Autonics

PANEL METER MT4Y SERIES

Α



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. *The following is an explanation of the symbols used in the operation manual. ▲ caution:Injury or danger may occur under special conditions

- 1. 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 may give an electric shock.

 3. Do not connect, inspect and repair terminals when it is power on.
- It may give an electric shock.

 4. Do not disassemble and modify this unit, when it is required. Please contact us.
- may cause an electric shock and a fire
- 5. Please check the number of terminal when connecting power line or measuring input.

- I. This unit shall not be used outdoors.

 It might shorten the life cycle of the product or give an electric shock.

 2. When connecting wire, No.20AWG(0.50mm²) should be used and tighten screw bolt on terminal block with 0.74N·m to 0.90N·m strength.

 It may cause a malfunction or fire due to contact failure.

 3. Please observe the rated specification.
- might shorten the life cycle of the product and cause a fire
- 4. Do not use beyond of the rated switching capacity of Relay contact. It may cause insulation failure, contact melt, contact failure, relay broken ar 5. In cleaning the unit, do not use water or an oil-based detergent. broken and fire etc.
- It might cause an electric shock or fire.

 6. Do not use this unit in place where there are flammable or explosive gas, humidity, direct ray the sun, radiant heat, vibration and impact etc.
- 7. Do not inflow dust or wire dregs into the unit.
- 8. Please connect properly after checking the polarity of measuring terminals.

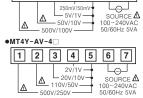
Front panel identification

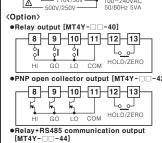


F

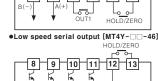


1 2 3 4 5 6 7





8 9 10 11 12 13



●MT4Y-DA-4□ 1 2 3 4 5 6 7 5mA/2mA 50mA/4-20mA 500mA/200mA − SOURCE Δ 100-240VAC 50/60Hz 5VA Δ

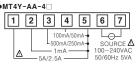
Panel cut-out

†

68 +0.7

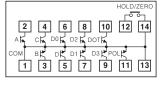
Min. 91

●MT4Y-AA-4□



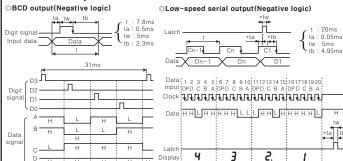
8 9 10 11 12 13 HI GO LO COM HOLD/ZERO ●PNP open collector output [MT4Y-□□-42] ●Relay+Current(DC4-20mA) output [MT4Y-□□-43] 8 9 10 11 12 13 DC4-20mA OUT1 HOLD/ZERO

Load max. 600 ♀ ●BCD Dynamic output [MT4Y-□□-45]



*When clock pulse is changed from High to Low, Data will

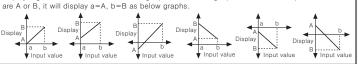
Time chart of Low-speed serial output and **BCD** output



■ Prescale function[PA1 : H-5C/L-5C mode]

n is to display setting(-1999 to 9999) of particular High/Low-limit value in order to /Low-limit value of measuring input. If measuring inputs are a or b and particular values

be output



Error display function

3

2

Display	Description				
НННН	Measuring input exceeds available max. input range:110%F • S				
LLLL	Measuring input exceeds available min. input range: -10%F • S				
d-HH	Display value for measuring input exceeds max. display range:9999				
d-LL	Display value for measuring input exceeds max. display range:-1999				
F-HH	Display value for measuring frequency exceeds max. measuring range:9999				
ovEr	Exceeds zero adjusting range: ±99				

★"LLLL" is only for 4-20mA input terminal of MT4Y-DA.

*Zero adjusting error is returning to measuring mode after "ovEr" is flickering 2 times *Refer to "

Measuring AC frequency function" for frequency measuring range.

*The above specifications are changeable at anytime without notice.

