

Autonics SMALL MULTI PANEL METER M4NN SERIES INSTRUCTION MANUAL



Thank you for choosing our Autonics product. Please read the following safety considerations before use.

Safety Considerations

Please observe all safety considerations for safe and proper product operation to avoid hazards. **Warning** Failure to follow these instructions may result in serious injury or death.

Caution Failure to follow these instructions may result in personal injury or product damage.

Warning

- 1. Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss.
2. Install on a device panel to use.
3. Do not connect, repair, or inspect the unit while connected to a power source.
4. Check 'Connections' before wiring.
5. Do not disassemble or modify the unit.

Caution

- 1. When connecting the power/measurement input, use AWG 24(0.20mm²) to AWG 20(0.50mm²) cable and tighten the terminal screw with a tightening torque of 0.74 to 0.90N·m.
2. Use the unit within the rated specifications.
3. Use dry cloth to clean the unit, and do not use water or organic solvent.
4. Do not use the unit in the place where flammable/explosive/corrosive gas, humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.
5. Keep metal chip, dust, and wire residue from flowing into the unit.

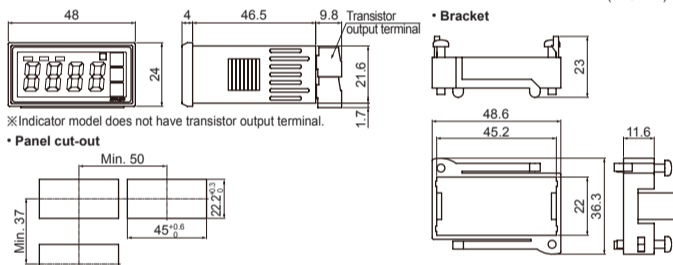
Ordering Information

Table with columns for Model, Control output, Power supply, Input, Type, Size, Digit, and Item. Includes options for Indicator, NPN/PNP open collector output, DC Voltage/Current/AC Voltage/Current, and DIN size.

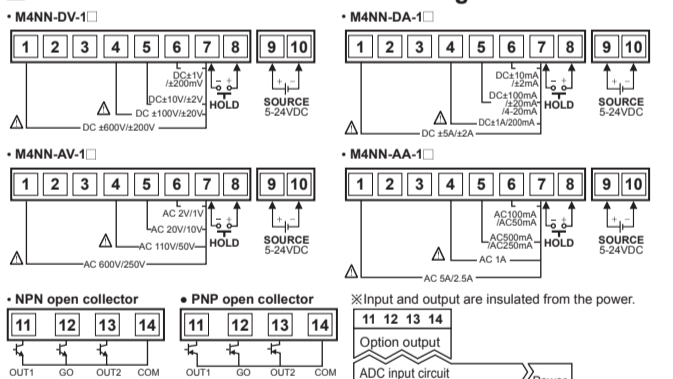
Unit Description



Dimension



Connections and Insulated Block Diagram



Monitoring Max./Min. Value

It monitors Max./Min. value of display value based on current display value and then display the data in HPEL mode and LPEL mode of parameter 0 group. Set delay time (0 to 30 sec) in PEEL mode of parameter 2 group in order to avoid caused by initial overcurrent or overvoltage, when monitoring the peak value. Delay time is 0 to 30 sec and it starts to monitor the peak value after set time.

Minus Input Display Setting

When minus input is unnecessary, or when display 0 not to display minus input due to display minus input due to unstable input value around 0, set oFF this minus input display function.

AC Frequency Measurement

It measures input signal frequency when it is an AC input. It uses fixed decimal point by dot parameter setting of parameter 1 group, measured range can be changed by setting and measured range of decimal point position is as below chart. It is available to adjust upper gradient of f and f of parameter 1 group. In order to measure frequency normally, input signal, over 10% F.S. of the measured range, should be supplied.

