Features

- 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)

RS PRO Energy Meter Modules

RS Stock No.: 0360669

RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

WARNING: Installation of this device must be carried out only by qualified personnel. Please read this manual carefully before installation.

1. Before connecting the module, turn off the power off the MPR4 series Analayser device. If the module is plugged in when the MPR4 is powered, the device will not recognize the module
2. Before connecting the device, make sure you turn off the power line connecting to the device on the panel.
3. Before connecting the device, by controlling the back panel of the device, make sure the device is connected to the right power terminals with matching voltage currents.
4. You should not connect the device to the network if it is malfunctioning.
5. In order to prevent electrical damage, avoid humid environments and operate the device far from water.
6. Never turn on the device when powered.
7. Always use in the suggested supply voltage range.

Product Description

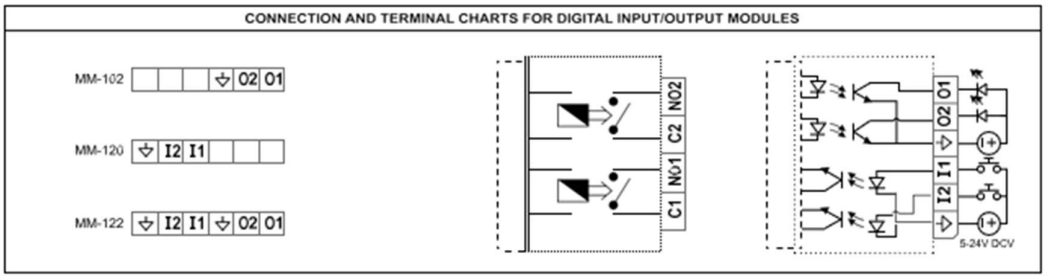
I/O Modules

Network Analyzers can be customized by installing I/O modules based on project requirements.

- 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)

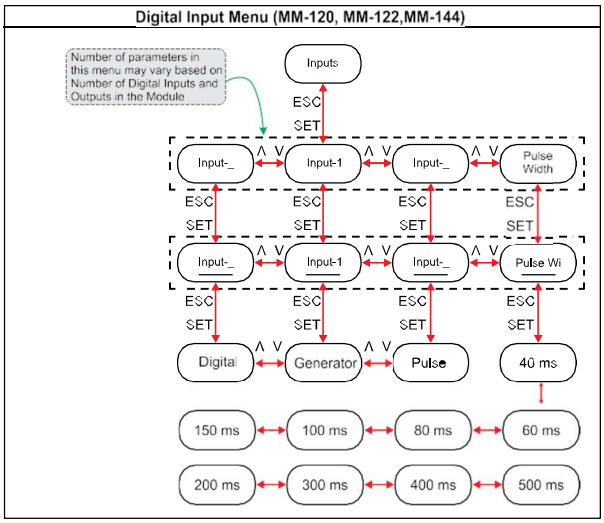
General Specifications

Digital Input Pulse Width	40-500ms
Digital Output Pulse Width	20-1000ms
Digital Output Pulse Duty	20-1000ms
Digital Output Maximum Current	50mA
Operating Voltage of DO	5-24VDC, maximum 30VDC
Relay Output	2NO, 5A / 250V / 1250VA



Digital Input

In module versions, there are different options with 1,2, or 4 digital inputs.



Input Parameter Settings

1. Digital Input: If you select this feature, logical input value will be used. By reading the value in Modbus register (H: 0xA0), you can understand whether the device is on logic-1 or logic-0 input level.