Specifications				
Series	MT4Y			
Power supply	100-240VAC 50/60Hz(90 to 110% of rated voltage)			
Power consumption		5VA		
Display method	7Segment LED Display(Red)			
Display accuracy	23°C ±5°C 35~85%RH	DC Type≔Voltage/Current: ±0.1% F.S. ±2Digit AC Type≔Voltage/Current: ±0.3% F.S. ±3Digit, Frequency:±0.1% F.S. ±2Digit When ±0.3% F.S. ±3Digit only for 5A terminal of MT4Y-DA, AA Type		
	-10°C~50°C DC/AC Type:=Voltage/Current: ±0.5% F.S ±3Digit, Frequency: ±0.6% F.S ±2Dig			
Input		DC Voltage/Current, AC/Voltage/Current, AC Frequency		
Max. allowable input		110% for input spec.		
A/D conversion method		Practical Over sampling using successive approximation ADC		
Sampling cycle	50ms(DC), 16.6ms(AC 60Hz) (1/12,000)			
Max. indication range	-1999 ~ 9999(4Digit)			
Max. input	110% for input spec.			
Preset output	Relay output © Contact capacity:250VAC 3A, 30VDC 3A/Contact composition:N.O(1a) NPN/PNP Open Collector output © 12-24VDC ±2V 50mA Max.(Load resistance)			
Sub output (Transmission output)	RS485 communication output ™ Baud rate:1200/2400/4800/9600, Transmission method:2 wires half duplex, Transmission code:ASC II Code (8Bit), Tuning method:Sub – synchronization, Protocol:Modbus type Serial/BCD output ™ NPN Open collector output, 12–24VDC Max. 50mA(Resistive load) DC4−20mA output ™ Resolution: 8000 division (Load resistance max. 600 Ω)			
AC measuring function		Selectable RMS or AVG		
Frequency measuring function	Measurement range:0.100~9999Hz(Fixed decimal point type)			
Hold function	Built-in(Outer hold function)			
Ambient temperature	-10 ~ 50 ℃ (at non-freezing status)			
Storage temperature		-20 ~ 60℃ (at non-freezing status)		
Ambient humidity		25 050/011		

