Network Analyzers

MPR-1 Series

NEW

MPR-1 Series

MPR-1 Series Power Analyzer

MPR-1 Series DIN type power analyzers have been designed for the purpose of measurement of electrical parameters at machines and wall boxes. With its screen-free design it is a measurement device suitable for power monitoring software.

CE

PRODUCT SELECTION TABLE

Product Code	Dimensions	% THD I	% THD V	Harmonics 1-51.	RS-485	Digital Input	Digital Output	Analog Output (mA/V)	Relay Output	Number of Samples In One Period	Memory	Current - Voltage Unbalances	X5/X1	85-300 VAC/DC
MPR-14-S	DIN4				●					128			●	●
MPR-15S-22	DIN4	●	●		●	2	2			128	4 MB		●	●
MPR-16S-21	DIN4	●	●	51	●	2			1	128	4 MB	●	●	●
MPR-17S-23	DIN4	●	●	51	●	2	2	1		128	4MB	●	●	●

Remote Monitoring Software:

With the energy management software developed by ENTES, energy consumption and quality can be monitored in real time by reading the values measured by devices. As a result, comprehensive energy monitoring and data storage is provided.
With the analysis of stored data, improvements in energy costs and sustainable savings are accomplished.

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** For more detailed information, see Page 84.*

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MEASURED PARAMETERS

Phase - Neutral Voltages (V_{LN})	Neutral Current (In)	Active Power (P)	Active Energy Import (kWh or MWh)
Phase - Phase Voltages (V_{LL})	Total Current (∑I)	Reactive Power (Q)	Active Energy Export (kWh or MWh)
Average Phase-Neutral Voltage	Power Factor (P.F)	Apparent Power (S)	Reactive Energy Capacitive (kVArh or MVArh)
Average Phase-Phase Voltage	Cos∑	Total Active Power (∑P)	Reactive Energy Inductive (kVArh or MVArh)
Max. Demand	Frequency (Hz)	Total Reactive Power (∑Q)	Apparent Energy (kVAh or MVAh)
Phase Currents (IL)	Max. / Min. Values	Total Apparent Power (∑S)	

MPR-14S

+

Total Harmonic Distortion for Voltage (THD-V)	Total Harmonic Distortion for Current (THD-I)

MPR-15S-22

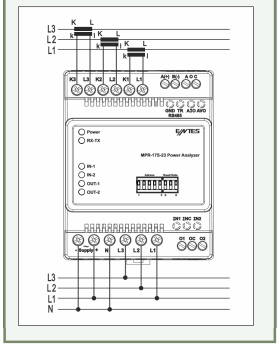
+

Voltage / Current Unbalances	1-51st Individual Voltage Harmonics	1-51st Individual Current Harmonics

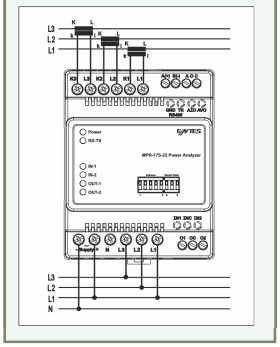
MPR-16S-21 / MPR-17S-23

Connection Diagram DIN4 - MPR-1 Series

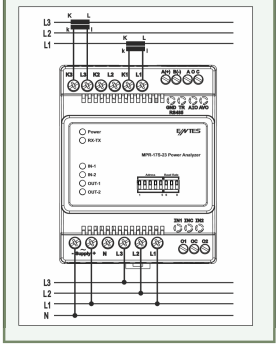
MPR-1 Series (3P4W)



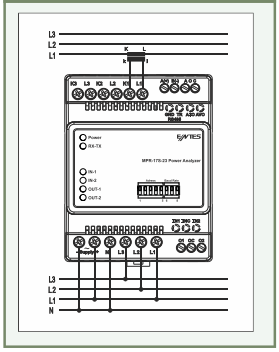
MPR-1 Series (3P3W)



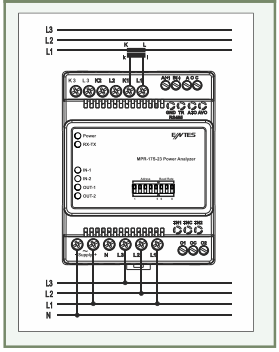
MPR-1 Series (ARON)



MPR-1 Series (3P4W balanced)

