

selec**MRJ4M-SL**

Operating Instructions

**SPECIFICATIONS****DISPLAY**

Liquid crystal display with backlight
1 line, 4 digits and 2 line, 7 digits per line to show electrical Parameters

LCD INDICATIONS

MD - Maximum Demand of Power

↔ - Communication in progress

LED INDICATIONS

INT - Integration of energy

WIRING INPUT

3 Ø - 4 wire, 1 Ø - 2 wire

RATED INPUT VOLTAGE

60 to 300V AC (L-N) ;
104 to 520V AC (L-L)

FREQUENCY RANGE

45-65 Hz

NO OF CHANNEL

3 Ø - 2 Channel, 1 Ø - 6 Channel (Selectable)

CT PRIMARY L1 and CT PRIMARY L2

5A to 10,000A (Programmable for any Value)

CT SECONDARY

330mV

PT PRIMARY

100V to 10kV (Programmable for any value)

PT SECONDARY

100 to 500V AC (L-L)(Programmable for any value)

DISPLAY UPDATE TIME

1sec for all parameters

POWER CONSUMPTION

Less than 8VA

ENVIRONMENTAL CONDITIONS

- Indoor use

- Altitude of up to 2000 meters

- Pollution degree II

Temperature : Operating : -10°C to 55°C

Storage : -20°C to 75°C

Humidity : Up to 85% non-condensing

MOUNTING : Din Rail mounting

WEIGHT

MRJ4M-SL : 200gms.

Pulse Output : Voltage range : 24V DC max.

Current capacity : 100mA max.

Pulse Duration : Selectable between 0.1 to 2.0sec.

Pulse Weight : Selectable between 0.01 to 9.99kWh

| ORDER CODE INFORMATION | | |
|----------------------------------|---------------------------------|---------------|
| Product | Supply | Certification |
| | Self Supplied(V1,N) | CE |
| MRJ4M-SL | 60 to 300V AC, 50 / 60Hz, (±5%) | ■ |
| Installation Category III | | |

SERIAL COMMUNICATION

| | |
|--|--|
| Interface standard and protocol | RS485 AND MODBUS RTU |
| Communication address | 1 to 255 |
| Transmission mode | Half duplex |
| Data types | Float and Integer |
| Transmission distance | 500 Metre maximum |
| Transmission speed | 300, 600, 1200, 2400, 4800, 9600, 19200 (in bps) |
| Parity | None, Odd, Even |
| Stop bits | 1 or 2 |
| Response time | 100ms (max and independent of baud rate) |

RESOLUTION

| PT Ratio x CT Ratio | kWh | INT |
|---------------------|-------|--------|
| <15 | 0.01K | 0.001K |
| <150 | 0.1K | 0.01K |
| <1500 | 1K | 0.1K |
| <15000 | 0.01M | 1K |
| <150000 | 0.1M | 0.01M |

NOTE : 1) For Voltage, Current, Power, resolution is automatically adjusted
2) For power factor, resolution is 0.01
3) The total energy is highest resolution of loads

ACCURACY :

| Measurement | Accuracy |
|--|---------------------|
| Voltage V_{L-N} | ±0.5% of full Range |
| Voltage V_{L-L} | ±0.5% of full Range |
| Current | ±0.5% of full Range |
| Frequency For L-N Voltage >20V, For L-L Voltage >35V | ±0.1% of full Range |
| Active Power | ±1% of full Range |
| Apparent power | ±1% of full Range |
| Reactive Power | ±1% of full Range |
| Power factor | ±0.01 of full Range |
| Active energy | Class 1 |
| Reactive energy | Class 1 |
| MAX Active Power | ±1% of full Range |
| MAX Apparent Power | ±1% of full Range |

SAFETY PRECAUTIONS

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If the equipment is not used in a manner specified by the manufacturer it might impair the protection provided by the equipment.

- Do not use the equipment if there is any mechanical damage.
- Ensure that the equipment is supplied with correct voltage.

