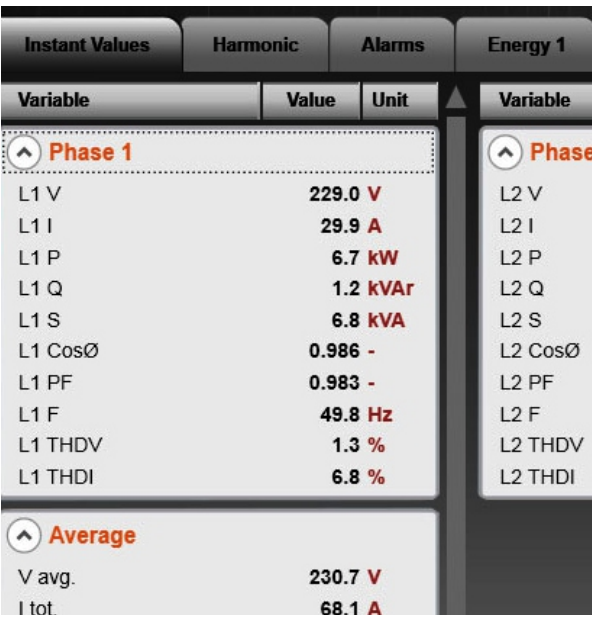
EMG SERIES
MULTIFUNCTION POWER METER



DEFINING AN ENERGY ANALYZER IN SIMPLE TERMS

An energy analyzer is an automation device which offers 3-phase energy monitoring, analyzing and controlling the network comprehensively.

It enables advanced applications such as energy metering, data logging, DIO applications, tranducer applications etc.

WHICH MARKETS ARE THEY USED FREQUENTLY?

- Submetering station
- PLC-Scada applications
- Electrical power plants and substations
- Medium voltage modular cabinets
- Energy meter applications
- Electric utilities
- Infrastructure
- Alarm station
- IT centres
- High-rise buildings

WHICH ACTIONS ARE EXECUTED?

An energy analyzer provides highly accurate measuring for main electrical parameters and expanded energy metering solutions for your electrical network.

All the data which are being measured or kept in its memory can be transmitted to remote monitoring system thanks to modbus communication.

It offers 3-phase energy and power measurement with data logging such as min/max/avg values, energy values, demand values etc. with date and time.

Digital inputs can be used for equipment status/position monitoring, activation second tariff which is used by generators or as a counter.

Digital outputs can be used to take an impulse which is synchronized with internal energy meters.

MEASURING
METERING
COUNTING
HARMONIC MONITORING
WAVEFORM DISPLAYING
CONVERTING
DATA LOGGING
PHASOR ANALYZING
ALARMING
COMMUNICATING
TAKING IMPULSE
SPECIFYING HOUR METERS

It provides conversion of main electrical parameters into DC voltage or DC mA outputs thanks to analogue outputs which can be easily programmed by the users.

Low/high limit thresholds for all electrical parameters can be defined so load management in a network is possible by means of alarm relay outputs.

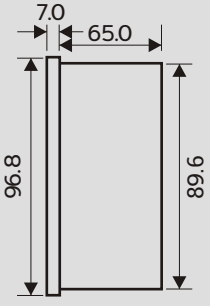
In dept-analysis of individual current and voltage harmonics in order to increase network quality.

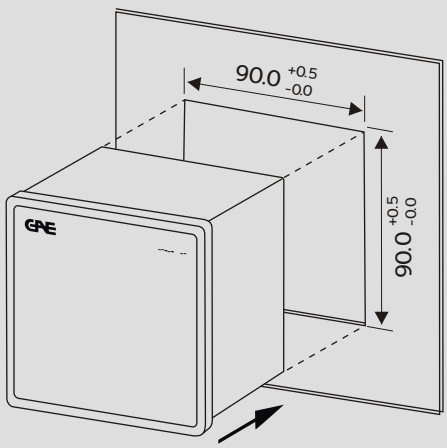
Displaying signal waveforms for current and voltage phases to detect signal deviations which are observed in real time.

Detailed analyze of phase relationships between current and voltage lines thanks to phasor diagram feature. Specifying run hours, on hours and power interruptions in order for your machine to be used more effectively.