Specification and range

Activate Display range Fixed Display range Fixed Display range Fixed Display range Variable Display Display Page Variable Display Page	Type	Measuring input and range		Input impedance	Standard (5tnd)	Prescale [SCAL]
DC Volt DC	Type				Display range [Fixed]	Display range [Variable]
DC Volt		0-500V	[5000]	4.33315MΩ	0.0~500.0(Fixed)	
DC Volt		0-100V	[1000]	4.33315MΩ	0.0~100.0(Fixed)	
DC (28)		0-50V	[500]	433.15kΩ	0~50.00(Fixed)	
0-5V 5ω 43.15k	DC Volt	0-10V		433.15kΩ	0.00~10.00(Fixed)	
0-250mV (2,25u) 2.15kΩ 0.00-250.00(Fixed) 0-50mV 507ω 2.15kΩ 0.00-50.00(Fixed) 0-50mV 507ω 2.15kΩ 0.00-50.00(Fixed) 0-94 (281) 0.01Ω 0.000-50.00(Fixed) 0-2A (281) 0.01Ω 0.000-20.00(Fixed) 0-200mA (2,581) 0.1Ω 0.00-50.00(Fixed) 0-50mA (2,581) 0.1Ω 0.00-200.0(Fixed) 0-50mA (2,581) 1.0Ω 0.00-20.00(Fixed) 0-5mA (5,581) 1.0Ω 0.000-20.00(Fixed) 0-5mA (5,581) 1.0Ω 0.000-20.00(Fixed) 0-5mA (5,581) 1.0Ω 0.000-50.00(Fixed) 0-5mA (5,581) 1.0Ω 0.000-50.00(Fixed) 0-500V (5,500) 4.987MΩ 0.00-20.00(Fixed) 0-500V (5,500) 0.000-10.00(Fixed) 0-200V (2,500) 0.000-10.00(Fixed) 0-200V (2,500) 0.000-10.00(Fixed) 0-200V (2,500) 0.000-10.00(Fixed) 0-10V (1,500) 0.000-10.00(Fixed) 0-10V 0.000-10.00(Fixed) 0-10V 0.000-10.00(Fixed) 0-10V 0.000-10.00(Fixed) 0-10V 0.000-10.00(Fixed) 0-10V 0.000-10.00(Fixed) 0-250V 0.000-10.00(Fixed) 0-250V 0.000-10.00(Fixed) 0-250V 0.000-10.00(Fixed) 0-250V 0.000-10.00(Fixed) 0-250V 0.000-10.00(Fixed) 0.000-	DC VOIL	0-5V	[Su]	43.15kΩ	0.00~5.000(Fixed)	
0−50mV 503□ 2.15kΩ 0.00−50.00(Fixed)		0-1V	[/]	43.15kΩ	0.000~1.000(Fixed)	
0-5A [5R] 0.01 Ω 0.000-5.000(Fixed) 0-2A [2R] 0.01 Ω 0.000-2.000(Fixed) 0-900mA [25R] 0.1 Ω 0.000-2.000(Fixed) 0-900mA [25R] 0.1 Ω 0.000-2.000(Fixed) 0-900mA [25R] 0.1 Ω 0.000-20.00(Fixed) 0-90mA [25R] 1.0 Ω 0.000-20.00(Fixed) 0-90mA [25R] 1.0 Ω 0.000-20.00(Fixed) 0-9mA [25R] 1.0 Ω 0.000-20.00(Fixed) 0-9mA [25R] 1.0 Ω 0.000-2.000(Fixed) 0-9mA [25R] 1.0 Ω 0.000-2.000(Fixed) 0-2mA [25R] 1.0 Ω 0.000-2.000(Fixed) 0-250V [250□] 4.987MΩ 0.0-500.0(Fixed) 0-250V [250□] 4.987MΩ 0.0-500.0(Fixed) 0-110V 10P] 1.087MΩ 0.0-500.0(Fixed) 0-10V [20□] 200kΩ 0.000-2.000(Fixed) 0-90V [20□] 200kΩ 0.000-2.00(Fixed) 0-10V [20□] 200kΩ 0.000-2.00(Fixed) 0-10V [20□] 200kΩ 0.000-2.00(Fixed) 0-10V [20□] 200kΩ 0.000-10.00(Fixed) 0-10V [20□] 200kΩ 0.000-5.000(Fixed) 0-12 0.000-2.000(Fixed) 0-14 [4R] 0.05Ω 0.000-2.000(Fixed) 0-250A [25R] 0.01Ω 0.000-5.000(Fixed) 0-250A [25R] 0.01Ω 0.000-5.000(Fixed) 0-250A [25R] 0.01Ω 0.000-2.000(Fixed) 0-250A [25R] 0.01Ω 0.000-2.000(Fixed) 0-250A [25R] 0.1Ω 0.000-2.000(Fixed) 0.000-2.000(Fixed) 0-250A [25R] 0.000-2.000(Fixed) 0.0000-2.000(Fixed) 0.0000-2.000(Fixed) 0.0000-2.		0-250mV			0.00~250.00(Fixed)	
D-2A		0-50mV	[50ñu]	2.15kΩ	0.00~50.00(Fixed)	