CAUTION :

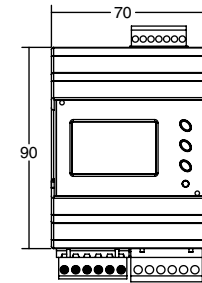
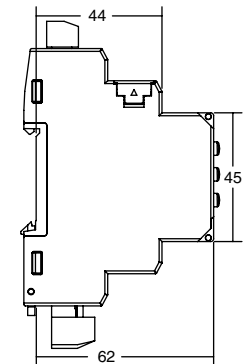
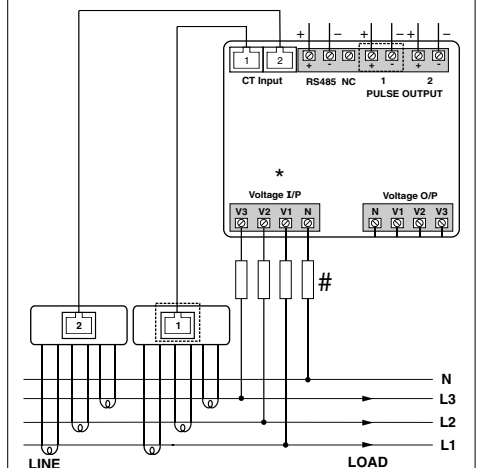
- Read complete instructions prior to installation and operation of the unit.
- Risk of electric shock.
- The equipment in its installed state must not come in close proximity to any heating sources, oils, steam, caustic vapors or other unwanted process by products.

WIRING GUIDELINES**WARNING :**

- To prevent the risk of electric shock, power supply to the equipment must be kept OFF while doing the wiring arrangement.
- Wiring shall be done strictly according to the terminal layout. Confirm that all connections are correct.
- Use lugged terminals.
- To reduce electromagnetic interference use of wires with adequate ratings and twists of the same in equal size shall be made with shortest connections.
- Layout of connecting cables shall be away from any internal EMI source.
- Cable used for connection to power source, must have a cross section of 0.5mm² to 2.5mm² (20 to 14AWG ; 75°C (min)).
- Copper cable should be used (Stranded or Single core cable).
- Before attempting work on device, ensure absence of voltages using appropriate voltage detection device.

INSTALLATION GUIDELINES**CAUTION :**

- This equipment, being built-in-type, normally becomes a part of main control panel and in such case the terminals do not remain accessible to the end user after installation and internal wiring.
- Conductors must not come in contact with the internal circuitry of the equipment or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.
- Circuit breaker or mains switch must be installed between power source and supply terminals to facilitate power 'ON' or 'OFF' function. However this switch or breaker must be installed in a convenient position normally accessible to the operator.
- The equipment shall not be installed in environmental conditions other than those mentioned in this manual.
- The equipment does not have a built-in-type fuse. Installation of external fuse of rating 275V AC / 0.5Amp for electrical circuitry / battery is highly recommended.

DIMENSIONS (All dimensions in mm)**Front View****Side View****TERMINAL CONNECTIONS**

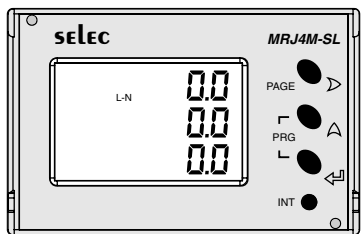
*NOTE : L1 needs to be included even if L2, or L3 are used for reference (6 channel & single phase)

All fuse types : 0.5A class CC UL type
0.5A fast acting 600V

CHANNEL DESCRIPTION

| LOAD | 2 CH | 6 CH |
|------|-----------------------------------|---------------|
| L1 | 1st, 2nd & 3rd phase of current 1 | CH1, CH2, CH3 |
| L2 | 1st, 2nd & 3rd phase of current 2 | CH4, CH5, CH6 |

FRONT PANEL DESCRIPTION



ONLINE PAGE DESCRIPTION

There are 2 dedicated key labeled as PAGE and PRG with symbols marked as **▷** and **▲** to read meter parameters.

