

# Network Analyzers (LED)

MPR-2 Series



MPR-2 Series

## MPR-2 Series DIN rail type Network Analyzers

MPR-2 Series DIN Type network analyzers have been designed for detailed measurement and analysis of electrical parameters. With their communication features all measurements can be tracked from a single monitoring center.

MPR-2 series can detect the status and allow the control of devices (breakers, switches, contactors etc.) in the field via their digital inputs and outputs.



## PRODUCT SELECTION TABLE

### Product Code

3xV, 3xI, Frequency, W, VAR, VA, P, Q, S, kWh, kVAh, Demand, Max., Min. Cos, I neutral	% THD-I	% THD-V	Individual Harmonics	RS-485 Models	Digital Input	Digital Output	Analog Output	Relay Output	Tariff	Clock (RTC)	Memory	Current/Voltage Unbalances	Pulse Counter	Run/On Hour	Alarm	Event Recording	Log Recording	X/5, X/1 Current Tr.	X/333 mV Current Tr.	plug&meter	95-270 VAC/DC	12-50 VDC
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### 95-270 VAC/DC Supply

MPR-24	●								1	●				●				●			●	
MPR-24-PM	plug&meter	●							1	●				●				C	●	●	●	
MPR-24S-PM	plug&meter	●			●				1	●	4 MB		●	●	●	●	●	C	●	●	●	
MPR-25S-22		●	●	●	●	2	2		8	●	4 MB		●	●	●	●	●	●	●			●
MPR-26S-21		●	●	●	51	●	2		1	8	●	4 MB	●	●	●	●	●	●	●			●
MPR-26S-21-PM	plug&meter	●	●	●	51	●	2		1	8	●	4 MB	●	●	●	●	●	C	●	●	●	
MPR-27S-23		●	●	●	51	●	2	2	1	8	●	4 MB	●	●	●	●	●	●	●			●

### 12-50 VDC Supply

MPR-24-D		●							1	●				●				●				●
MPR-24-D-PM	plug&meter	●							1	●				●				C	●	●	●	
MPR-25S-22-D		●	●	●	●	2	2		8	●	4 MB		●	●	●	●	●	●	●			●
MPR-26S-21-D		●	●	●	51	●	2		1	8	●	4 MB	●	●	●	●	●	●	●			●
MPR-26S-21-D-PM	plug&meter	●	●	●	51	●	2		1	8	●	4 MB	●	●	●	●	●	C	●	●	●	
MPR-27S-23-D		●	●	●	51	●	2	2	1	8	●	4 MB	●	●	●	●	●	●	●			●

C Can be used by X5PM converter

### Log Reader Software:

Thanks to the free Log Reader software developed by ENTES, data logs of parameters such as current, voltage, power, profile, temperature and THD recorded by MPR series devices can be transferred to the computer.

The data that will be imported can be filtered according to time interval and parameter type.

The obtained data can be imported as XLS, CSV etc. file formats.

Log Reader Software can be downloaded from [www.entes.com.tr](http://www.entes.com.tr).

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## MEASURED PARAMETERS

Phase - Neutral Voltages ( $V_{LN}$ )	Power Factor (P.F)	Active Power (P)	Active Energy Import (kWh or MWh)
Phase - Phase Voltages ( $V_{LL}$ )	Cos	Reactive Power (Q)	Active Energy Export (kWh or MWh)
Demand / Max. Demand	Frequency (Hz)	Apparent Power (S)	Reactive Energy Capacitive (kVarh or MVarh)
Phase Currents ( $I_L$ )	Max. / Min. Values	Total Active Power ( P )	Reactive Energy Inductive (kVarh or MVarh)
Neutral Current ( $I_n$ )		Total Reactive Power ( Q )	Apparent Energy (kVAh or MVAh)
		Total Apparent Power ( S )	

MPR-24



Total Harmonic Distortion for Voltage (THD-V)

Total Harmonic Distortion for Current (THD-I)

MPR-25S-22



Voltage / Current Unbalances

1-51<sup>st</sup> Individual Voltage Harmonics

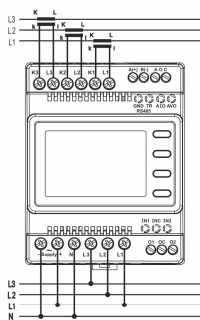
1-51<sup>st</sup> Individual Current Harmonics

MPR-26S-21 / MPR-27S-23

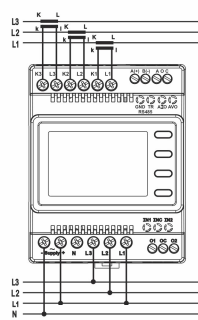
## Connection Diagram DIN-4 - MPR-2 Series

The connection diagrams below are available for MPR-2. Please look for quick start manual for MPR-2-D.