DC O-500mA (2.5R) O.1 \(\omega\$ O.0-500.0(Fixed) O-200mA (2.7R) O.1 \(\omega\$ O.0-500.0(Fixed) O-50mA (2.7R) O.1 \(\omega\$ O.0-500.0(Fixed) O-50mA (2.7R) O.0-50.0(Fixed) O-5mA (2.7R) O.0 \(\omega\$ O.00-50.00(Fixed) O-5mA (2.7R) O.0 \(\omega\$ O.00-5.00(Fixed) O-5mA (2.7R) O.0 \(\omega\$ O.00-5.00(Fixed) O-2mA (2.7R) O.0 \(\omega\$ O.00-50.0(Fixed) O-200 O-2500 (2.50\) A.987M\(\omega\$ O.0-250.0(Fixed) O-2500 (2.50\) A.987M\(\omega\$ O.0-250.0(Fixed) O-100 (1.0P) O.00-50.0(Fixed) O-500 O-200 O-2		0-5A	[5 <i>R</i>]	0.01Ω	0.000~5.000(Fixed)	-1999~9999(Variable)
DC O−200mA (0.2R) O−10 O−		0-2A	[28]	0.01Ω	0.000~2.000(Fixed)	-1999~9999(Variable)
Ampere		0-500mA	[0.58]	0.1 Ω	0.0~500.0(Fixed)	-1999~9999(Variable)
4-20mA (2878) 1.0.Ω 00.00-20.00(Fixed) 0-5mA (588) 10.0Ω 0.000-5.000(Fixed) 0-2mA (288) 10.0Ω 0.000-5.000(Fixed) 0-2mA (288) 10.0Ω 0.000-2.000(Fixed) 0.0000-2.000(Fixed) 0.0000-2.000(Fixed) 0.0000-2.000(Fixed) 0.0000-2.000(Fixed) 0.0000-2.	DC	0-200mA	[0.2A]	0.1 Ω	0.00~200.0(Fixed)	-1999~9999(Variable)
0-5mA 5πB 10.0 Ω 0.000-5.000(Fixed) 0-2mA 2πB 10.0 Ω 0.000-2.000(Fixed) 0	Ampere	0-50mA	[S0AR]	1.0♀	0.00~50.00(Fixed)	
O-2mA [288] 10.0Ω 0.000-2.000(Fixed)		4-20mA	[20AA]	1.0♀		
O-500v		0-5mA	[5 ñ R]	10.0Ω	0.000~5.000(Fixed)	
AC Volt O-250V (250ω) 4.987M Ω 0.0-250.0(Fixed) with max. input voltage is in the max. input voltage is in 30~10% of the input voltage is input voltage is in 30~10% of the input voltage is input voltage is in 30~10% of the input voltage is in 30~10% of the input voltage is in 30~10% of input voltage is in 30~100% of input voltage is in 30~100% of input voltage is in 30~100% of input voltage i		0-2mA	[865]	10.0Ω	0.000~2.000(Fixed)	position.)
AC Volt AC Volt AC Volt AC Volt AC Volt AC Ac Ac Ac Paperee AC Ac Maperee AC Volt AC Volt AC Volt AC Volt AC Volt AC Ac Maperee AC Ac Maperee AC Volt AC Ac Maperee AC Ac Maperee AC		0-500V	[5000]	4.987MΩ	0.0~500.0(Fixed)	
AC Volt 0-50V 50J 1.087MΩ 0.0-440.0(Fixed) 30-100% of the input volta 0-20V 20J 200kΩ 0.00-50.00(Fixed) 0-20V 20J 200kΩ 0.00-20.00(Fixed) 0-10V (f0J 200kΩ 0.00-10.00(Fixed) 0-10V (f0J 20kΩ 0.000-10.00(Fixed) 0-1V (f0J 20kΩ 0.000-1.000(Fixed) 0-5A [5R] 0.01Ω 0.000-5.000(Fixed) 0-5A [5R] 0.01Ω 0.000-5.000(Fixed) 0-25A (25R] 0.01Ω 0.000-5.000(Fixed) 0-1A (RR 0.05Ω 0.000-1.000(Fixed) 0-250mA (25R) 0.1Ω 0.0-500.0(Fixed) 0-250mA (25R) 0.1Ω 0.0-500.0(Fixed) 0-250mA (25R) 0.1Ω 0.0-500.0(Fixed) 0-100mA (25R) 0.1Ω 0.00-250.0(Fixed) 0-100mA (25R) 0.1Ω 0.00-250.0(Fixed) 0-100mA (25R) 0.1Ω 0.00-250.0(Fixed) 0-100mA (25R) 0.5Ω 0.00-100.0(Fixed) 0-100mA 0.00-100.0(Fixed) 0-1000mA 0.00-100.0(Fixed) 0-1000mA 0.00-100.0(Fixed) 0-1000mA 0.00-1000.0(Fixed) 0-1000mA 0.00-1000.0(Fixed) 0-1000mA 0.00-1000.0(Fixed)		0-250V	[2500]	4.987MΩ	0.0~250.0(Fixed)	