At power ON meter displays average phase to neutral voltage and active energy of three phases. If any key is not pressed for 60sec., unit resumes manual mode.

| KEY PRESS | PARAMETER KEY | DESCRIPTION |
|---|--|---|
| ONLINE PAGE DESCRIPTION FOR MRJ4M-SL (2CH) | | |
| Press page (▷) key (1st time) | — | Displays line to neutral voltage of three phases |
| | Press▲ key | Displays line to line voltage of three phases |
| | Press▷ key 3 sec. | Displays voltage sequence. |
| Press page (▷) key (2nd time) | — | Displays current of three phases of load 1. |
| | Press▲ key | Displays current of three phases of load 2. |
| Press page (▷) key (3rd time) | — | Displays power factor of three phases of load 1 and frequency. |
| | Press▲ key 1st time | Displays power factor of three phases of load 2 and frequency. |
| | Press▲ key 2nd time | Displays active power of three phases of load 1. |
| | Press▲ key 3rd time | Displays active power of three phases of load 2. |
| | Press▲ key 4th time | Displays reactive power of three phases of load 1. |
| | Press▲ key 5th time | Displays reactive power of three phases of load 2. |
| | Press▲ key 6th time | Displays apparent power of three phases of load 1. |
| | Press▲ key 7th time | Displays apparent power of three phases of load 2. |
| | Press▲ key 8th time | Displays total active power of three phases of load 1 and load 2. |
| | Press▲ key 9th time | Displays total reactive power of three phases of load 1 and load 2. |
| | Press▲ key 10th time | Displays total apparent power of three phases of load 1 and load 2. |
| Press▲ key 11th time | Displays max demand of active power of load 1 and load 2 | |

| KEY PRESS | PARAMETER KEY | DESCRIPTION |
|--|----------------------|--|
| ONLINE PAGE DESCRIPTION FOR MRJ4M-SL (2CH) | | |
| Press page (▷) key (3rd time) | Press▲ key 12th time | Displays max demand of apparent power of load 1 and load 2 |
| Press page (▷) key (4th time) | — | Displays average phase to neutral voltage and active energy of three phases of load 1 and load 2 |
| | Press▲ key 1st time | Displays average phase to neutral voltage and reactive energy of three phases of load 1 and load 2 |
| | Press▲ key 2nd time | Displays total active energy of three phases of Load 1 and Load 2 |
| | Press▲ key 3rd time | Displays total reactive energy of three phases of Load 1 and Load 2 |
| Note - For 1 phase 2 wire network, all page will be same as 3 phase 4 wire, but only selected phase parameter will display. | | |

| KEY PRESS | PARAMETER KEY | DESCRIPTION |
|---|---------------------|--|
| ONLINE PAGE DESCRIPTION FOR MRJ4M-SL (6CH) | | |
| Press page (▷) key (1st time) | — | Displays line to neutral voltage of selected phase. |
| Press page (▷) key (2nd time) | — | Display current of CH 1 on 1st row, CH 2 on 2nd row and CH 3 on 3rd row as page one. |
| | Press▲ key 1st time | Display current of CH 4 on 1st row, CH 5 on 2nd row and CH 6 on 3rd row as page two. |
| Press page (▷) key (3rd time) | — | Display power factor of CH 1 on 1st row, CH 2 on 2nd row and CH 3 on 3rd row as page one & Frequency |
| | Press▲ key 1st time | Display power factor of CH 4 on 1st row, CH 5 on 2nd row and CH 6 on 3rd row as page Two & Frequency |
| | Press▲ key 2nd time | Display active power of CH 1 on 1st row, CH 2 on 2nd row and CH 3 on 3rd row as page one. |
| | Press▲ key 3rd time | Display active power of CH 4 on 1st row, CH 5 on 2nd row and CH 6 on 3rd row as page two. |
| | Press▲ key 4th time | Display reactive power of CH 1 on 1st row, CH 2 on 2nd row and CH 3 on 3rd row as page one. |
| | Press▲ key 5th time | Display reactive power of CH 4 on 1st row, CH 5 on 2nd row and CH 6 on 3rd row as page two. |
| | Press▲ key 6th time | Display apparent power of CH 1 on 1st row, CH 2 on 2nd row and CH 3 on 3rd row as page one. |

