

PANEL METER MT4Y SERIES

M A N U A L



Thank you very much for selecting Autonics products. For your safety, please read the following before using.

Caution for your safety

- Please keep these instructions and review them before using this unit. Please observe the cautions that follow: Warning Serious injury may result if instructions are not followed. Caution Product may be damaged, or injury may result if instructions are not followed.

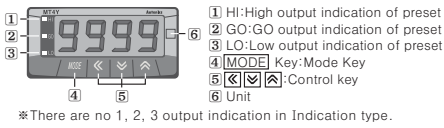
Warning

- In case of using this unit with machinery(Nuclear power control, medical equipment, vehicle, train, airplane, combustion apparatus, entertainment or safety device etc), it is required to install fail-safe device. It must be mounted on Panel. Do not connect, inspect and repair terminals when it is power on. Do not disassemble and modify this unit, when it is required. Please contact us. Please check the number of terminal when connecting power line or measuring input.

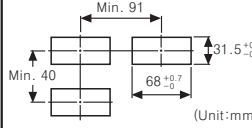
Caution

- This unit shall not be used outdoors. When connecting wire, No.20AWG(0.50mm^2) should be used and tighten screw bolt on terminal block with 0.74N·m to 0.90N·m strength. Please observe the rated specification. Do not use beyond of the rated switching capacity of Relay contact. In cleaning the unit, do not use water or an oil-based detergent. Do not use this unit in place where there are flammable or explosive gas, humidity, direct ray sun, radiant heat, vibration and impact etc. Do not inflow dust or wire dregs into the unit. Please connect properly after checking the polarity of measuring terminals.

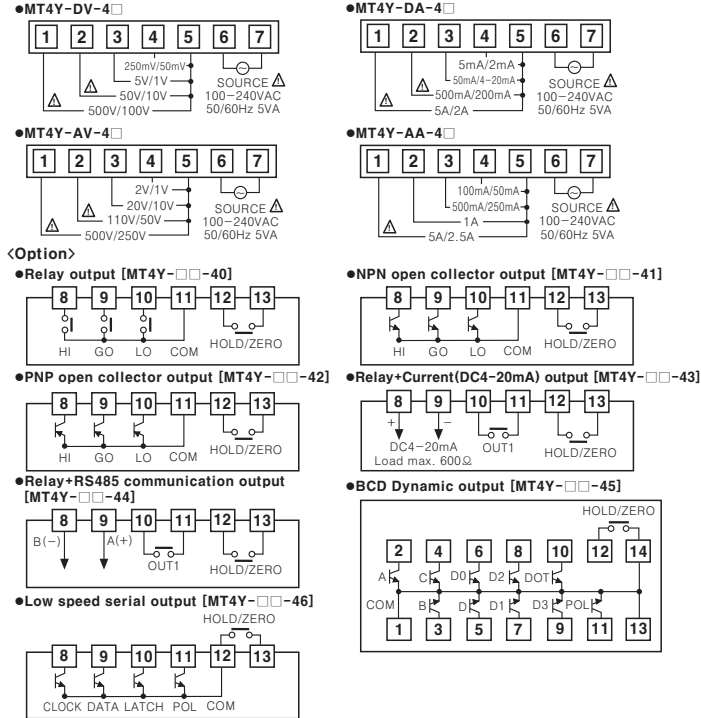
Front panel identification



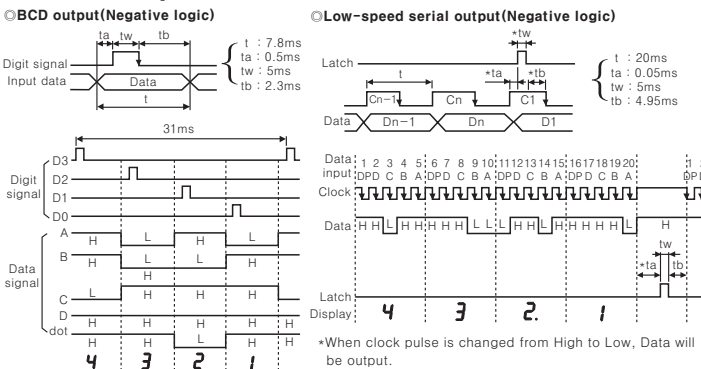
Panel cut-out



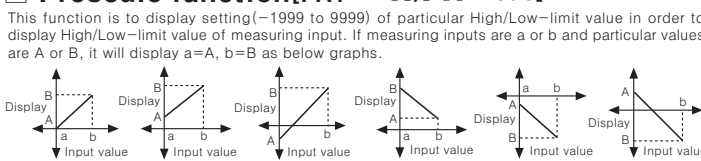
Terminal connection



Time chart of Low-speed serial output and BCD output



Prescale function[PA1: H-SC/L-SC mode]



Error display function

Table with 2 columns: Display and Description. Lists error codes like HHHH, LLLL, d-HH, d-L, F-HH, and oEr with their corresponding conditions.