AC Volt 0 − 50V 5ℓJ 200 kΩ 0.00~20.00(Fixed) 0 − 10V 1ℓJ 200 kΩ 0.00~20.00(Fixed) 0 − 10V 1ℓJ 200 kΩ 0.00~20.00(Fixed) 0 − 10V 1ℓJ 200 kΩ 0.000~1.000(Fixed) 0 − 10V 1ℓJ 200 kΩ 0.000~1.000(Fixed) 0 − 10V 1ℓJ 200 kΩ 0.000~1.000(Fixed) 0 − 5A 58 0.01 Ω 0.000~5.000(Fixed) 0 − 2.5A 258 0.01 Ω 0.000~2.500(Fixed) 0 − 10 1ℓβ 0.05 Ω 0.000~1.000(Fixed) 0 − 10 1ℓβ 0.05 Ω 0.000~1.000(Fixed) 0 − 2.50mA (258) 0.1 Ω 0.00~500.0(Fixed) 0 − 200mA (258) 0.1 Ω 0.00~250.0(Fixed) 0 − 100mA (268) 0.5 Ω 0.00~100.0(Fixed) 0 − 100mA (268) 0 − 100mA (268) 0 − 100mA (268) 0.00~100.0(Fixed) 0 − 100mA (268) 0 − 1		0-110V	[1100]	1.087MΩ	0.0~440.0(Fixed)	
0-20V 20√ 200 kΩ 0.00-20.00(Fixed) voltage, it cause the terminal under 30%. 0-2√ 2√ 20 kΩ 0.000-1.00(Fixed) voltage, it causes the terminal under 30%. 0-2√ 2√ 20 kΩ 0.000-1.000(Fixed) 0-1√ (fu) 20 kΩ 0.000-1.000(Fixed) 0-5A 58 0.01Ω 0.000-5.000(Fixed) 0-2.5A 258 0.01Ω 0.000-2.500(Fixed) 0-2.5A 258 0.01Ω 0.000-1.000(Fixed) 0-1Λ (β β 0.05Ω 0.000-1.000(Fixed) 0-250mA (β 58 0.1Ω 0.0-250.01(Fixed) 0-250mA (β 58 0.1Ω 0.00-250.01(Fixed) 0-100mA (β 78 0.5Ω 0.00-10.00(Fixed) 0-100mA (β 78 0.00-10.00(Fixed) 0-100mA (β 78 0.00-10.00(Fixed) 0.00-100.00(Fixed) 0-100mA (β 78 0.00-10.00(Fixed) 0-100mA (β 78 0.00-10.00(Fixed) 0.00-100.00(Fixed) 0-100mA (β 78 0.000-10.	AC Valt	0-50V		1.087MΩ		
0-2V 2⊌ 20k 0.000-2.000(Fixed) 0.000-1.000(Fixed) 0.000-1.000(Fixed) 0.000-1.000(Fixed) 0.000-1.000(Fixed) 0.000-1.000(Fixed) 0.000-2.500(Fixed) 0.0000-2.500(Fixed) 0.00000-2.500(Fixed) 0.0000-2.500(Fixed) 0.00000-2.500(Fixed) 0.0000-2.500(Fixed) 0.0000-2.500(Fixed) 0.0000-2.500(Fixed) 0.0000-2.500(Fixed) 0.0000-2.500(Fixed) 0.0000-2.500(Fixed) 0.0000-2.500(Fixed) 0.00000-2.500(Fixed) 0.0000-2.500(Fixed) 0.0000-2.500(Fixed) 0.0000-2.500(Fixed	AC VOIL	0-20V	[200]	200kΩ	0.00~20.00(Fixed)	voltage, it cause the termin
0−1V [I _o] 20kΩ 0.000−1.000(Fixed)		0-10V	[100]	200kΩ	0.00~10.00(Fixed)	breakdown and over-range
O-5A [5R] 0.01Ω 0.000-5.000(Fixed)		0-2V	[20]	20kΩ	0.000~2.000(Fixed)	
O-2.5A 258 0.01\(\Omega\$ 0.000-2.500([rixed)		0-1V		20kΩ	0.000~1.000(Fixed)	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		0-5A		0.01Ω	0.000~5.000(Fixed)	to the terminal under 30%.
AC Ampere 0-500mA [0.5R] 0.1\Omega 0.0\sigma 50.0(Fixed) 0-250mA [0.25R] 0.1\Omega 0.00\sigma 50.0(Fixed) 0-100mA [0.8] 0.5\Omega 0.00\sigma 10.00(Fixed) 0.00\sigma 10.00(Fixed)		0-2.5A	[2.5R]	0.01Ω	0.000~2.500(Fixed)	
Ampere 0-250mA [8/8] 0.1 ≤ 0.0-250.0(Fixed) 0-250mA [8/8] 0.1 ⊆ 0.00-250.0(Fixed) 0-100mA [8/8] 0.5 ⊆ 0.00-100.0(Fixed)		0-1A	[18]			
0-250mA [(£58)] 0.1≦ 0.00~250.0(Fixed) 0-100mA [(£78)] 0.5⊆ 0.00~100.0(Fixed)		0-500mA	[0.5 A]	0.1 Ω	0.0~500.0(Fixed)	
- 100mm to 1	Ampere	0-250mA				
0-50mA [\$858] 0.5Ω 0.00~50.0(Fixed)		0-100mA		0.5♀	0.00~100.0(Fixed)	
		0-50mA	[\$0AR]	0.5♀	0.00~50.0(Fixed)	