2. Pulse Input: If you select this feature, incoming pulses to the input will be counted.

3. Generator Input: If you select this feature, energy registries are saved to the generator register.

Pulse Width Setting

Minimum amount of time required to help the device count the number of pulses are set in accordance with the values below:

1. 40 milliseconds

2. 60 milliseconds

3. 80 milliseconds

4. 100 milliseconds

Pulse Input Menu

5. 150 milliseconds

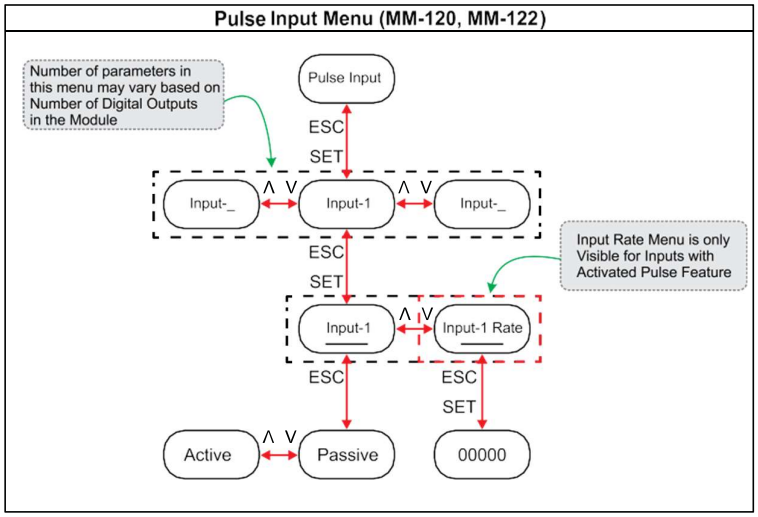
6. 200 milliseconds

7. 300 milliseconds

8. 400 milliseconds

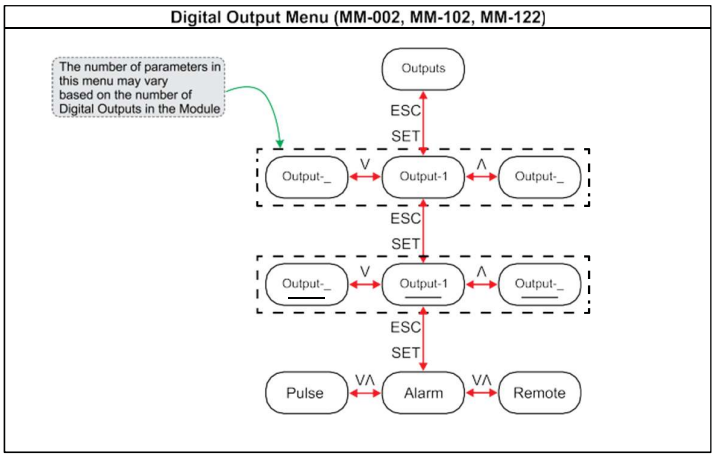
9. 500 milliseconds

In this menu, you can activate the Pulse-Meter. If pulses on the input are in line with the value assigned via “Pulse Bandwidth Settings” menu, the Pulse-Meter should increase based on these settings. You can view active “Pulse-Meters” on the main menu.



Digital Outputs

In module versions, there are different options with 1,2, or 4 digital inputs.



Output Parameter Settings

1. Pulse Output: “Pulse Output” in the Settings display is activated and the pulse output of the device is calibrated based on the parameters you set.

2. Alarm Based Output: When an alarm is created, the numerical output of the logic value will be set to zero.

3. Remote Output: By assigning a value to Modbus register (H: 0x9E), the output level is set to logic-1 or logic-1. By doing so, you can change the remote output and trigger an external device.

In this menu, you can change the settings for outputs with activated Pulse Feature.

Pulse Output Menu

Σ+EA Q14 = Total Imported Active Energy (Q14)

Σ-EA Q23 = Total Exported Active Energy (Q23)