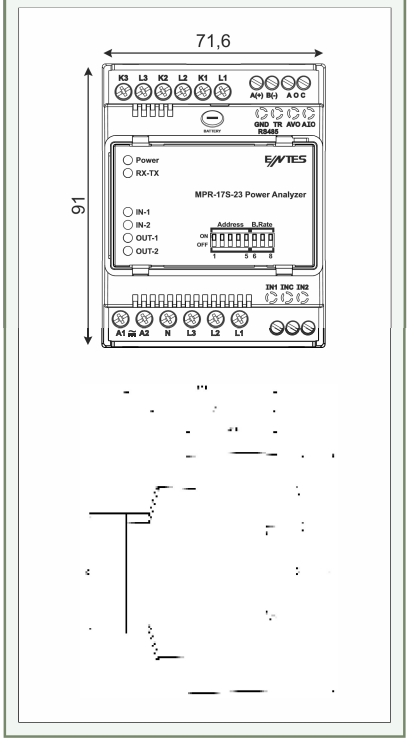


MPR-1 Series (3P3W balanced)



Dimensions

MPR-1 Series



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SPECIFICATIONS

	MPR-14S	MPR-15S-22	MPR-16S-21	MPR-17S-23
ENCLOSURE				
Dimensions	DIN4 Rail Mounting			
Protection Class	Terminals = IP20, Enclosure Protection Class = Ip40			
MEASUREMENTS				
Voltage				
Measurement Range	10-400 VAC (L-N) 10 - 690 VAC (L-L)			
Measurement Range with Transformer	1-400.0kV Transformer Ratio: 1-5000			
Accuracy	%0.5 ± 1 Digit			
Input Impedance	>1M Ω			
Burden (Input Load)	<0,5 VA			
Current				
Nominal Current	In : 5A / 1A			
Minimum Current	5 mA			
Measurement Range	50 mA - 5,5 A Accuracy : %0.5 ± 1 Digit			
Measurement Range with Transformer	50 mA -10000 A			
Burden	<1 VA			
Overload Current	1,2 In continuous			
Short Time Overload (1s)	10xIn			
Power/Energy				
Active Power	0 - 1 GW Accuracy : %1 ± 1 Digit			
Reactive Power	0 - 1 GVAr Accuracy : %1 ± 1 Digit			
Apparent Power	0 - 1 GVA Accuracy : %1 ± 1 Digit			
Power Factor	±1.00 Accuracy : ± 0,02			
Active Energy	0 - 99 999 999 kWh or MWh Accuracy : %1 class 1			
Reactive Energy	0 - 99 999 999 kVArh or MVArh Accuracy : %2 class 2			
Total Harmonic Distortion (THD)	–	THD V%, THD I%		
Individual Harmonics		–	1-51 Voltage (V) and Current (I)	
Demand Period	1,2,5,10,15,20,30,60 min.			
Frequency	45-65 Hz			
Number of Samples In One Period	128			
SUPPLY				
Supply Voltage	85 - 300 VAC/DC			
Operating Frequency	50/60 Hz			
Power Consumption	<6 VA			
DIGITAL INPUT / OUTPUT				
Digital Input Pulse Width	–	20/500 ms		
Digital Input Operating Voltage	–	12...48 VAC/DC		
Switching Current	–	Max 50mA		
Digital Output Supply Voltage	–	5-30 VDC (open collector)		
Pulse Duration	–	100ms pulse period 80ms pulse width		
Pulse Width	–	20-500 ms (Adjustable)		
ANALOG OUTPUT				
Current Output	–			0-20mA, 4-20mA, 4-24mA
Voltage Output	–			0-5V, 0-10V, ±5V, ±10V
RELAY OUTPUT				
Relay Output	–		1 NO Contact, 250 VAC/5A	
TEMPERATURE INPUT				
Sensor Input Type	–			
Thermocouple Type	–			
MEMORY				
Internal Memory Size	–		4MB	
COMMUNICATION				
Communication Interface/Protocol	RS 485 / MODBUS RTU			
Transfer Speed	2400-115200			
AMBIENT CONDITIONS				
Operating Temperature	- 10 / +55°C			
Storage Temperature	- 20 / +70°C			
Overvoltage Category	III			
Pollution Degree	II			
Ambient Humidity	%95			
STANDARDS				
Standards	EN 61557-12, EN 61326-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4 EN 62053, EN 60068, EN 61010			
CONNECTIONS				
Mounting	Rail Mounting			
Connection Terminals	Screw Terminal			
Connection Types	3F4T, 3F3T, 3 Phase Aron, 3F4T Balanced, 3F3T Balanced			