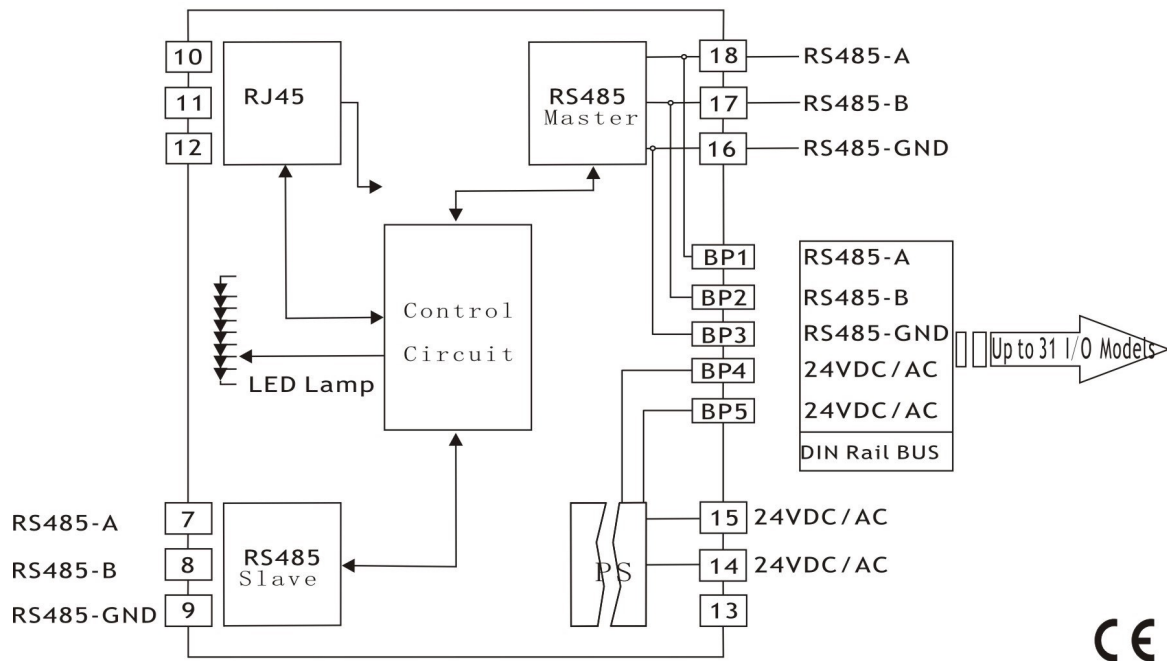◆ Wed-based configuration software
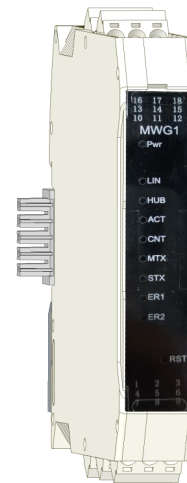
MODBUS TCP   MODBUS RTU CE

【Description】

This signal conditioner is a 24channel current input module with RS485 outputs. It provides isolation between each channel of inputs, each channel of outputs, power, and network circuits. Network communication adheres to the industry-standard RS-485 Modbus RTU protocol. AC and DC power sources are supported with nonpolarized, diode-coupled terminals. Not only works as independent signal isolator with communication，but combine with MWG1 to constitute a remote I/O DAS support both of MODBUS RTU and MODBUS TCP protocols.
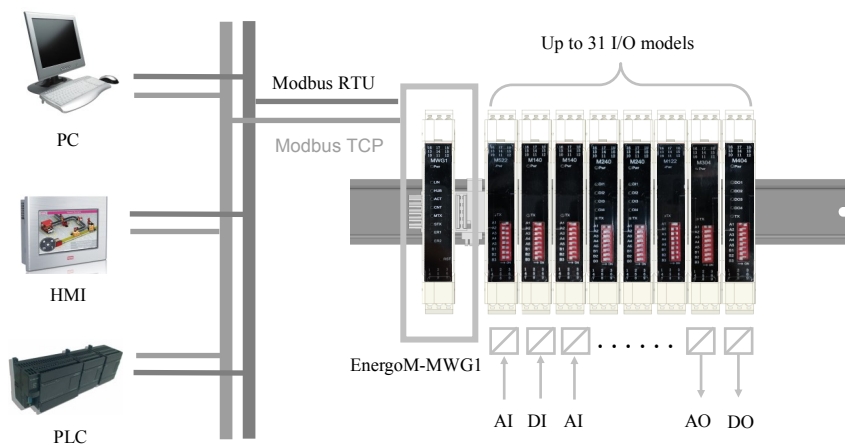
【Specifications】