| KEY PRESS | PARAMETER KEY | DESCRIPTION | |
|---|--------------------------------------|--|---|
| ONLINE PAGE DESCRIPTION FOR MRJ4M-SL (6CH) | | | |
| Press page (▷) key (3rd time) | Press▲ key 7th time | Display apparent power of CH 4 on 1st row, CH 5 on 2nd row and CH 6 on 3rd row as page two. | |
| | Press▲ key 8th time | Displays total active power of load 1 (CH1,CH2,CH3) on 1st row and load 2 (CH4,CH5,CH6) . | |
| | Press▲ key 9th time | Displays total reactive power of load 1 (CH1,CH2,CH3) on 1st row and load 2 (CH4,CH5,CH6) . | |
| | Press▲ key 10th time | Displays total apparent power of load 1 (CH1,CH2,CH3) on 1st row and load 2 (CH4,CH5,CH6) . | |
| | Press▲ key 11th time | Displays max demand of active power of CH 1 on 1st row, CH 2 on 2nd row and CH 3 on 3rd row as page one. | |
| | Press▲ key 12th time | Displays max demand of apparent power of CH 1 on 1st row, CH 2 on 2nd row and CH 3 on 3rd row as page one. | |
| | Press▲ key 13th time | Displays max demand of active power of CH 4 on 1st row, CH 5 on 2nd row and CH 6 on 3rd row as page two. | |
| | Press▲ key 14th time | Displays max demand of apparent power of CH 4 on 1st row, CH 5 on 2nd row and CH 6 on 3rd row as page two. | |
| | Press page (▷) key (4th time) | — | Displays line to neutral voltage of selected phase on 1st row and CH1 active energy |
| | | Press▲ key 1st time | Displays line to neutral voltage of selected phase on 1st row and CH1 reactive energy |
| | | Press▲ key 2nd time | Displays line to neutral voltage of selected phase on 1st row and CH2 active energy |
| | | Press▲ key 3rd time | Displays line to neutral voltage of selected phase on 1st row and CH2 reactive energy |
| Press▲ key 4th time | | Displays line to neutral voltage of selected phase on 1st row and CH3 active energy | |

| KEY PRESS | PARAMETER KEY | DESCRIPTION |
|---|----------------------|---|
| ONLINE PAGE DESCRIPTION FOR MRJ4M-SL (6CH) | | |
| Press page (▷) key (4th time) | Press▲ key 6th time | Displays line to neutral voltage of selected phase on 1st row and CH4 active energy |
| | Press▲ key 7th time | Displays line to neutral voltage of selected phase on 1st row and CH4 reactive energy |
| | Press▲ key 8th time | Displays line to neutral voltage of selected phase on 1st row and CH5 active energy |
| | Press▲ key 9th time | Displays line to neutral voltage of selected phase on 1st row and CH5 reactive energy |
| | Press▲ key 10th time | Displays line to neutral voltage of selected phase on 1st row and CH6 active energy |
| | Press▲ key 11th time | Displays line to neutral voltage of selected phase on 1st row and CH6 reactive energy. |
| | Press▲ key 12th time | Displays line to neutral voltage of selected phase on 1st row and total active energy of all channel. |
| | Press▲ key 13th time | Displays line to neutral voltage of selected phase on 1st row and total reactive energy of all channel. |

Note : All pages will be same as above for P1/P2/P3 only phase wise voltage will be display (For MRJ4M-SL only)

SERIAL NUMBER DESCRIPTION

Press▲ key for 10sec. to display 8 digit serial number, the serial number will be displayed for 10 second

CONFIGURATION

There are 3 dedicated key with symbols marked as **▷**, **▲** and **◀**. Use these 3 key to enter into configuration / change setting.

Note : The settings should be done by a professional, after going through this users manual and after having understood the application situation.