Specifications

Specifications table including Series (MT4Y), Power supply, Power consumption, Display method, Display accuracy, Input, Preset output, Sub output, AC measuring function, Frequency measuring function, Ambient temperature, Storage temperature, Ambient humidity, Insulation type, and Approval.

Specification and range

Table showing measuring input and range, input impedance, standard and display ranges, and prescale settings for DC Volt, DC Ampere, and AC Volt.

Display cycle delay function [PA 2 : d15t mode]

It is difficult to read display value, in case, measuring input value is fluctuated frequently, it is also changed. In this case, it is able to make display value stable by delaying display cycle. Display cycle displaying time can be changed in d15t mode of Parameter 2.

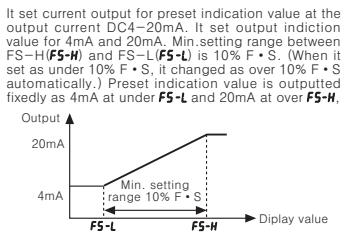
Monitoring function for Peak display value [PA 0 : HPEE/LPEE mode, PA 2 : PEEL mode]

It observes Max./Min. value of display value by current display value and then display the data in HPEE mode and LPEE mode of parameter 0. Set delay time(0 to 30sec.) in PEEL mode of parameter 2 in order to prevent malfunction caused by initial over current or over voltage, when monitoring the peak value.

Initialization function

It initializes parameter setting state. When pressing [MODE] key over 5 seconds at the same time in measuring mode, former changed state is canceled and it changes as initial state.

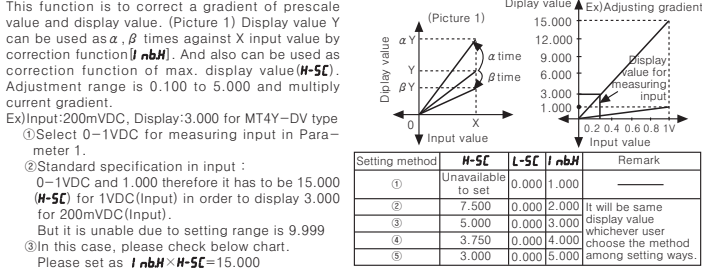
Current output (DC4-20mA) Scale adjustment function [PA 2 : FS-H / FS-L mode]



Error correction function [PA 1 : InbH / InbL mode]

This function is for correcting display value error of measuring input. InbH: 5.000 to 0.100(Correct gradient(% of High value)) Display value=(Measuring value x InbH) + InbL

Gradient correction function [PA 1 : InbH mode]



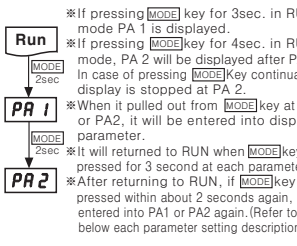
Preset output mode[PA 2 : oUt mode]

Table for Preset output mode showing Mode, Output operation, and Operation for various settings like oFF, LSt, HSt, LHSt, HHSt, LLSt, and LdSt.

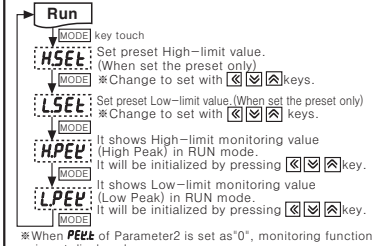
Parameter

Parameter table with columns: Parameter, Display, Function, and Note. Lists parameters like In-r, dISP, Stnd, FrEQ, SCAL, L-SC, dot, InbH, InbL, InbE, oUt, HYS, PEEL, d15t, Eri, Ev In, FS-H, FS-L, AdrS, Prty, StP, rSt, bPS, LcL, HSE, LSE, HPEE, LPEE, and LPEL.