◆ RS485(Master):

   Protocol: Modbus, ZPBUS®

   Support up to 31 I/O models

   Data format:1 Start Bit,8 Data Bits, no Parity,1 Stop Bit

   Baud Rate:1200、2400、4800、9600、19200、38400、57600、15200

   Analog Input Channels: MAX 60

   Discrete Input Channels: MAX 60

   Analog Output Channels: MAX 60

   Discrete Output Channels: MAX 60

◆ RS485(Slave):

   Protocol: Modbus RTU

   Address ID range: 1-254

    Data Format: 1 Start Bit,8 Data Bits, no Parity,1 Stop Bit

◆ RJ45(10 Base T/100 Base TX):

   Protocol: Modbus TCP,TCP/IP, http

   Modbus TCP (client): 6 connections

   http (client): 2 connections

◆ Built-in Web server:

   TCP/IP parameter Settings

   RS485 communication parameter setting

   Settings for I/O devices

   Equipment fault diagnosis

   Real-time observe the status & measurements of each channel

◆ Power Supply:

   Voltage:15-30 VDC or AC

   Terminal Bock & Rail bus redundant power

   Power Loss: 1.2 W

◆ AD Resolution: 24 bit

◆ Four-way isolation between RS485 (master)/RS485(slave)/RJ45/Power Supply: ≥ 1500VAV/1min

◆ Four-way isolation resistance :≥ 100Mohm/500V

◆ Operating Temperature: -10~70℃

◆ Storage Temperature: -40-85℃

◆ Relative Humidity: 5-95% non-condensing

◆ EMC: EN1326:1997+ a1:1998 + a2:2001 + a3:2003

◆ 【Weight]】:95g

【Wiring Diagram】

【Application】

Modbus RTU

Modbus TCP

PC

HMI

PLC

Up to 31 I/O models

EnergoM-MWG1

AI   DI   AI   AO   DO

【Front Panel】

LED name	Description
PWR	Power Indicator
LIN	LAN connection status
HUB	External login indicator
ACT	Communication Indicator
CNT	Client connection indicator
MTX	RS485 Master send message
STX	RS485 Slave send message
ER1	I/O models communication failure
ER2	Alarm
RST	Reset to default IP address

【Configuration】

There is a built-in webserver inside the EnergoM-MWG1, so it is easy to configure the MWG1 using the steps below.

1) Connect the EnergoM-MWG1 to a PC with the CAT 5/6 UTP cable, Apply power. (a WIFI hotspot needed if login by smart phone or Pad)

2) Open the browser, type the default IP address：http://192.168.0.166 enter into the main interface (see figure 1).

3) The information of the I/O models，including device ID, types of AI/DI/AO/DO，Mapping addressing as well as the measurement value for each channel will be display on the page.

4) Enter the Password (default:1234),you can enter into the Network and I/O models parameter configuration (see figure 2). the furthermore parameters of RS485 port ,Gateway and I/O models can be programmed setting
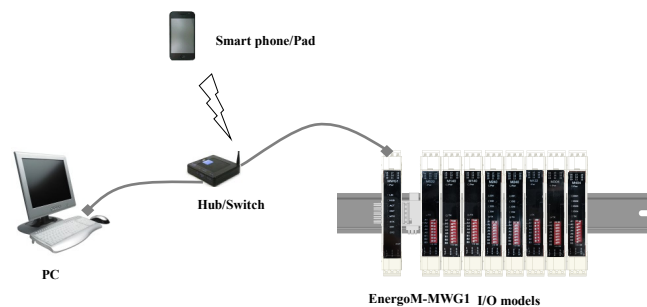
5) Save the changes and exit.

For more information about configuration, please see the Data Manual.

Figure 1

Figure 2

Smart phone/Pad

Hub/Switch

PC

EnergoM-MWG1 I/O models

【Order Information】

Part No.	Description
EnergoM-MWG1	full isolation communication control model