



METERING INSTRUMENTS
DIGITAL MULTIMETERS AND ENERGY METERS
NETWORK ANALYZERS
DATA CONCENTRATOR
COMMUNICATION DEVICES

ENERGY METERS
DIRECT CONNECTION
OR BY CURRENT
TRANSFORMERS
MID CERTIFIED VERSIONS



EMA 10 | 11 | 14

DIGITAL MEASURING INSTRUMENTS - NETWORK ANALYZER

OPTIONS

ORDER CODE	DESCRIPTION
C1	Auxiliary supply 20 ÷ 60 VCA/DC
1A	Rated current inputs by external CT 1A
0.5	Active energy 0.5
H	Detailed harmonic analysis (1...31°)
MEM1	1MB data memory
6DI	6 digital inputs

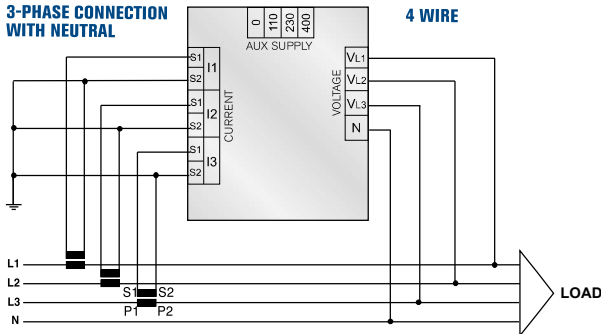
4DO	4 digital outputs
2 DI e 2 DO	2 digital inputs and 2 digital outputs
2 AO	2 analog outputs
4 AO	4 analog outputs

COMMUNICATION PORTS

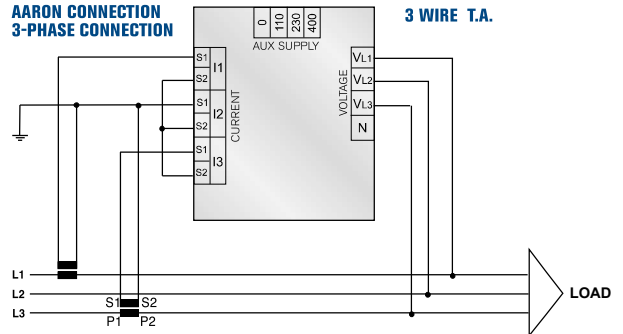
485	RS485 serial interface
ETH	Ethernet interface with Web server function
PF/S	Profibus-DP interface

