

FACILE QE-POWER-T

The FACILE QE-POWER-T software is the fastest way to configure the three phase power QE-POWER-T.

Download the software from our website

<http://www.qeed.it/category/software/?lang=en>

Update your Java if needed.

Connect the PC to the QE-POWER-T using a USB-RS485 converter (like the Q-USB485).

The software will give you all the steps for the connection.

Mind that the QE-POWER-T need to be switched off and on to charge the new configuration.



Modbus configuration parameters

Mind that, when you set the internal dip switch to 1 to connect the device to the PC by FACILE you are in the default mode: Address 1 , Baudrate 9600.

In this way, if you don't know the configuration of a QE-POWER-T already installed you can read it anytime using the default setting by dip switch 1 ON e choose LOAD CONFIGURATION FROM DEVICE on the FACILE main page

The screenshot displays the 'Actions' window of the 'QE-POWER-T v003' application. The 'Modbus' tab is selected, showing configuration parameters for Address (1), Delay (1), Parity (NONE), and Baud rate (9600). A blue arrow points from the text 'Modbus configuration parameters' to these settings. To the right, the 'REAL TIME CLOCK' section includes fields for YEAR (0), MONTH (JANUARY), DAY (1), HOUR (0), and MINUTE (0). Below these fields are three buttons: 'READ DATE/TIME FROM DEVICE', 'SEND DATE/TIME TO DEVICE', and 'SYNCHRONIZES PC DATE/TIME WITH DEVICE'. A blue arrow points from the text 'REAL TIME CLOCK settings for PLUS and PRO versions' to these buttons. At the bottom right, there is a 'FACTORY DEFAULT' button. The bottom of the window features a navigation bar with 'HOME', 'BACK', 'NEXT', and 'QUIT' buttons.

Modbus configuration parameters

REAL TIME CLOCK settings for PLUS and PRO versions

Modbus Global input settings Power Settings Alarm settings Power Quality Setting

Address 1 Delay 1 Parity NONE Baud rate 9600

YEAR 0 MONTH JANUARY DAY 1

HOUR 0 MINUTE 0

READ DATE/TIME FROM DEVICE

SEND DATE/TIME TO DEVICE

SYNCHRONIZES PC DATE/TIME WITH DEVICE

FACTORY DEFAULT

HOME BACK NEXT QUIT

QE-POWER-T v003

Actions

Modbus Global input settings Power Settings Alarm settings Energy Setting

Measurement current channel
Input 1A/5A

Energy saving
Enabled

Connection
Three phase: 4 wires, 3 CT (with neutral)

FFT Representation
Absolute

Measurement type
Float

Integrator condition
Integrator disabled

Reactive power calculation method
Triangle method

RS-485 as Switch
RS-485

Filtered measurements
Filtering disabled

Frequency detection Channel
Voltage

Voltage input type
Normal load

Energy Unit Factor
[Wh/10]

FACTORY DEFAULT

HOME BACK NEXT QUIT

Type of Current
Transformers

Type of connection :
Single phase,
Arnon connection
3 PH without Neutral
3 PH with Neutral

If Rogowski probes
please enable the
Integrator

If you want to use the digital
output, please select
SWITCH, the RS485 will be
available on the bottom
connection

Select the scale for the energy registers:
 $\text{Wh}/10 \rightarrow \text{reading } 10001 = 1000,1 \text{ Wh} = 1,0001 \text{ KWh}$
 $\text{Wh} \rightarrow \text{reading } 10001 = 10001 \text{ Wh} = 10,001 \text{ KWh}$
 $\text{KWh} \rightarrow \text{reading } 10001 = 10001 \text{ KWh}$

CT Ratio

For Current secondary:

Primary / Secondary

(E.g. : 100 A / 5 A = 20)

Put 20

For Voltage secondary:

Amp (primary)/ Volt (secondary)

(E.g. : 100 A / 0,333V= 300,3)

Put 300,3

For Rogowski probe use the Sensitivity:

1000 A / 100mV = 10.000

Put 10000

QE-POWER-T v003

Actions

Modbus Global input settings Power Settings Alarm settings Power Quality Setting

CT_Transducer ratio
1

CT_Transducer delay (°)
0

VT_Transducer ratio
1

VT_Transducer delay (°)
0

Min voltage ripple (V)
0

Minimum current ripple (A)
0

Minimum power ripple (W)
0

DC Filter
10

AC Filter
50

minute_for_Max_demand (0-60)
0

Power Threshold exceedings
0

seconds_for_mean_RMS (0-30)
0

seconds_for_MAX_RMS (1-30)
1

seconds_for_min_RMS (1-30)
1

Recover the phase displacement introduced by current transformers

CT Transducer ratio:
If Input 1A/5A -> Default 1.0 (Ex: 600:5 -> transducer_ratio = 120)
If Input Rogowski -> Sensitivity [A/V] (Ex: 1000:0,1 -> transducer_ratio = 10000)

VT Transducer ratio:
Default 1.0

FACTORY DEFAULT

HOME BACK NEXT QUIT

CUT-OFF function

The ALARM SETTINGS page allow you to set the FAIL LED light linked to some specific event.

Please mind that it is only a LED setting. To connect the digital output to the event or threshold you have to set the right side of this page

QE-POWER-T v003

Actions

Modbus Global input settings Power Settings **Alarm settings** Power Quality Setting

☐ FAIL EEPROM

☐ Phase reversal

☐ I1 Over-range

☐ I1 Under-range

☐ I2 Over-range

☐ I2 Under-range

☐ I3 Over-range

☐ I3 Under-range

☐ V1 Over-range

☐ V1 Under-range

☐ V2 Over-range

☐ V2 Under-range

☐ V3 Over-range

☐ V3 Under-range

ATTENTION!
Shown only by FAIL LED
on device

Alarm linked to digital output

Alarm address
V_L1_N

MORE THAN A THRESHOLD

Alarm Threshold
0

Alarm Hysteresis
0

Alarm Threshold 2
0

**FACTORY
DEFAULT**

HOME BACK NEXT QUIT

nominal voltage level

set the thresholds
SAG, SWELL and
INTERRUPTIONS

QE-POWER-T v003

Actions

Modbus Global input settings Power Settings Alarm settings Power Quality Setting

Nominal Star Voltage V Minimum duration cutoff ms

Sag level V

Swell level V

Interruption level V

Parameter are entered correct!

HOME BACK NEXT QUIT

Energy registers notes :

taking as example the KWh1 totalizer (register 40245) , each one are SIGNED LONG LONG (64 bit)

40245 -> 2^{15} 2^0
00000000 00000000

40246 -> 2^{31} 2^{16}
00000000 00000000

40247 -> 2^{47} 2^{32}
00000000 00000000

40248 -> 2^{62} 2^{48}
00000000 00000000
sign

If the master device can't manage LONG LONG registers is possible manage only the first two register (for each totalizer) as LONG format after to have set the unit factor to KWh (recommended).

Mind that the measure will be without sign and near the maximum value recordable ($\approx 4,2 \times 10^9$) must to be export the value and reset the totalizer.

There isn't the direct reset for the totalizers, to do it, write zero into all of them and save the value writing 0XBABA in 40244 register.