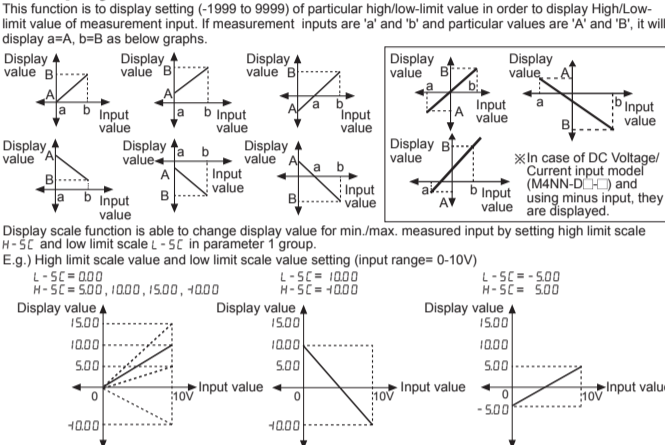
Error Display

Table with columns for Display, Description, and Error Code. Lists error codes like HHHH, F-HH, LLLL, PF-H, PF-L, d-HH, and d-LL with their corresponding descriptions.

Specifications

Table of specifications for models M4NN-DV-1, M4NN-DA-1, M4NN-AV-1, and M4NN-AA-1. Includes measurement input, max. allowable input, power supply, display method, accuracy, and environmental conditions.

Display Scale

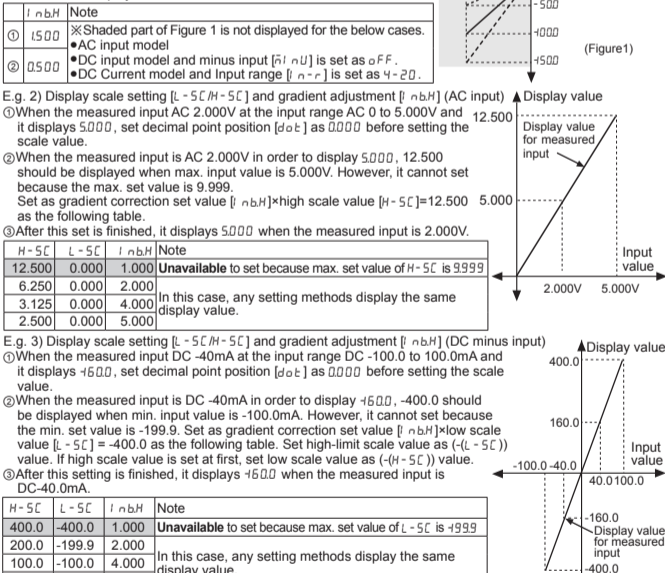


Error Correction

It corrects display error of measurement input. It is available to adjust display value by setting high limit error correction function. The display value to 500V measured input varies by adjusting the offset of low-limit value.

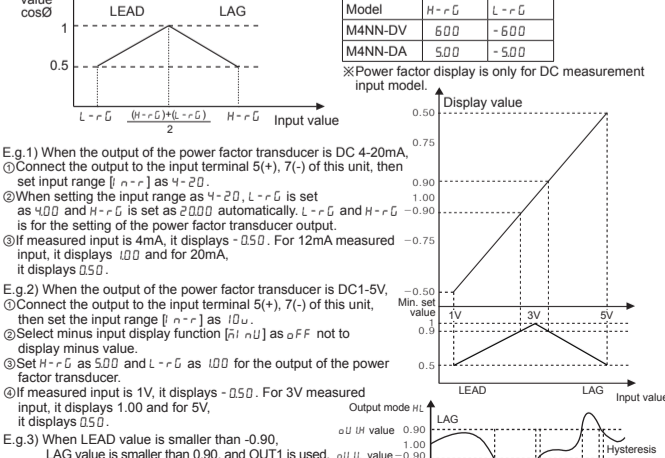
Gradient Correction

This function is to adjust gradient of standard display value or scale value for the input value within the measured input range. By adjusting gradient, it is available as 'High limit error correction function'.



Power Factor [PF] Display

This function displays LEAD and LAG by analog output signal from the power factor transducer. It is available to accept several outputs of the power factor transducer by high-limit/low-limit/low-limit/low-limit.



Measurement Input

Table showing measured input ranges, display values, input impedances, and display ranges for DC Voltage, DC Current, AC Voltage, and AC Current.

