



## SINGLE PHASE POWER METER

Isolated V/I converter -RS485 Modbus - Datalogger

## QA-POWER-M



Single-phase power meter **RMS**, and Voltage/Current Isolated. **Signal Converter 1000 VDC / 600 VAC, 10 A AC/DC, Variable frequency measurement. Configurable via USB, DIN rail mounting, 4 kV galvanic isolation, universal supply AC/DC. Configurable alarm contact, RS485 Modbus and Analog output. DATALOGGING via USB** with pen drive stick memory and download storage data on excel importable files. **RTC Real Time Clock** integrated.



### INPUT

**VOLTAGE:** Up to **1000 V DC / 600 V AC** fully configurable via USB.  
**CURRENT:** Up to **10 A AC/DC** direct (more by using external CT).

### OUTPUT

**CURRENT:** 0...20 mA programmable, max load 600 ohm.  
**VOLTAGE:** 0...10 V programmable, min load resistance 2 kohm.  
**RS485 MODBUS:** bus connection on the basis of the module or terminal, dip-switch for setting address and baudrate.  
**CONTACT OUTPUT:** Optomos contact, programmable NO alarm contact by free interface software FACILE QA-POWER, retransmission or storage.

### APPLICATION

**Photovoltaic:** parallel string voltage monitoring.  
**Energy Management:** direct communication via RS485 Modbus to all Master Modbus devices.  
High Voltage AC/DC converter.  
High Current AC/DC converter using external CT.  
Local and Remote monitoring at the same time.

POWER SUPPLY	10..40 Vdc, 20-28 Vac, 50-60 Hz
ABSORPTION	Maximum 2.5 VA
PROTECTION INDEX	IP20
ACCURACY	0,5% F.S.
MEASURE	Irms, Vrms, Watt, Var, Va, Vpk, Ipk, Frequency, Cosφ, Energy bidirectional, THD
WORKING FREQUENCY	DC or 1...400 Hz
TEMPERATURE COEFFICIENT	< 200 ppm/°C
WORKING TEMPERATURE	-15...+65°C
STORAGE TEMPERATURE	-40°C... +85°C
ISOLATION	4 kV input, 1.5 kV between output, RS485 and power supply.
HUMIDITY	10...90% not condensing
ALTITUDE	Up to 2000 m s.l.m.
MOUNTING	DIN rail mounting with removable terminals, RS485 bus and Supply connection ready on the base of module (connector not included, on request).
CONNECTIONS	Removable terminals 5.08 mm
CE STANDARDS	EN61000-6-4/2006 + A1 2011; EN64000-6-2/2005; EN61010-1/2010.
DIMENSIONS	17.5 x 100 x 112 mm (terminal excluded)
DATA LOGGER	Non-volatile memory. Log on USB OnTheGo port by Pen Drive stick memory. RTC Real Time Clock integrated allows you to manage the log with date and time.
CONFIGURATION	By free software FACILE QA-POWER-M to configure all of the conversion parameters like span, zero, alarm contact and log via USB port or via RS485. Dip-switch for setting modbus address and baudrate.