Σ+ER Q1 = Total Imported Reactive Energy in Zone 1

Σ-ER Q4 = Total Exported Reactive Energy in Zone 4

Σ+ER Q2 = Total Imported Reactive Energy in Zone 2

Σ-ER Q3 = Total Exported Reactive Energy in Zone 3

ΣES Q14 = Q14 Total Visible Energy

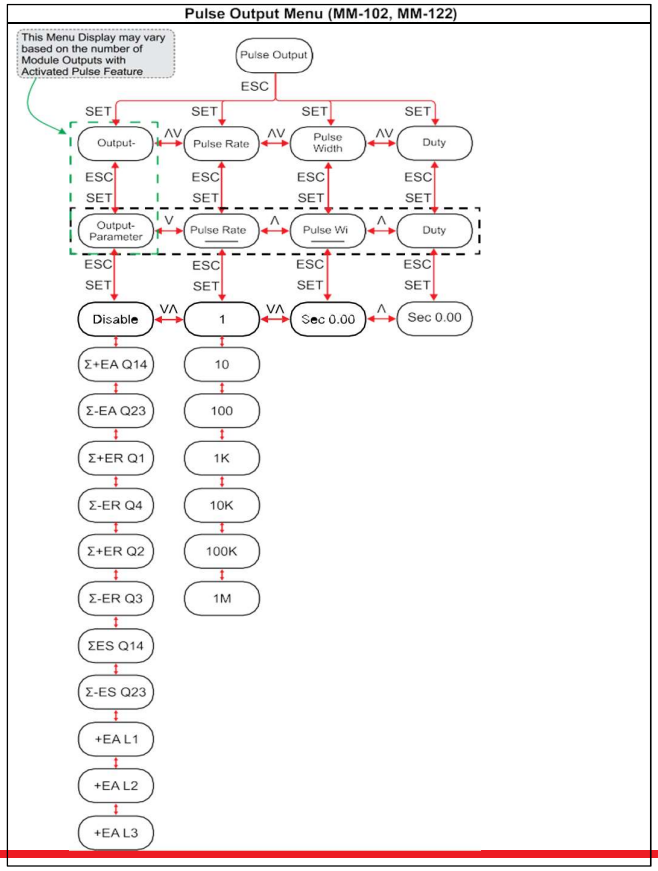
Σ-ES Q23 = Q23 Total Exported Visible Energy

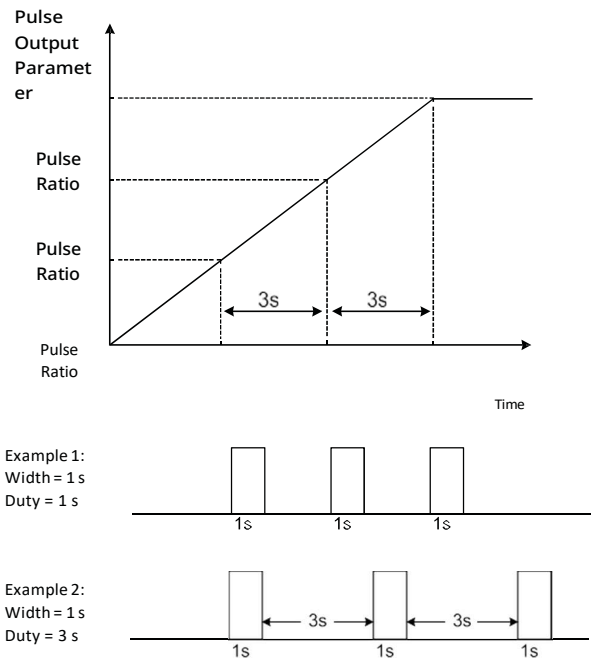
+EA L1 = 1. Phase Active Energy (Import)

+EA L2 = 2. Phase Active Energy (Import)

+EA L3 = 3. Phase Active Energy (Import)

Pulse outputs produce one pulse per ”Pulse Bandwidth” period set in accordance with the rate of increment for each “Pulse Rate”. Duty, indicates the minimum waiting time between each pulse. If the interval between triggered pulses is shorter than the minimum waiting time, pulses are recorded to the device memory. Pulses recorded to the device memory based on Bandwidth and Duty parameters are respectively sent to output.





Note: The contact resistance at ohmic load (e.g. Incandescent bulb, Resistance Devices) is 5A, It is recommended to use a contactor if the inductive load e.g.: AC motor fluorescent (Electronic Ballast) etc.) switch, Otherwise adhesion may occur in relay contacts.

Technical Drawing