For the configuration setting mode :

- Use▲ and◀ for 3sec. to enter or exit from config. mode.
- Use▷ shift key to move cursor left or right by one digit each time. After last digit of display cursor shift at 1st digit of display.
- Use▲ increment key for increasing the parameter value.
- Use◀ key to save the setting and move on to next page.
- Use▲ and▷ keys to go back and to previous page.

| Config. page. | Function | Range or Selection | Factory Setting |
|---------------|-----------------------------|--|-----------------|
| | Password | 0000 to 9998 | 1000 |
| 1 | Change Password | No / Yes | No |
| 1.1 | New Password | 0000 to 9998 | 1000 |
| 2 | Channel Selection | 2CH / 6CH | 2CH |
| 3 | Network Selection | 3P4W, 1P2W-P1, 1P2W-P2, 1P2W-P3. | 3P4W |
| #4 | CT Secondary | Preset | 5 |
| #5 | CT Primary 1 | 5A to 10,000A | 160 |
| #6 | CT Primary 2 | 5A to 10,000A | 160 |
| 7 | Current Connection1 | LHS/RHS | RHS |
| 8 | Current Connection2 | LHS/RHS | RHS |
| #9 | PT Secondary | 100V to 500V | 350 |
| #10 | PT primary | 100V to 10kV | 350 |
| 11 | Slave Id | 1 to 255 | 1 |
| 12 | Baud Rate | 300, 600, 1200, 2400, 4800, 9600 and 19200 | 9600 |
| 13 | Parity | None, Even, Odd | None |
| 14 | Stop Bit | 1 or 2 | 1 |
| 15 | Back Light | 0 to 7200 sec. | 0000 |
| 16 | Demand interval method | Sliding / Fixed | Sliding |
| 17 | Demand interval duration | 1 to 30 | 15 |
| 18 | Demand interval length | 1 to 30min | 1 |
| *19 | Pulse Weight (load 1) | 0.01 to 9.99kWh | 0.10 |
| *20 | Pulse Weight (load 2) | 0.01 to 9.99kWh | 0.10 |
| *21 | Pulse Duration | 0.1 to 2.0 sec. | 0.1 |
| 22 | Factory Default | No / Yes | No |
| 23 | Reset Energy and Max Demand | No / Yes | No |
| *23.1 | Password | 0001 to 9999 | 1001 |
| 23.01 | Reset Active Energy -1 | No / Yes | No |
| 23.02 | Reset Reactive Energy -1 | No / Yes | No |
| 23.03 | Reset L1 Max Power | No / Yes | No |
| 23.04 | Reset Active Energy -2 | No / Yes | No |
| 23.05 | Reset Reactive Energy -2 | No / Yes | No |
| 23.06 | Reset L2 Max Power | No / Yes | No |

• For resetting energy parameters user will be prompted the password. If correct password is entered, the user will be able to reset all energy parameters. This password will be value which will be greater than the configuration password by 1.

* Valid only for 2 channel selection.

In configuration set primary value first and then secondary value for both CT & PT.

CT ROTATION - IMPORTANT NOTE

Please note: All **THREE PHASE** easywire current transformers as default are configured to monitor Incoming supplies(L1 is on the right-hand side when Viewed from the P2 face). If the transformer is to be used For load monitoring(Requiring L1 to be on the Left-hand Side when viewed from the P2 face),the operator must Perform the "To change" procedure described below:

To change:

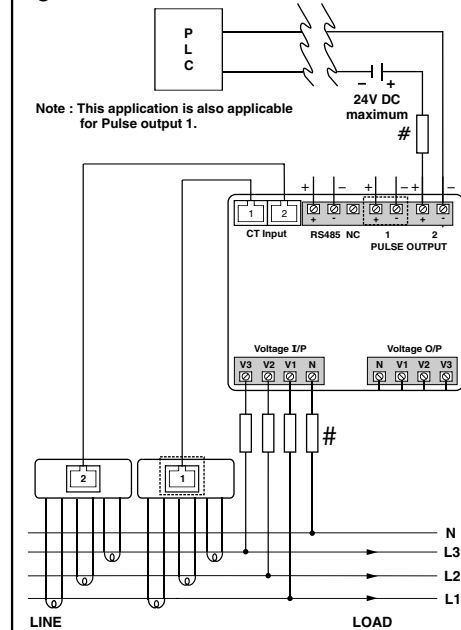
We can change LHS/RHS in configuration mode only.