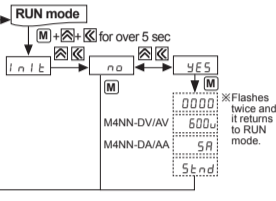
Display Cycle Delay

In some applications the measured input may fluctuate which in turn causes the display to fluctuate. By adjusting the display cycle delay function time at d1 5z of parameter 2 group, the operator can adjust the display time within a range of 0.1 sec to 5 sec.

Zero Adjustment

Forces the display value of measured input to 0 (Zero). Zero adjustment range: -99 to 99. Zero adjustment method: Press [0] and [0] key in RUN mode for 3 sec.

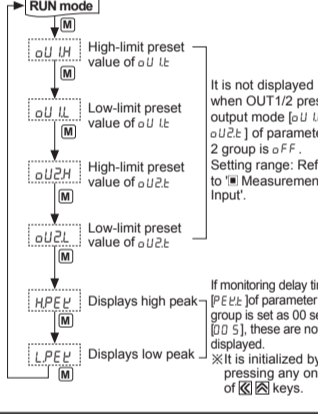
Initialization



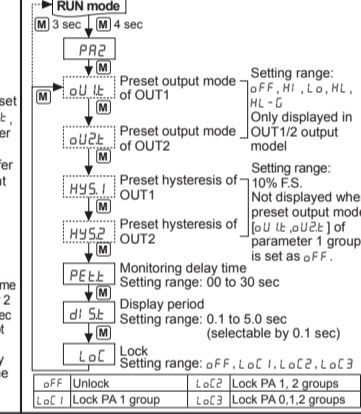
Pre-set Output Operation Mode

Table showing pre-set output operation modes (oFF, HI, LO, HL-G) and their corresponding output behaviors for OUT1 and OUT2.

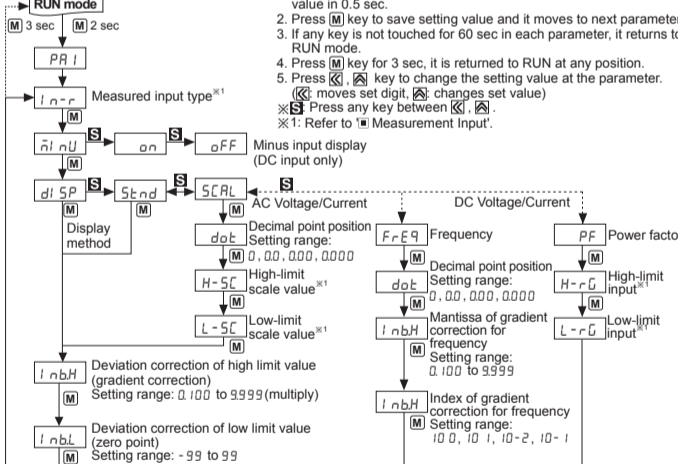
Parameter 0 Group



Parameter 2 Group



Parameter 1 Group



Factory Default

Table of factory default settings for parameters 1, 2, and 0 across the four models.

Cautions during Use

- 1. Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
2. 5-24VDC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
3. Install a power switch or circuit breaker in the easily accessible place for supplying or disconnecting the power.
4. Keep away from high voltage lines or power lines to prevent inductive noise.

Major Products

- Photocell Sensors, Temperature Controllers, Fiber Optic Sensors, Temperature/Humidity Transducers, Door Sensors, SSRs/Power Controllers, Door Side Sensors, Counters, Area Sensors, Timers, Proximity Sensors, Panel Meters, Pressure Sensors, Tachometer/Pulse (Rate) Meters, Rotary Encoders, Display Units, Connector/Sockets, Sensor Controllers, Switching Mode Power Supplies, Control Switches/Lamps/Buzzers, I/O Terminal Blocks & Cables, Stepper Motors/Drivers/Motion Controllers, Graphic/Logic Panels, Field Network Devices, Laser Marking System (Fiber, Co., Nd: YAG), Laser Welding/Cutting System.

Autonics Corporation

18, Bongsong-ro 513beon-gil, Haendae-gu, Busan, South Korea, 48002. TEL: 82-51-519-3232. E-mail: sales@autonics.com