QA-POWER-M

SINGLE PHASE POWER METER  
Isolated V/I converter -RS485 Modbus - Datalogger

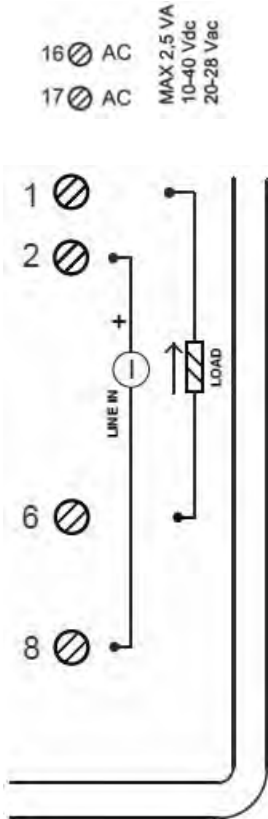
### 3-WAY GALVANIC ISOLATION



**Pen Drive USB Datalogger!**

**INSTRUCTION MANUAL**
**QA-POWER-M**
**DESCRIPTION:**

The QA-POWER-M is an isolated VOLTAGE and CURRENT converter and SINGLE PHASE NETWORK ANALYZER. The module has a programmable analog output (voltage or current) and a digital output (optomos). Thanks to the presence of the RS485 serial port can perform advanced functions such as I / O Module with Modbus RTU protocol. The QA-POWER-M behaves as a slave device by placing Current or Voltage Input, n°1 AO and n°1 DO.

**ELECTRICAL CONNECTIONS**
**QA-POWER-M**
**INSTRUCTION MANUAL**

**POWER SUPPLY:**

10...40 Vdc or 20...28 Vac - Connectors 16 and 17, or by T-BUS connector (optional tool) on the base of the module (see the picture placed on the bottom of this page).

**VOLTAGE/CURRENT INPUT (DIRECT INSERTION):**

the input Voltage (LINE) has to be connected on terminals 2 (+) and 8, the Load has to be connected on terminals 1 (+) and 6.

FOR VOLTAGE: up to 600 V AC, 1000 V DC.

FOR CURRENT: up to 10 A AC/DC.

You can set the measurement range as per your need using the FACILE QA- POWER-M software or by RS485 using the modbus registers.

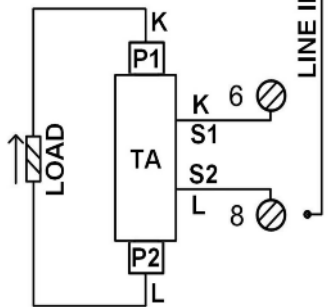
**INSERTION WITH EXTERNAL CT:**

the input Voltage (LINE) has to be connected on terminals 2 (+) and 8 (as for the direct insertion).

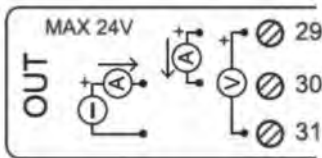
The external CT (current transformer), must be connected as follows:

- S1 terminal of the CT connected to the terminal 6;
- S2 terminal of the CT connected to the terminal 8.

For the connection of the LOAD to the CT, follow the wiring diagram on the left side (INPUT P1 side and OUTPUT P2 side).

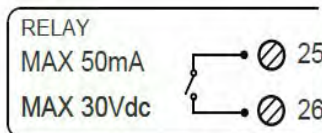


**WITH THIS CONFIGURATION, SET THE CURRENT RATIO VIA FACILE SOFTWARE (SEE PAGE 3).**

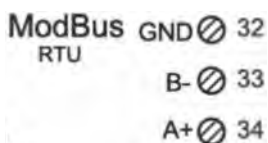

**ANALOG OUTPUT:**

for Voltage analog output, connect terminals 31 and 29 (positive).

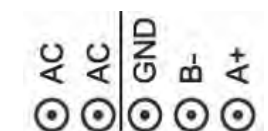
For ACTIVE current analog output, connect terminals 29 (positive) and 30. For PASSIVE current analog output, connect terminals 30 (positive) and 31. Analog output supply: 13 Vdc, max 30 mA.


**DIGITAL OUTPUT:**

relay Output is an Optomos contact. Connection are with terminals 25 and 26. The contact can be used like an pulse output (you can set by FACILE the value of the pulse) or like Alarm contact (you can set the associated parameter by FACILE).


**SERIAL OUTPUT RS485:**

available on connectors 32 (GND), 33 (B-), 34 (A+), or by T-BUS connector to be mounted on the module.


**T-BUS CONNECTION (OPTION), needs T-BUS connector:**

it may be affixed to the accessory T-BUS based on the module to bring both power and serial communication. The number of modules supported by the bus is a function of the power supply used (check the absorption of the modules).