To check:

Press \leftarrow key for 3 sec to check the CT mounting Settings.

APPLICATION OF PULSE OUTPUT

PROCESS INTEGRATION



Pulse output from MRJ4M-SL meter can be interfaced into a process through a PLC for on line control of energy content in the process. If the PLC has a self excited digital input, external DC supply is not needed. The kWh pulse is also used to derive average kWh information at the PLC.

All fuse types : 0.5A class CC UL type
0.5A fast acting 600V

■ In MRJ4M-SL valid only for 2 channel selection

MODBUS REGISTER ADDRESSES LIST

Readable / writable parameters from MRJ4M-SL :

| Address | Hex Address | Parameter | Range | | Length (Register) | Data Structure |
|---------|-------------|-------------------------------|---------------|------------------------------|-------------------|----------------|
| | | | Min value | Max value | | |
| 40000 | 0x00 | Password | 0 | 9998 | 1 | Integer |
| 40001 | 0x01 | N/W selection | 0x0000 | 3P-4W | 1 | Integer |
| | | | Value | Meaning | | |
| | | | 0x0002 | 1P2W-P1 | 1 | Integer |
| | | | 0x0003 | 1P2W-P2 | 1 | Integer |
| | | | 0x0004 | 1P2W-P3 | 1 | Integer |
| | | | Min value | Max value | | |
| 40002 | 0x02 | CT Secondary (A) | 5 | 5 | 1 | Integer |
| 40003 | 0x03 | CT primary L1 (A) [of load 2] | 5 | 10000 | 1 | Integer |
| 40004 | 0x04 | PT Secondary (V) | 100 | 500 | 1 | Integer |
| 40005 | 0x05 | PT primary (V) | 100 | 10000 | 2 | Integer |
| 40007 | 0x07 | Slave id | 1 | 255 | 1 | Integer |
| | | | Value | Meaning | | |
| 40008 | 0x08 | Baud rate (bps) | 0x0000 | 300 | 1 | Integer |
| | | | 0x0001 | 600 | | |
| | | | 0x0002 | 1200 | | |
| | | | 0x0003 | 2400 | | |
| | | | 0x0004 | 4800 | | |
| | | | 0x0005 | 9600 | | |
| | | | 0x0006 | 19200 | | |
| 40009 | 0x09 | Parity | 0X0000 | None | 1 | Integer |
| | | | 0X0001 | Odd | | |
| | | | 0x0002 | Even | | |
| 40010 | 0x0A | Stop bit | 0x0000 | 1 | 1 | Integer |
| | | | 0x0001 | 2 | | |
| | | | Min value | Max value | | |
| 40011 | 0x0B | Backlight OFF (sec.) | 0 | 7200 | 1 | Integer |
| | | | Value | Meaning | | |
| 40012 | 0x0C | Factory Default | 1 | Set to factory setting range | 1 | Integer |
| 40013 | 0x0D | Reset kWh [of load 2] | 1 | Reset Total Active Energy | 1 | Integer |
| 40015 | 0x0F | Reset kVArh [of load 2] | 1 | Reset Total Reactive Energy | 1 | Integer |
| 40034 | 0x22 | Demand Interval Method | 0x0000 | Sliding | 1 | Integer |
| | | | 0x0001 | Fixed | | |
| 40035 | 0x23 | Demand Interval Duration | MIN Value : 1 | MAX Value : 30 | 1 | Integer |
| 40036 | 0x24 | Demand Interval Length(min) | MIN Value : 1 | MAX Value : 30 | 1 | Integer |
| 40037 | 0x25 | Reset max kW [of load 2] | 1 | Reset max Active power | 1 | Integer |
| 40041 | 0x29 | Reset max kVA [of load 2] | 1 | Reset max Apparent power | 1 | Integer |
| 40042 | 0x2A | Reset kWh [of load 1] | 1 | Reset Total Active energy | 1 | Integer |
| 40044 | 0x2B | Reset kVArh [of load 1] | 1 | Reset Total Reactive energy | 1 | Integer |
| 40045 | 0x2C | Reset max kW [of load 1] | 1 | Reset max Active power | 1 | Integer |
| 40049 | 0x31 | Reset max kVA [of load 1] | 1 | Reset max Apparent power | 1 | Integer |
| | | | Min value | Max value | | |
| 40050 | 0x32 | CT primary L2 (A) [of load 1] | 5 | 10000 | 1 | Integer |
| *40057 | 0x39 | Pulse Duration (sec.) | 0.1 | 2.0 (sec.) | 1 | Integer |
| #40058 | 0x3A | Pulse Weight of load 1 (kWh) | 0.01 | 9.99 (kWh) | 1 | Integer |
| #40059 | 0x3B | Pulse Weight (kWh)[of load 2] | 0.01 | 9.99 (kWh) | 1 | Integer |
| | | | Value | Meaning | | |
| 40060 | 0x3C | No of Channel | 0 | 2 CH | 1 | Integer |
| | | | 1 | 6 CH | 1 | Integer |
| 40061 | 0x3D | Current connection-L1 | 0X0000 | RHS | 1 | Integer |
| | | | 0X0001 | LHS | | |
| 40062 | 0x3E | Current connection-L2 | 0X0000 | RHS | 1 | Integer |
| | | | 0X0001 | LHS | | |