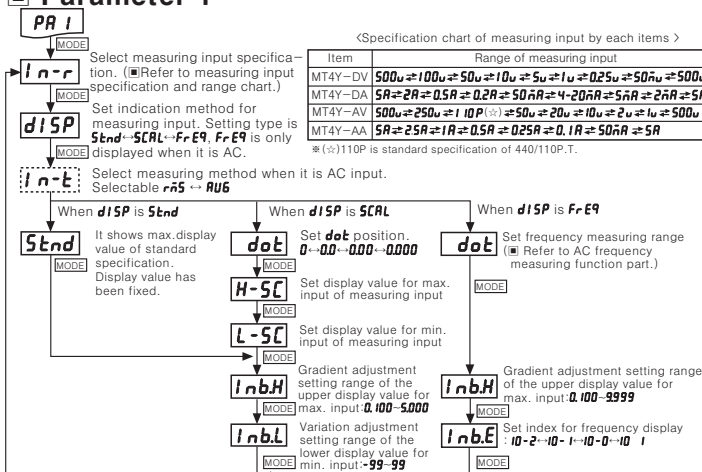
Parameter setting



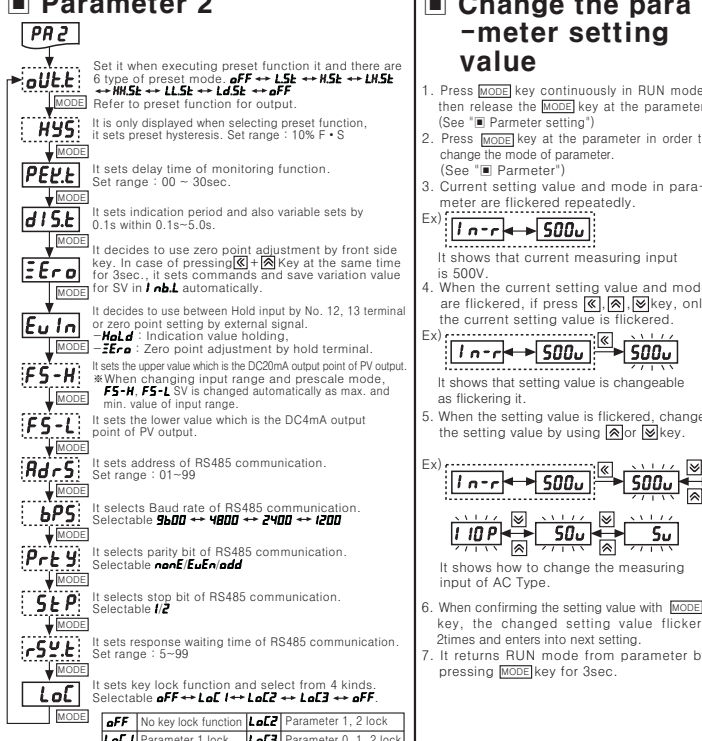
Parameter 0



Parameter 1



Parameter 2



Change the parameter setting value

- 1. Press [MODE] key continuously in RUN mode, then release the [MODE] key at the parameter. (See "Parameter setting") 2. Press [MODE] key at the parameter in order to change the mode of parameter. (See "Parameter") 3. Current setting value and mode in parameter are flickered repeatedly. Ex) [In-r] -> [500u] It shows that current measuring input is 500u. 4. When the current setting value and mode are flickered, it press [MODE] key, only the current setting value is flickered. Ex) [In-r] -> [500u] -> [500u] It shows that setting value is changeable as flickering it. 5. When the setting value is flickered, change the setting value by using [MODE] key. Ex) [In-r] -> [500u] -> [500u] It shows how to change the measuring input of AC type. 6. When confirming the setting value with [MODE] key, the changed setting value flickers 2 times and enters into next setting. 7. It returns RUN mode from parameter by pressing [MODE] key for 3sec.

Caution for using

- 1. Allowable installation environment: Altitude Max. 2000m, Pollution Degree 2, Installation Category II. 2. Please use the terminal(M3.5, Max.7.2mm) when connecting the AC power supply. 3. Please use separated line from high voltage line or power line in order to avoid inductive noise. 4. Please install power switch or circuit breaker in order to cut off the power supply. 5. The switch or circuit breaker should be installed near by users for safety. 6. Be sure to avoid using this unit near by machinery making strong high frequency noise. (High frequency welder & Sewing machine, High capacity SCR unit etc.) 7. When input is applied, if "HHH" or "LLL" are displayed, there are some problem with measuring input, please check the line after power off. 8. Noise inflowing from power line can cause serious problem for DPM driving by AC power supply. Even though there is condenser for protecting noise between lines at primary side of power transformer, but it is very difficult to install protection components at small size product like DPM. Therefore, please use noise absorber circuit such as line filter, varistor in external lines when voltage failure is occurred by power relay, magnet S/W and high frequency equipment are operated in same line or surge is occurred by spark of high voltage or thunder etc. 9. Input line: Shield wire must be used when the measuring input line is getting longer in the place occurring lots of noise. *It may cause malfunction if above instructions are not followed.

Major products

- Proximity sensors, Photoelectric sensors, Area sensors, Fiber optic sensors, Door/Door side sensors, Pressure sensors, Counters, Timers, Rotary encoders, Display units, Power controllers, Sensor controllers, Panel meters, Graphic/Logic panels, Area sensors controllers, Tachometer/Pulse(Rate) meters, Temperature/Humidity transducers, Stepping motors/drivers/motor controllers, Laser marking system(CO2, Nd:YAG), Laser welding/soldering system.

Autonics Corporation logo and contact information, including address, phone, fax, and email.