

EMA-90N

POWER QUALITY AND ENERGY MEASUREMENT



PRODUCT DESCRIPTION

The **EMA-90N** power analyzer has been designed to combine the maximum possible easiness of operations together with a wide choice of advanced functions.

The device measures currents and voltages, energy consumption and power and displays the individual voltage/current harmonics for power quality in accordance with **EN 50160**.

The accuracy of active energy measurements corresponds to class 0.2 S in accordance with **EN 62053-22**. The current inputs are connected via external current transformer (.../1A or .../5A) or 333mV or Rogowski probes.

DEVICE FEATURES

- FLUSH-MOUNT HOUSING, 96x96 mm
- TFT COLOUR DISPLAY (320x240) 3.5"
- KEYBOARD WITH 6 KEYS FOR VISUALIZATION AND SETTING
- EASY AND FAST NAVIGATION
- COMPATIBLE WITH LV, MV, HV APPLICATIONS
- TRUE RMS MEASUREMENTS
- CONTINUOUS SAMPLING: 128 SAMPLES/PERIOD
- MEASUREMENT REFRESH RATE 200ms
- ACCURACY CLASS ACCORDING TO IEC 62053-22 0.2S
- READING OF MORE THAN 300 ELECTRICAL PARAMETERS
- 4 CURRENT INPUTS
- HARMONIC ANALYSIS OF VOLTAGE AND CURRENT UP TO 63.RD ORDER
- EVENTS STORAGE AND MANAGEMENT: SWELL, DIPS, INTERRUPTIONS WITH TIMESTAMP
- WAVEFORMS V & I
- GRAPHS: HISTORICAL VOLTAGES AND CURRENTS, POWER LOAD CURVE, ENERGY CONSUMPTION
- ANALOG INDICATORS V, I, PF, W, VAR
- ADVANCED PROGRAMMABLE I/O FUNCTIONS
- MODBUS RTU AND MODBUS TCP
- INTEGRATED WEB SERVER
- R.I.N.A. CERTIFICATE FOR MARINE APPLICATION

Display examples





EMA-90N Power Quality and Energy Measurement

Typical Applications

MONITORING OF THE VOLTAGE AND CURRENT QUALITY IN ACCORDANCE WITH EN 50160

STORING A LIST OF EVENTS, THAT CAN BE USEFUL TO THE USER IN ORDER TO DETECT ANOMALIES AND/OR KEEP TRACK OF THE PLANT BEHAVIOUR

HIGH-RESOLUTION WAVEFORM VISUALIZATION ALLOWS ANALYSIS OF POWER QUALITY

DATA LOGGER FUNCTION ALLOWS TO STORE VARIABLES CHOSEN FREELY AMONG THE MEASURES. EVERY RECORD IS MARKED WITH A TIME STAMP TAKEN FROM THE REAL-TIME CLOCK OF BUILT IN THE MODULE

Description of function

Sampling rate of the measuring channel: 128 samples/period

Provides the voltage/current harmonic analysis up to the 63rd order each phase L1, L2, L3.

There is a display page that graphically represents the harmonic content (spectrum) through a bar graph

Waveform page graphically views the waveform of the voltage and current signals read by the EMA-90N.

The user can create a maximum of 6 customised display pages. Each of these pages can view measurements, freely chosen among the available readings

The EMA-90N manages the time and date, that is used for the storage of events and for time-related functions

Password access: the password is used to enable or lock the access to setting menu and to command menu

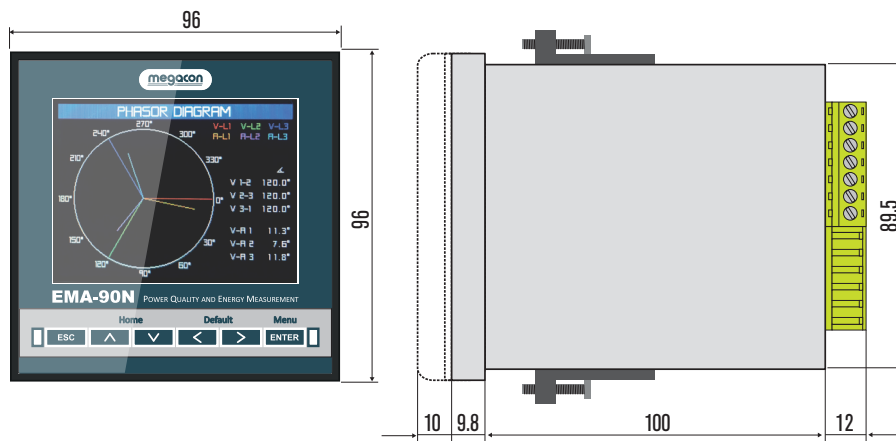
32 adjustable parameter setpoints

For the energy billing, the EMA-90N can manage 16 different tariffs in addition to the total and partial energy meters

Inputs and Outputs	Communication
4 digital inputs, 4 digital outputs	Built-in RS-485 interface (Modbus-RTU)
2 digital inputs, 6 digital outputs	Ethernet port (Modbus-TCP)
8 digital outputs	Ethernet port with embedded Web-server
8 digital inputs, 2 digital outputs	Profibus DP
2/4 analog outputs	M-Bus
4 digital outputs, 2/4 analog outputs	SNMP protocol
4 analog inputs	n°2 RS-485 (COM1 and COM2)
2 PT100 temperature sensors	Ethernet port and RS-485 with gateway function, that acts as a bridge over others devices equipped with RS-485 only, in order to achieve a more economic configuration (only one Ethernet port).
2 analog inputs, 1 PT100 temperature sensor	

- The EMA-90N supports a maximum of 2 communication modules.
- The communication channels are completely independent for the communication protocol.
- The two channels can communicate at the same time.

Mechanical dimensions (mm)



Megacon AB

Ranhammarsvägen 20 - S-168 67 Bromma, Sweden -Phone: +46 (0)8-402 42 50

www.megacon.se