

Autonics PANEL METER MT4W SERIES INSTRUCTION MANUAL



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

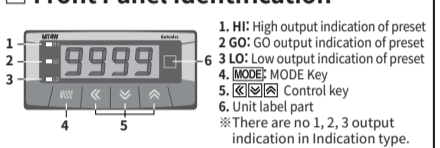
Safety Considerations

- 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.

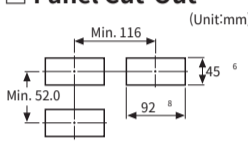
Caution

- When connecting the power/measurement input and relay output, use AWG 24(0.20mm²) to AWG 15(1.65mm²) cable and tighten the terminal screw with a tightening torque of 0.98 to 1.18N·m. Use proper cables for the rated load current.

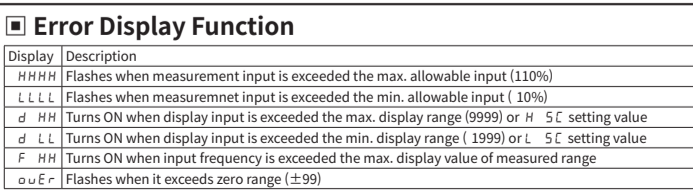
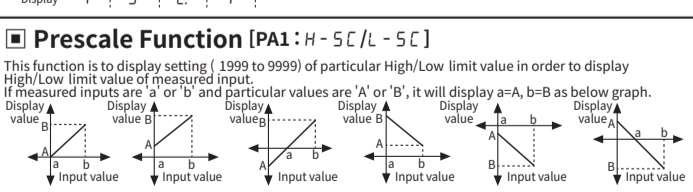
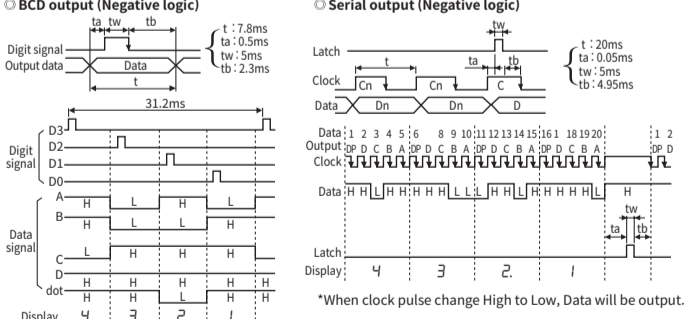
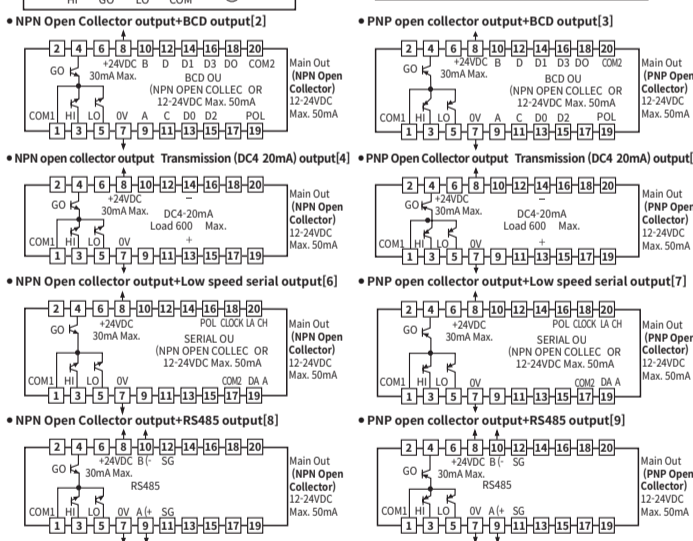
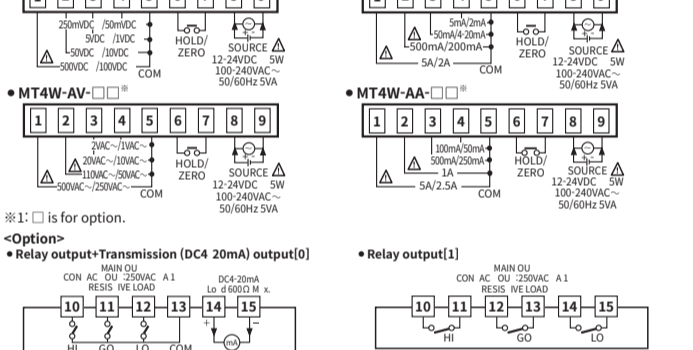
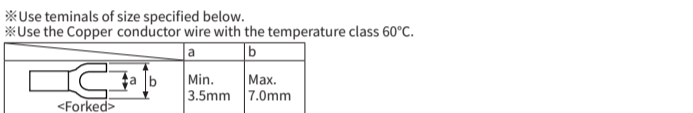
Front Panel Identification



Panel Cut-Out



Connections



Specifications

Table with 2 columns: Specification and Value. Includes Model (MT4W 12 24VDC), Power supply (100 240VAC 50/60Hz), Allowable voltage range (90 to 110%), Power consumption (5VA), Display method (7 Segment LED display), Display accuracy (23°C±5°C), Input (DC Voltage/Current), Preset output (Relay output, RS485 communication), Sub output (Transmission output), Insulation resistance (Over 100MΩ), Dielectric strength (2,000VAC), Noise immunity (±2kV), Vibration (0.75mm amplitude), Shock (100m/s²), Relay life cycle (Min. 20,000,000 operations), Environment (Ambient temperature 10 to 50°C), Insulation type (Double insulation), Approval (CE, RoHS), Weight (Approx. 326g).

