**RS PRO**

## Features

- Digital input/output, analog output and relay measurement options with modular I/O structure
- 96 x 96 x 45 mm compact design
- 3,5" segment LCD screen
- 16 MB memory
- Current & voltage unbalanced measurement
- Detailed measurement up to 51 harmonics
- 256 event log
- Sag / Swell measurement
- IP54 protection class

# RS PRO Network Analyzers

## RS Stock No.:  0360700



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

## Product Description

The MPR-4 Series panel type network analyzers are compact solutions, designed for detailed measurement and analysis of electrical parameters, with dimensions of 96 x 96 x 45 mm. Operating within a voltage range of 50-270 VAC/DC, these devices offer up to 16 MB of internal memory and a modular structure for flexible I/O solutions, making them adaptable for various applications.

Real-time monitoring is possible via the large LCD screen, and the communication features of the MPR-4 Series allow for easy monitoring of energy measurements from a centralized location.
These attributes make the MPR-4 Series ideal for efficient energy management.

## General Specifications

| | |
|---|---|
| **Protection Class** | Terminal: IP20, Front: IP51 (IP54 optional) |
| **Operating Voltage** | 50-270 VAC/DC |
| **Operating Frequency** | 50/60 Hz |
| **Power Consumption** | < 5 VA (< 10 VA with module) |
| **Internal Memory Size** | 16 MB |
| **LOG Record** | YES |
| **Event Record** | YES |
| **Interface / Protocol** | RS-485 / MODBUS RTU |
| **Transfer Rate (bps)** | 2400-115200 |
| **Display Type** | 3,5" LCD |
| **Mounting Type** | Flush mount |
| **Connection Terminals** | Screw terminal with socket |
| **Operating Temperature (Min to Max)** | -10C°...+70C° |
| **Storage Temperature (Min to Max)** | -20C°...+80C° |
| **Overvoltage Category** | III |
| **Pollution Degree** | II |
| **Maximum Ambient Humidity** | 90% |

## Measurement Specifications

| Voltage | |
|---|---|
| Measurement Range | 5-300 VAC (L-N), 5-480 VAC (L-L) |
| Measurement Range with Voltage Transformer | 5 V - 999,9 kV |
| Neutral - Ground Voltage (PE-N) | 2-300 VAC |
| Accuracy | 2-300 VAC |
| Input Impedance | 0,5% ± 1 Digit |
| Burden | > 1 M |
| **Current** | |
| Nominal Current | In: 5A / 1A |
| Minimum Current | 5 mA |
| Measurement Range | 50 mA - 5,5 A |
| Measurement Range with Current Transformer | 50 mA - 10.000 A |
| Accuracy | 0,5% ± 1 Digit |
| Burden | 0,5 VA |
| Overload Current | 1,2 x In |
| Short Time Overload (1 sec) | 10 x In |
| **Power / Energy** | |
| Active Power | 0 - 1 GW ; 1% ± 1 Digit |
| Reactive Power | 0 - 1 GVAr ; 2% ± 1 Digit |
| Apparent Power | 0 - 1 GVA ; 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) |
| Apparent Energy | 0 - 99 999 999 kVAh or MVAh; Accuracy 1% |
| Total Harmonic Distortion | L - L Voltage (THD-U%); L - N Voltage (THD-V%); Current (THD-I%) |
| Individual Harmonics | 2-51 Voltage (V) and Current (I) |
| Voltage and Current Unbalances | YES |
| Sag & Swell | records as event |
| Demand Period | 1,5,10,15,20,30,60 min |
| Frequency | 45-65 Hz |
| Sampling Rate per Period | 128 |

## Input & Outputs (with module)

| Digital Input | |
|---|---|
| Pulse Width | 40 - 500 ms |
| **Digital Output** | |
| Energy Pulse Output | Active energy (1 kWh/pulse - 50 MWh/pulse) |
| Pulse Width / Duty | 0,25A |
| Switching Current | 20 - 1000 ms |
| Switching Voltage | Max 50 mA |
| **Relay Output** | |
| Relay Output | 5 - 24 VDC, max 30 VDC |
| **Analog Output** | |
| Current Output | 2 NO, 250 VAC / 5 A |
| Voltage Output | 0 - 20 mA, 4 - 20 mA, 0 - 24 mA |
| Accuracy | 0.5% |

## Dimensions

| Dimensions | 96mm x 96mm x 45mm |
|---|---|
| Width | 45mm |
| Length | 96mm |
| Height | 96mm |

## Standards

EN 61557-12, EN 61326-1, EN 61000-6-2, EN 61000-6-4, EN 62053, EN 60068, EN 61010
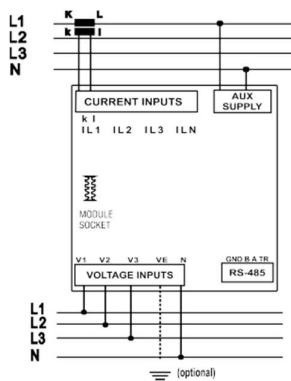
## I/O Module Selection

| I/O Module Selection Table |
|---|
| MM-102 (2 Digital Output, 5-24 VDC) |
| MM-120 (2 Digital Input, 5-24 VDC) |
| MM-122 (2 Digital Inputs + 2 Digital Outputs, 5-24 VDC) |

MPR-4 Series Network Analyzers can be customized by installing I/O modules based on project requirements.
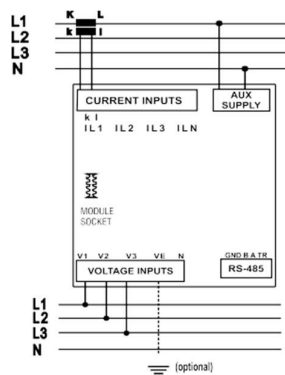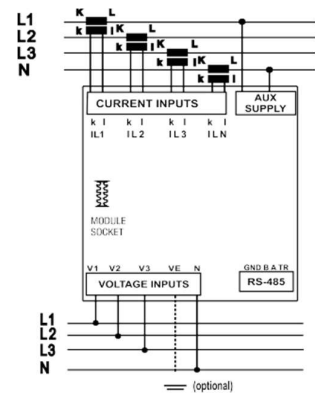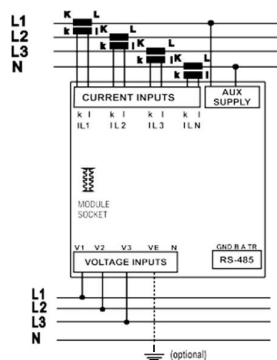
## Connection Diagrams

### 3P4W BALANCED



### 3P3W BALANCED



### 3P4W



### 3P3W



### ARON