WIRING DIAGRAMS EMA 10, 11, 14 - EMA 90

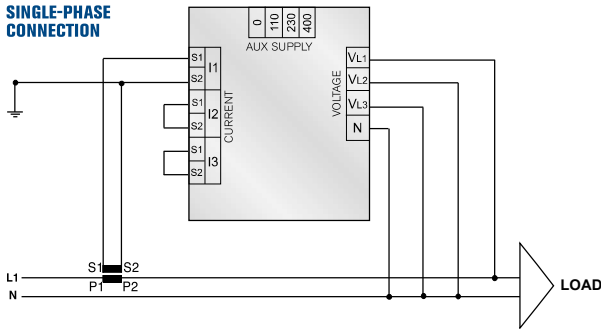
3-PHASE CONNECTION WITH NEUTRAL



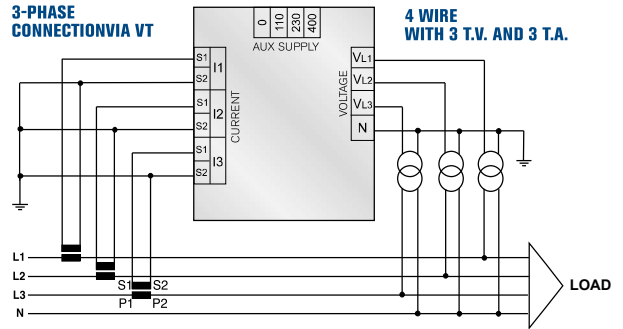
AARON CONNECTION 3-PHASE CONNECTION



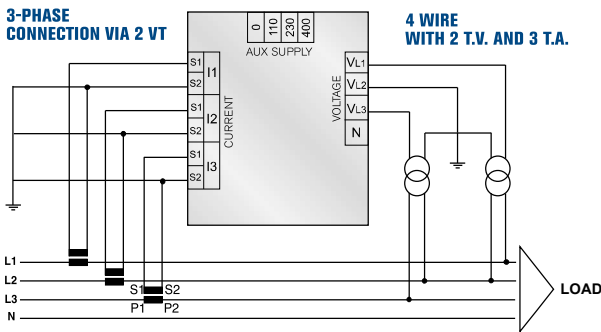
SINGLE-PHASE CONNECTION



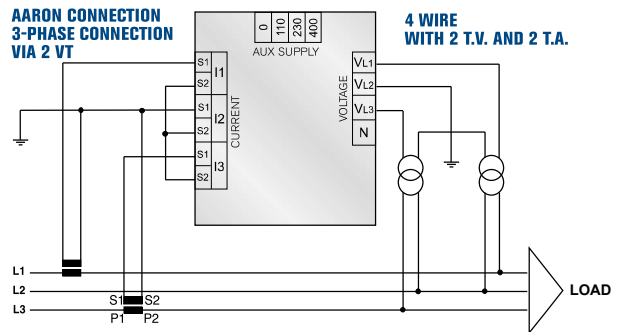
3-PHASE CONNECTION VIA VT



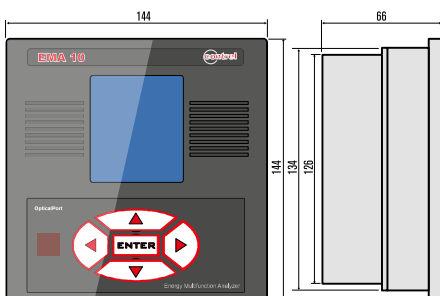
3-PHASE CONNECTION VIA 2 VT



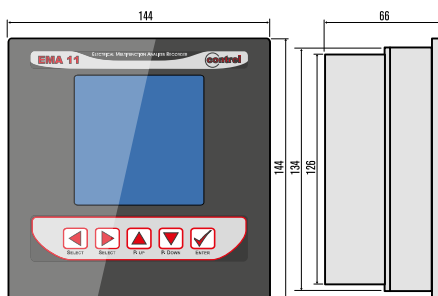
AARON CONNECTION 3-PHASE CONNECTION VIA 2 VT



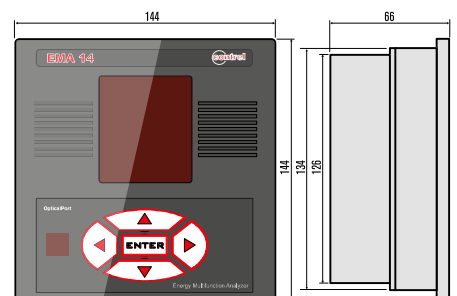
MECHANICAL DIMENSIONS EMA 10



MECHANICAL DIMENSIONS EMA 11



MECHANICAL DIMENSIONS EMA 14



EMA 90

DIGITAL MEASURING INSTRUMENTS NETWORK ANALYZER

TECHNICAL CHARACTERISTICS		EMA 90
AUXILIARY SUPPLY		
Nominal voltage U_s		90 - 260 VAC/DC
Operating voltage range		$\pm 15\%$
Power consumption		5VA
Frequency		30 \div 500 Hz
VOLTAGE INPUTS		
Measurement range		10...600VAC L-L
Method of measuring		True RMS value
Measuring input impedance		2M Ω
Method of connection		Single-phase, two-phase, three-phase orbanced three-phase system
CURRENT INPUTS		
Reference current		1A (option) or 5A
Measurement range		0,01...5A
Method of measuring		True RMS value
Overload capacity		10A by an external current transformer
Self-consumption		0,2VA
ACCURACY		
Measures	Voltage	$\pm 0,5\%$
	Current	$\pm 0,5\%$
	Power	$\pm 0,5\%$
	Frequency	$\pm 0,2\%$
	Active energy	Class 1
INSULATION		
Insulation voltage		3.7kVAC for 1 minute
DISPLAY		
Display type		Graphic LCD display
Format		128 x 128 pixel
Dimension		50 x 50 mm
AMBIENT CONDITION		
Operating temperature		-10...+50°C
Storage temperature		-15...+70°C
HOUSING		
Version		Flush mount 96 x 96 mm
Degree of protection		IP52 on front IP20 Housing and terminals
Weight		430g
CERTIFICATIONS AND COMPLIANCE		
Reference standards		EN 61010-1, EN62053-21, EN62053-22

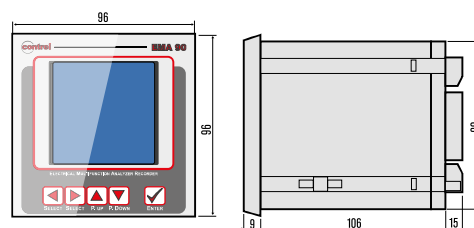
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C1	Auxiliary supply 20 \div 60 VCA/DC
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H	Detailed harmonic analysis (1...31 $^{\circ}$)
MEM1	1MB data memory
4DI	4 digital inputs
2DO	2 digital outputs
2DO/R	2 relays
1 AO	1 analog output



WIRING DIAGRAMS EMA 90

See page 24

MECHANICAL DIMENSIONS EMA 90



COMMUNICATION PORTS	
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