-1999~9999(Variable) -1999~9999 (Variable) -1999~9999 (Variable) -1999~9999 (Variable)

Prescale [SCAL]

*Please connect proper termina with max. input voltage is in 30-100% of the input voltage. When it is bigger than input voltage, it cause the terminal breakdown and over-range indication. The accuracy is decreased when it is connecte to the terminal under 30%.

Display cycle delay function [PA 2 : d15.t mode]

t is difficult to read display value, in case, measuring input value is fluctuated frequently, it is also changed. It this case, it is able to make display value stable by delaying display cycle. Display cycle displaying time an be changed in dISE mode of Parameter 2. f selecting 4.0s, the display value is displayed every 4sec. averaging input value for 4sec.

■ Monitoring function for Peak display value [PA 0 : HPEY/LPEY mode, PA 2 : PEYE mode]

It observes Max./Min. value of display value by current display value and then display the data in NPEV mode and LPEV mode of parameter 0. Set delay time (0 to 30sec.) in PEUL mode of parameter 2 in order to prevent malfunction caused by initial over current or over voltage, when monitoring the peak value. Delay time is 0-30sec. and it will monitor the peak value after setting time. If pressing \(\) \(\) \(\) key at \(\) key at \(\) \(\) \(\) Monitoring function is not indicated when setting the PEk.t of parameter 2 as "0".

Initialization function

It initializes parameter setting state. When pressing 【 ▼ 🛦 key over 5 seconds at the same time ir measuring mode, former changed state is canceled and it changes as initial state.

Current output (DC4-20mA) Scale adjustment function [PA2: F5-H / F5-L mode]

It set current output for preset indication value at the output current DC4-20mA. It set output indiction value for 4mA and 20mA. Min. setting range between FS-H(F5-H) and FS-L(F5-L) is 10% F·S. (When it set as under 10% F·S, it changed as over 10% F·S automatically.) Preset indication value is outputted fixedly as 4mA at under F5-L and 20mA at over F5-H, Output

Min. setting range 10% F • S

Error correction function [PA1: Inb.H / Inb.L mode]

his function is for correcting display value error of

:99[Adjust deviation of Low value],

I nbL:±98[Adjust deviation of Low value],
I nbH:5,000 to 0.100[Correct gradient(%) of High value]
Diplay value=(Measuring value×I nbH) + I nbL
EX/When the user desires measuring input specification
is 0 to 500V and display value is 0 to 500.0, it is
able to remove the offset of Low display value to
set −12(Offset correcting value) in I nbL(When
Low display value is "□□ 1.2" in 0V input)
Display value for measuring input(500V) is decided by
offset adjustment of low value. In case display value
is "501.0" display value will be 500.0 by adjusting the
gradient of high display value if 0.998 of correcting
value is set at I nbH by calculating 500.0/ 501.1
(Tarced display value/Current display value) (Target display value/Current display value)

*The offset correction range of I nbL is within -99 to +99 for D-0, D-1 digit regardless of decimal point.

Zero adjustment function

Measuring range

Measuring AC

frequency function

It measures input signal frequency when it is an AC input. It uses fixed decimal point[PA1:dok mode], measuring range can be changed by settling and measuring range of decimal point place is as below. It is available to adjust the upper inclination with[PA1: hob/mode] and [PA17.hok mode]. In order to measure frequency normally, input signal, over 10% F·S of measuring range should be supplied. Please select the proper point of measuring terminal.

อ**) คb#**:0.100~9.999[Inclination adjustment of high value อัง ค**b.∉**:10−2, 10−1, 10−1[Index adjustment of **i คb#**]

[PA1 : d15P mode]

Decimal point 0.000 0.00 0.0

sets the preset indication value as zero when min input is supplied into the measuring terminal, zero error can be adjusted with 3 ways as below. When zero adjustment adjustment with front key and Hold terminal is finished normally, zero of measuring terminal is displayed and the adjusted value is saved in I nbL automatically.

Operation	Input correc -tion value	Front side key	Input external signal		
Description	PR 1: Direct input correc—tion value method at I nb.L mode.	key for 3sec. at the at measuring	Short-circuit Hold terminal of external No. 12, 13 over min.50m.		
*Refer to description [■ Error correction function],					

[■ Error indication function] and [■ Parameter 2] for function and error.