* 0.1 resolution [1 = 0.1sec.] # 0.01 resolution [1 = 0.01kWh]

■ In MRJ4M-SL only for 2 channel

MODBUS REGISTER ADDRESSES LIST

Readable parameters : [Length (Register) : 2 ; Data Structure : Float]

NOTE : In 4 byte data type, LSB will be displayed on lower address and MSB will be displayed on higher address.

| Address | Hex Address | Parameter |
|----------------------------|-------------|----------------------------------|
| 30000 | 0x00 | Voltage V1N |
| 30002 | 0x02 | Voltage V2N |
| 30004 | 0x04 | Voltage V3N |
| 30006 | 0x06 | Average Voltage LN |
| 30008 | 0x08 | Voltage V12 |
| 30010 | 0x0A | Voltage V23 |
| 30012 | 0x0C | Voltage V31 |
| 30014 | 0x0E | Average Voltage LL |
| 30132 | 0x84 | Serial No (Data Structure : Hex) |
| FOR 2 CHANNEL | | |
| [Load 2] parameters | | |
| 30016 | 0x10 | Current I1 |
| 30018 | 0x12 | Current I2 |
| 30020 | 0x14 | Current I3 |
| 30022 | 0x16 | Average Current |
| 30024 | 0x18 | kW1 |
| 30026 | 0x1A | kW2 |
| 30028 | 0x1C | kW3 |
| 30030 | 0x1E | kVA1 |
| 30032 | 0x20 | kVA2 |
| 30034 | 0x22 | kVA3 |
| 30036 | 0x24 | kVAr1 |
| 30038 | 0x26 | kVAr2 |
| 30040 | 0x28 | kVAr3 |
| 30042 | 0x2A | Total kW |
| 30044 | 0x2C | Total kVA |
| 30046 | 0x2E | Total kVAr |
| 30048 | 0x30 | PF1 |
| 30050 | 0x32 | PF2 |
| 30052 | 0x34 | PF3 |
| 30054 | 0x36 | Average PF |
| 30056 | 0x38 | Frequency |
| 30058 | 0x3A | kWh |
| 30062 | 0x3E | kVArh |
| 30064 | 0x40 | kW MAX Active Power |
| 30072 | 0x48 | kVA MAX Apparent Power |
| 30134 | 0x86 | Existing kW MAX Active Power |
| 30138 | 0x8A | Existing kVA MAX Apparent Power |