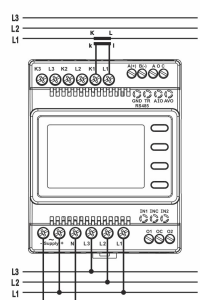
MPR-2 Series (3P4W)



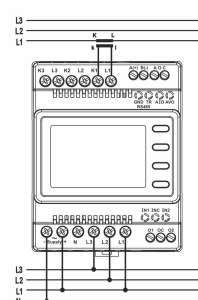
MPR-2 Series (3P3W)



MPR-2 Series (3P4W Balanced)

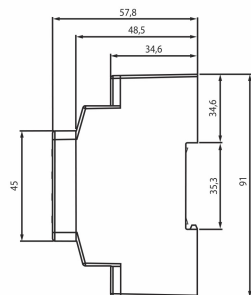
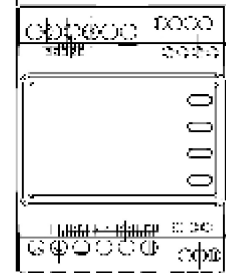


MPR-2 Series (3P3W Balanced)



## Dimensions

MPR-2 Series



# Network Analyzers (LED)

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## SPECIFICATIONS

	MPR-24	MPR-25S-22	MPR-26S-21	MPR-27S-23	MPR-26S-21-PM	MPR-24-PM
<b>ENCLOSURE</b>						
Dimensions	DIN4 Rail Mounting, 24 Pcs / Box					
Protection Class	Terminals = IP20, Front: IP40					
Display	2,1" Segmented LCD					
<b>MEASUREMENTS</b>						
<b>VOLTAGE</b>						
Measurement Range	10-300 VAC (L-N) 10 - 480 VAC (L-L)					
Measurement Range with VT	10V-999.9kV					
Accuracy	%0.5 ± 1 Digit					
Input Impedance	>1M Ω					
Burden (Input Load)	<0,5 VA					
<b>CURRENT</b>						
Rated Current	In : 5A / 1A					
Minimum Current	5 mA					
Measurement Range	50 mA - 5,5 A Accuracy: %0.5 ± 1 Digit					
Measurement Range with CT	50 mA - 10000 A					
Burden	<1 VA					
Overload Current	1,2 In continuous					
Short Time Overload (1sec)	10xIn					
<b>POWER/ENERGY</b>						
Active Power	0 - 1 GW Accuracy: %1 ± 1 Digit					
Reactive Power	0 - 1 GVAr Accuracy: %2 ± 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 kVAh or MVAh Accuracy: %2 Class 2					
Apparent Energy	0 - 99 999 999 kVAh or MVAh Accuracy: %1					
Tariffs	-				8	-
Total Harmonic Distortion (THD)	-				%THD-V, %THD-I	-
Individual Harmonics	-				1-51 Voltage (V) and Current (I)	-
Demand Period	1,5,10,15,20,30,60 min.					
Frequency	45-65 Hz					
Sampling Rate per Period	128					
<b>SUPPLY</b>						
Operating Voltage	95 - 270 VAC/DC (12-50 VDC in MPR-2X-D Series)					
Operating Frequency	50/60 Hz					
Power Consumption	<5 VA					
<b>DIGITAL INPUT / OUTPUT</b>						
Digital Input Pulse Width	-				20-500 ms	-
Digital Input Operating Voltage	-				5...30 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)	-
<b>ANALOG OUTPUT</b>						
Current Output	-				0-20mA, 4-20mA, 0-24mA	-
Voltage Output	-				0-5V, 0-10V, ±5V, ±10V	-
<b>RELAY OUTPUT</b>						
Relay Output	-		1 NO Contact, 250 VAC/5A	-		1 NO Contact, 250 VAC/5A
<b>MEMORY</b>						
Internal Memory Size	-				4MB	-
<b>COMMUNICATION</b>						
Interface/Protocol	-				RS-485 / MODBUS RTU	-
Transfer Rate	-				2400-115200 bps	-
<b>AMBIENT CONDITIONS</b>						
Operating Temperature	- 10 / +55°C					
Storage Temperature	- 20 / +70°C					
Overvoltage Category	III					
Pollution Degree	II					
Ambient Humidity	%95					
<b>STANDARDS</b>						
Standards	EN 61557-12, EN 61326-1, EN 61000-6-2, EN 61000-6-4 EN 62053, EN 60068, EN 61010					
<b>CONNECTIONS</b>						
Mounting	Rail Mounting					
Connection Terminals	Screw Terminal					
Connection Types	3P4W, 3P3W, 3 P4W, 3P4W Balanced, 3P3W Balanced					

Compatible with Entes plug&meter and X/333mV current transformers.