DIMENSION & SHIPPING

Weight: 0.428 kg
H x W x D: 135 mm x 163 mm x 132 mm



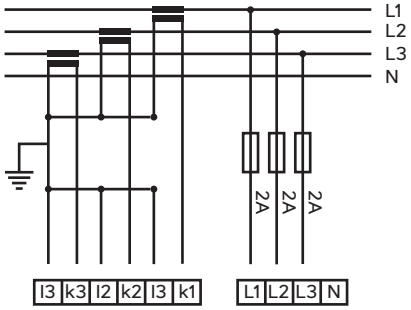


DATASHEET

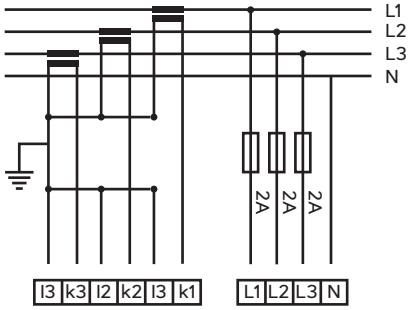
1 - GENERAL SPECIFICATIONS					
Type	EMG 5	EMG 10	EMG 20B	EMG 25	EMG 50
Definition	3Ø Multimeter	3Ø Multimeter	3Ø Energy Analyzer	3Ø Energy Analyzer	3Ø Energy Analyzer
Display	Seven Segment	Seven Segment	LCD	LCD	LCD
Data Logging with Timestamp	-	-	-	-	●
CTR & VTR (1-5000 adj.)	●	●	●	●	●
Demand Period (1-60 min adj.)	-	●	●	●	●
Number of Measurement in a period	256	256	256	256	512
Phasor Diagram	-	-	-	-	●
Signal Waveforms	-	-	-	-	●
RS485 Communication	-	-	●	●	●
2 - AUXILIARY POWER					
Range	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC
Power Consumption	<3 W, <6 VA	<3 W, <6 VA	<2 W, <4.5 VA	<2 W, <4.5 VA	<2.5 W, <3 VA
3 - MEASUREMENT					
Basic Measurements (V, I, f, CosØ, PF, P, Q, S, THDI, THDV, etc.)	only V, I, f	●	●	●	●
Min, Max and Demand Values	-	●	●	●	●
Current Measurement Input	10mA - 6A AC	10mA - 6A AC	10mA - 6A AC	10mA - 6A AC	10mA - 6A AC
Voltage Measurement Input	1 - 300 VAC (L-N)	1 - 300 VAC (L-N)	1 - 300 VAC (L-N)	1 - 300 VAC (L-N)	1 - 300 VAC (L-N)
	2 - 500 VAC (L-L)	2 - 500 VAC (L-L)	2 - 500 VAC (L-L)	2 - 500 VAC (L-L)	2 - 500 VAC (L-L)
Harmonics for Current and Voltage Phases	-	-	Up to 31st	Up to 31st	Up to 51st
THD for Voltage and Current in	-	●	●	●	●
4 - MEASUREMENT ACCURACY					
Total Active Power	-	0.5	0.5	0.5	0.2
Total Reactive Power	-	1	1	1	1
Total Apparent Power	-	0.5	0.5	0.5	0.2
Total Active Energy	-	0.5	0.5	0.5	0.5
Total Reactive Energy	-	2	2	2	2
Frequency	0.1	0.1	0.1	0.1	0.05
Current	0.5	0.5	0.5	0.5	0.2
Neutral Current	-	0.5	0.5	0.5	0.5
Voltage	0.2	0.2	0.2	0.2	0.2
Power factor	-	0.5	0.5	0.5	0.5
THDV, THDI	-	1	1	1	1
5 - ENERGY METERS AND COUNTERS					
Tariff	-	Utility	Utility	Utility & Genset	Utility & Genset
Multi Sub-Tariffs (Peak, Day and Off-Peak)	-	-	-	-	●
3Ø Phase Energy Meters	-	●	●	●	●
On Hour, Run Hour and Int Counter	-	●	●	●	●
6 - INPUTS AND OUTPUTS					
Alarm Relay Outputs	-	-	-	2 pcs. (10A,250VAC,1250VA)	2 pcs. (10A,250VAC,1250VA)
Digital Inputs	-	-	-	2 pcs. (Dry Contact)	2 pcs. (Dry Contact)
Digital Outputs	-	-	-	2 pcs. (5-30VDC)	2 pcs. (5-30VDC)
7 - COMMUNICATION					
Protocol	-	-	Modbus RTU	Modbus RTU	Modbus RTU
Baud Rate	-	-	1200-57600 bps adj.	1200-57600 bps adj.	2400-115200 bps adj.
LEGEND: ● feature supported	bit.ly/GAEemg5	bit.ly/GAEemg10	bit.ly/GAEemg20b	bit.ly/GAEemg25	bit.ly/GAEemg50

WIRING DIAGRAM

EMG 5, EMG 10, EMG20B, EMG25

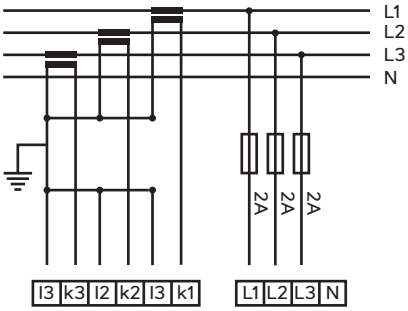


3 wire with 3 CTs

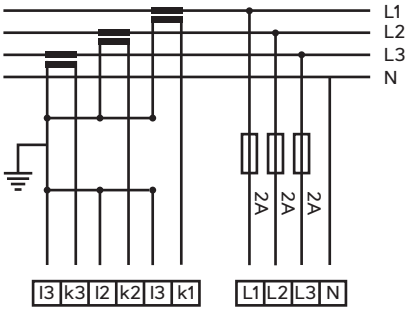


4 wire with 3 CTs

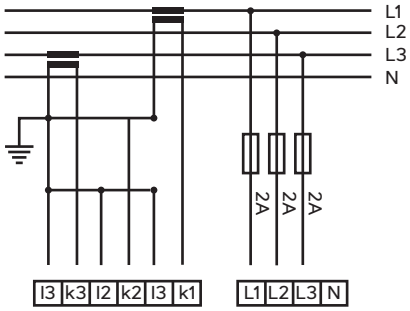
EMG 50



3 wire with 3 CTs

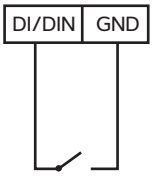


4 wire with 3 CTs

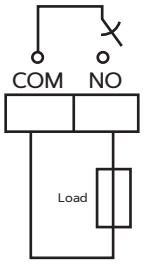


4 wire with 2 CTs

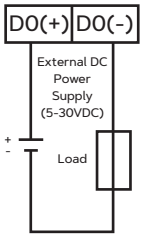
DIGITAL I/O AND ALARM OUTPUT CONNECTION EMG25 & EMG50



Digital Input



Alarm Relay Output



Digital Output

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