| Address | Hex Address | [Load 1] Parameter |
|----------------------|-------------|---------------------------------|
| 30074 | 0x4A | Current I1 |
| 30076 | 0x4C | Current I2 |
| 30078 | 0x4E | Current I3 |
| 30080 | 0x50 | Average Current |
| 30082 | 0x52 | kW1 |
| 30084 | 0x54 | kW2 |
| 30086 | 0x56 | kW3 |
| 30088 | 0x58 | kVA1 |
| 30090 | 0x5A | kVA2 |
| 30092 | 0x5C | kVA3 |
| 30094 | 0x5E | kVAr1 |
| 30096 | 0x60 | kVAr2 |
| 30098 | 0x62 | kVAr3 |
| 30100 | 0x64 | Total kW |
| 30102 | 0x66 | Total kVA |
| 30104 | 0x68 | Total kVAr |
| 30106 | 0x6A | PF1 |
| 30108 | 0x6C | PF2 |
| 30110 | 0x6E | PF3 |
| 30112 | 0x70 | Average PF |
| 30114 | 0x72 | Frequency |
| 30116 | 0x74 | kWh |
| 30120 | 0x78 | kVArh |
| 30122 | 0x7A | kW MAX Active Power |
| 30130 | 0x82 | kVA MAX Apparent Power |
| 30142 | 0x8E | Total kWh (Load 1 and Load 2) |
| 30144 | 0x90 | Total kVArh (Load 1 and Load 2) |
| 30146 | 0x92 | Existing kW MAX Active Power |
| 30148 | 0x94 | Existing kVA MAX Apperant Power |
| FOR 6 CHANNEL | | |
| 30150 | 0x96 | kWh of CH1 |
| 30152 | 0x98 | kWh of CH2 |
| 30154 | 0x9A | kWh of CH3 |
| 30156 | 0x9C | kWh of CH4 |
| 30158 | 0x9E | kWh of CH5 |
| 30160 | 0xA0 | kWh of CH6 |
| 30162 | 0xA2 | kVArh of CH1 |

| Address | Hex Address | Parameter |
|---------|-------------|--|
| 30164 | 0xA4 | kVArh of CH2 |
| 30166 | 0xA6 | kVArh of CH3 |
| 30168 | 0xA8 | kVArh of CH4 |
| 30170 | 0xAA | kVArh of CH5 |
| 30172 | 0xAC | kVArh of CH6 |
| 30174 | 0xAE | kW Max active power of CH1 |
| 30176 | 0xB0 | kW Max active power of CH2 |
| 30178 | 0xB2 | kW Max active power of CH3 |
| 30180 | 0xB4 | kW Max active power of CH4 |
| 30182 | 0xB6 | kW Max active power of CH5 |
| 30184 | 0xB8 | kW Max active power of CH6 |
| 30186 | 0xBA | kVA Max apparent power of CH1 |
| 30188 | 0xBC | kVA Max apparent power of CH2 |
| 30190 | 0xBE | kVA Max apparent power of CH3 |
| 30192 | 0xC0 | kVA Max apparent power of CH4 |
| 30194 | 0xC2 | kVA Max apparent power of CH5 |
| 30196 | 0xC4 | kVA Max apparent power of CH6 |
| 30198 | 0xC6 | Existing kW Max active power of CH1 |
| 30200 | 0xC8 | Existing kW Max active power of CH2 |
| 30202 | 0xCA | Existing kW Max active power of CH3 |
| 30204 | 0xCC | Existing kW Max active power of CH4 |
| 30206 | 0xCE | Existing kW Max active power of CH5 |
| 30208 | 0xD0 | Existing kW Max active power of CH6 |
| 30210 | 0xD2 | Existing kVA Max apparent power of CH1 |
| 30212 | 0xD4 | Existing kVA Max apparent power of CH2 |
| 30214 | 0xD6 | Existing kVA Max apparent power of CH3 |
| 30216 | 0xD8 | Existing kVA Max apparent power of CH4 |
| 30218 | 0xDA | Existing kVA Max apparent power of CH5 |
| 30220 | 0xDC | Existing kVA Max apparent power of CH6 |

(Specifications subject to change as development is a continuous process.)

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