■ Gradient correction function [PA1: I ¬ЬН mode] Diplay value ▲ Ex)Adjus

can be used as α , β times against X input value by orrection function [And also can be use orrection function of max. display value(**H-5£**). djustment range is 0.100 to 5.000 and multiply x)Input:200mVDC, Display:3.000 for MT4Y-DV type

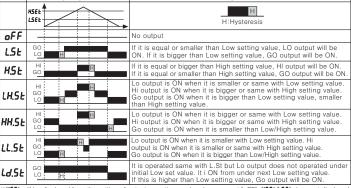
①Select 0-1VDC for measuring input in Para (2)Standard specification in input

Please set as I nb.H×H-5C=15.000

0-1VDC and 1.000 therefore it has to be 15.000 (H-SE) for 1VDC(Input) in order to display 3.000 But it is unable due to setting range is 9.999

(Picture 1) 15.000 12.000 9.000 6.000 H-SC L-SC I nb.H 0.000 1.000

■ Preset output mode[PA 2 : ﻣﺎﻟﺎﻟﻪ mode]



#HSEL wil ing of output operation mode, when user set "oFF", #SEE/LSEE does not dis

Parameter

<u> </u>	· uiii				
Parameter	_	Display	Function	Note	
	In-E	Input type	Selectable RMS/AVG in AC type	Indication in AC type only	
	In-r	Input range	Selection of input range		
	dISP	Display	Selection of display type	Selectable Stnd / SCAL / FrE9	
	Stnd	Standard	Standard scale range	Display Max. display value of 5tnd	
	Fr E9	Frequency	Frequency display		
PA 1	SCAL	Scale	Scale range	It is displayed at SCAL , sets max.	
(Para-	H-SC	High scale	Set max. value of display range	display value/min. display value	
meter 1)	L-SC	Low scale	Set min. value of display range	(-1999 to 9999)	
	dot	Dot	Set Dot position	Display only SCAL/FrE9 describe position	
		Input bias high	Correct High-limit value of display value	Stnd/SCAL :Correction range 0.100~5.00 Fr E9 :Correction range 0.100~9.999	
		Input bias low	Correct Low-limit value of display value	Set range:-99 to +99	
	Inb.E	Input bias exponent	Set display index of frequency mode	Set range:10 ⁻² / 10 ⁻¹ / 10 ⁰ / 10 ¹	
	oUŁ.Ł	Out type	Set operation mode of preset output	Selectable oFF/L.St/H.St/LH.St/HH.St /LL.St/Ld.St	
	HY5	Hysteresis	Set hysteresis value	Setting range 1 ~ 10% F • S	
	PEY.Ł	Peak time	Set monitoring delay time for peak value(sec)	Setting range:00sec ~ 30sec	
	d 1 5.Ł	Display time	Set sampling time(sec.)	Variable by 0.1sec unit of 0.1~5.0sec	
	EEro	Zero Key	Set usage of front side zero adjustment key	No:Set usage of front side zero adjustment key Yes:Usage of front side zero adjustment key	
PA 2 (Para- meter 2)	Euln	Event Input	Set external terminal(6, 7) function	Hold:Use external terminal as Hold terminal Zero:Use external terminal as zero point adjustment terminal	
	F5-H	Full scale High	Set the upper value output point or PV output	Min. set range: Min. 10% F • S	
	_	Full scale Low	Set the lower value output point or PV output	Max. set range:Max. FS-H 10%	
	AdrS	Address	Set communication address	Set range:01 to 99	
	6PS	Bit per second	Set baudrate(bps)	Selectable 1200/2400/4800/9600	
	LoC	Lock	Set lock function	Selectable oFF/Loc1/Loc2/Loc3	
	HSEŁ	High set	Set High setting value	Setting range can be set within	
PA 0	L.SEE	Low set	Set Low setting value	indication range of Stnd/SCAL	
(Para- meter 0)	HPEL	High peak	Max. value by data monitoring	Return to initial status by pressing	
	LPEY	Low peak	Min. value by data monitoring	 key	

Parameter setting

**If pressing We key for 3sec. in RUN mode PA 1 is displayed.

**If pressing We key for 4sec. in RUN mode, PA 2 will be displayed after PA 1 in case of pressing We Key continually display is stopped at PA 2.

**When it pulled out from We key at PA1 or PA2, it will be entered into display parameter.

or PA2, it will be entered into display parameter.

parameter.

parameter.

special will returned to RUN when we key is pressed for 3 second at each parameter.

*After returning to RUN, if we key is pressed within about 2 seconds again it is entered into PA1 or PA2 again.

(Refer to the below each parameter cattled description) setting description.)