Measurement Input [PA1: i n b H]

Table with 4 columns: Type, Measured input and range, Input impedance, Display range [5 b n d], Prescale Display range [5 C R L]. Includes rows for DC Volt, DC Amper, AC Volt, and AC Amper.

When "HHHH" or "LLLL" is flashes with a certain measurement input, disconnect power supply and then check the cables.

Display Cycle Delay Function [PA2: d i 5 t]

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 d i 5 t of parameter 2, the operator can adjust the display time within a range of 0.1 sec to 5 sec.

Monitoring Max./Min. Display Value Function [PA0: HPE L/ LPE L, PA2: PE L]. This function monitors Max./Min. display value based on the current display value and then displays the data at HPE L/ LPE L of parameter 0. It sets the delay time (0 to 30 sec) at PE L of parameter 2 in order to prevent malfunction caused by initial over current or over voltage, when monitoring the peak value.

Current Output (DC4-20mA) Scale adjustment function [PA2: F5-H/F5-L]. It sets current output for the display value at the current output DC 4 20mA. It sets display value for 4mA at F5-L and 20mA at F5-H and the range between F5-H and F5-L should be 10% F.S. (When it sets as under 10% F.S., it changed as over 10% F.S. automatically.) Preset display value is fixed to output as 4mA at under F5-L and 20mA at over F5-H.

Error Correction Function [PA1: i n b H / i n b L]. It corrects display value error of measured input. i n b L: ±99 (Adjust deviation of low value). i n b H: 5.000 to 0.100 (Correct gradient (%) of high value). Display values: (Measured value) i n b H + i n b L. When the measured range is 0 to 500V, and the display range is 0 to 50.0. If the low display value is i n b L to 0V input, set 12 as the i n b L value to display "0 0" by adjusting the offset of the low value.

Gradient Correction Function [PA1: i n b H]. It corrects the gradient of prescale value and display value. (Picture 1) Display value Y can be used as a, β times against X input value by correction function (i n b H) and used as correction function of max. display value [H 5 C]. Adjustment range is 0.100 to 5.000 and multiply current gradient.

Preset Output Mode [PA2: o U E t]. It corrects the gradient of prescale value and display value. (Picture 1) Display value Y can be used as a, β times against X input value by correction function (i n b H) and used as correction function of max. display value [H 5 C]. Adjustment range is 0.100 to 5.000 and multiply current gradient.

Startup Compensation Timer Function [PA2: 5 t R t]

This time function limits the operation of an output until the measured input (overvoltage or inrush current) is stable at moment of power on. All outputs are off during startup compensation time setting after power is supplied. Setting range: 0.0 to 99.9 (unit: sec), Factory default: 0.0.

Parameter table with columns: Parameter, Display, Function, Note. Includes parameters for PA1 (Parameter 1) and PA2 (Parameter 2).

Parameter Setting and Parameter 0. Parameter Setting: Press MODE key in RUN mode and it enters PA 0 group. Press MODE key for over 3 sec in RUN mode, it displays [PA 1]. Press MODE key for over 5 sec in RUN mode, it displays [PA 2] after [PA 1]. Parameter 0: Press MODE key touch. Set preset High limit value. (It is not displayed when o U E t mode value of PA2 is o F F.)

Parameter 1. Select measured input specification. Select the display method of measuring input. Select measurement method when it is AC input. When d i 5 P is 5 b n d, it shows max. display value of standard specification. When d i 5 P is 5 C R L, Set decimal point position. When d i 5 P is F r E 9, Set frequency measured range value (High peak) in RUN mode.

Parameter 2. Select Preset output mode. Set preset hysteresis. Set startup compensation time. Set monitoring delay time. Set a display cycle. Enable zero point adjustment by front key operation. Press both [H] and [L] keys at the same time for 3sec. Set high limit value for DC 20mA output position of PV output. Set address of RS485 communication output. Select baud rate of RS485 communication output. Set key lock function and select from 4 kinds.

Change The Parameter Setting Value. Advance to the parameter to be changed when pressing MODE key continuously in RUN mode and releasing MODE key at the parameter. When pressing MODE key in each parameter, the initial mode of the parameter is displayed. When pressing one of [H] or [L] keys in display mode, the saved setting value is displayed. Change the setting value by [H] or [L] key when setting value flashes. Change AC type measured input from 250V to 125V.

Cautions during Use. 1. Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents. 2. 12-24VDC power supply should be isolated 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.

Connection with the line filter and Connection with the varistor. This unit may be used in the following environments. 1. Indoors (in the environment condition rated in 'Specifications'). 2. Altitude max. 2,000m. 3. Pollution degree 2. 4. Installation category II.