Parameter 1

PA 1

MD

When **d15P** is **Stnd**

Parameter 0

►Run MD Set preset High-limit value

Set preset High-limit value.

HSEE: (When set the preset only)

When set the preset only)

Set preset Low-limit value.

LSEE: (When set the preset only)

When set the preset only)

When set the preset only)

When Et shows High-limit monitoring value.

HPEE: (High Peak) in RUN mode.

It will be initialized by pressing
When Lit will be initialized by pressing
LOW Peak) in RUN mode.

LOW twill be initialized by pressing
When PEkt of Parameter2 is set as "0", monitoring function is not displayed.

Select measuring input specification. (©Refer to measuring input specification and range chart.)

Set indication method for MT4Y-DA 58 ± 28 ± 28 ± 20 68 ± 4 ± 20 68 ± 50 In-E Select measuring method when it is AC input. Selectable rā5 ↔ RUE

Stnd It shows max.display value of standard specification.
Display value has been fixed. H-5C Set display value for max input of measuring input L-5C Set display value for min input of measuring input Gradient adjustment setting range of the upper display value for max. input: 0.100~5,000

When dISP is SCAL

Gradient adjustment setting rang of the upper display value for max. input: 0.100-9999 Variation adjustment setting range of the lower display value for min. input:-99~99 Inb.E Set index for frequency display

Change the para

-meter setting

Press In key continuously in RUN mode then release the In key at the parameter (See In Parmeter setting")
Press In key at the parameter in order to change the mode of parameter.
(See "In Parmeter")
Current setting value and mode in parameter are flickered repeatedly.

value

When dISP is FrE9

Parameter 2

PA 2

Set it when executing preset function it and there are 6 type of preset mode. oFF++ L.St++ H.St++ LH.St ++ H.St++ LL.St++ LB.St++ CH.St++ OFF Refer to preset function for output

HY5 It is only displayed when selecting preset function it sets preset hysteresis. Set range:10% F • S PELL It sets delay time of monitoring function. Setting range is 00 ~ 30sec.

It decides to use zero point adjustment by from key. In case of pressing ◀ + ▲ Key at the sam for SV in Inb.L automatically.

for SV in Inb.L automatically.

½ Included to use between Hold input by No. 12, 13

Leminal or zero point setting by external signal.

Hold:Indication value holding,

Lori-Zero-Zero point adjustment by hold terminal. Euln

t sets the upper value which is the DC20mA output

FS + # point of PV output.

**When changing input range and prescale mode,
FS-H, FS-L SV is changed automatically as max.
and min. value of input range. F5-L It sets the lower value which is the DC4mA output point of PV output.

Rdr5 It selects Range of RS485 communication output I.MD It selects Baud rate of RS485 communication

It sets key lock function and select from 4 kinds.
Selectable is oFF+LoC1++LoC2++LoC3++oFF OFF No key lock function Loc2 Parameter 1, 2 lock

bP5 output. Selectable is 9600 ↔ 4800 ↔ 2400 ↔ 1200.

When the current setting value and mode are flickered, if press , , , , key, only the current setting value is flickered. 1 n-r → 500u → \$00u

Ex) 1 n-r - 500u

It shows that setting value is changeable as flickering it. When the setting value is flickered When the setting value is flickered, change the setting value by using a or key.

It shows how to change the measing of AC Type.

Input of AC type.

When confirming the setting value with

We key, the changed setting value flickers

2times and enters into next setting.

It returns RUN mode from parameter by
pressing Mickey for 3sec.

Caution for using owable installation environmen

②Altitude Max. 2000m ④Installation Catergory II

2. Please use the terminal (M3.5, Max.7.2mm) when connectting the AC power supply

Please use the terminal (M3.5, Max.7.2mm) when connectting the AC power supply.
 Please use separated line from high voltage line or power line in order to avoid inductive noise.
 Please install power switch or circuit breaker in order to cut off the power supply.
 The switch or circuit breaker should be installed near by users for safety.
 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.)
 When input is applied, if "HHHHH" or "LLLL" are displayed, there are some problem with measuring input, please check the line after power off.
 Noise inflowing from power line can applied to the line of the power off.

8. Noise inflowing from power line can cause serious problem for DPM driving cause serious problem for DPM driving by AC power supply. Even though there is condenser for protecting noise between lines at primary side of powe 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

INPU 菜菜

and high frequency equipment are operated in same line or surge is occurred by spark of high voltage or thunder etc. Input line: Sheiled 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.

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