

5 Digits Multi-Functions Micro-process Signal Isolated Transmitter

GMTA

FEATURES

- Accuracy: $\pm 0.1\%$ F.S. ± 1 digit (DC / Potentiometer / Resistor / PT-100 / Load Cell)
 $\pm 0.1\%$ F.S. ± 1 digit (AC)
- Measuring AC, DC Voltage / AC, DC Current / Potentiometer / Resistor / PT-100 / Load Cell
- High brightness 0.4" LED display range: -199999~999999; decimal point selectable
- Surge test of AC 2000V / min between input, output and power
- Root square / Max. Hold / Data Hold / Reset / 1~2 Alarms (Hi or Lo) programmable
 - Analog output / RS-485 communication / analog output simulation function available
- High stability, non-flammable case (PC), high safety



ORDER INFORMATION : GMTA - Code1 Code2 Code3 - Code4 Code5

C1	Input Type	C2	Voltage(V)	C2	Current(A)	C2	Potentiometer	C2	Resistor	C2	RTD (PT-100)	C2	Load Cell	C4	Output1	C5	Output2
D	DC Signal	V1	0-50mV	A1	0-20uA	P1	500Ω-10KΩ	I1	0-10Ω	T1	-50-50°C	L1	1mV/V EX.5V	A	4-20mA	N	None
A	AC AVG	V2	0-5V	A2	0-200uA	P2	10KΩ-100KΩ	I2	0-100Ω	T2	0-50°C	L2	2mV/V EX.5V	V	0-10V	A	4-20mA
M	AC TRMS	V3	1-5V	A3	0-2mA	P3	100KΩ-1MΩ	I3	0-1KΩ	T3	0-100°C	L3	3mV/V EX.5V	O	Option	V	0-10V
P	3W Potentiometer	V4	0-10V	A4	0-20mA	PO	Option	I4	0-10KΩ	T4	0-200°C	L4	1mV/V EX.10V	Y	Rs485	O	Option
I	2W Resistor	V5	0-36V	A5	0-200mA			I5	0-100KΩ	T5	0-400°C	L5	2mV/V EX.10V	R1	1 Relay		
T	RTD (PT-100)	V6	0-300V	A6	4-20mA			IO	Option	T6	0-600°C	L6	3mV/V EX.10V	O1	1 O.C		
L	Load Cell	V7	0-600V	A8	0-5 A					TO	Option	LO	Option	R2	2 Relays	N	None
2	2W Sensor	VO	Option	A0	Option									O2	2 O.C	N	None
3	3W Sensor																
4	4W Sensor																

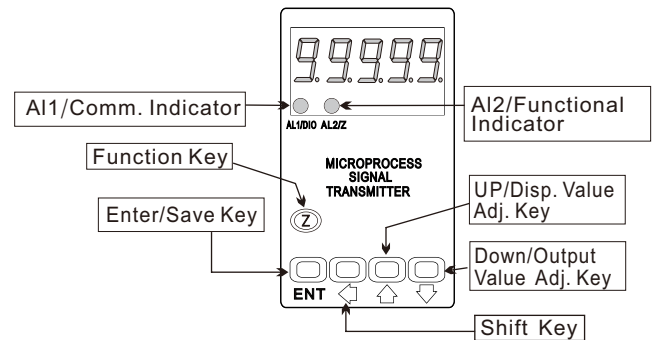
C2	Aux. Power
A	AC/DC 100~240V
D	AC/DC 22~60V

**1: 2 wire type offers excitation power DC24V for 2 wire (Loop Power) pressure, temperature, humidity sensors using.
2: 3.4 wire type offers excitation power DC24V for 3, 4 wire (Loop Power) pressure, temperature, humidity sensors using.

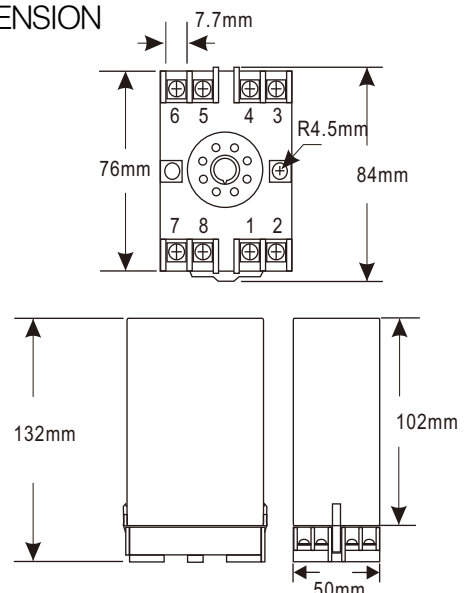
SPECIFICATION

- Accuracy: $\pm 0.1\%$ F.S. (DC / Resistor / Potentiometer / PT-100 / Load Cell)
 $\pm 0.2\%$ F.S. (AC)
- Display Screen: High brightness red LED; 10.16mm (0.4")
- Sampling Rate: 60 cycles/sec
- Display Range: -199999~999999
- Zero Adjustment: ± 9999
- Span Adjustment: ± 9999
- Over Range Indication: doFL / ioFL or -doFL / -ioFL
- Polarity Indication: Automatic with "-" indication
- Parameters Setting: Push buttons
- Back Up Memory: EEPROM
- Analog Output Resolution: 15 bit
- Output Response Time: <250 msec (0-90%)
- Output Capability: Voltage Output: <20mA
Current Output: <10V
- Output Ripple: $\leq \pm 0.1\%$ F.S.
- Isolation: Input / Output / Power / Case
- Temperature Coefficient: 100ppm/°C (0-60°C)
- Operating Environment: 0-60°C; 20-90% RH (non-condensing)
- Storage Environment: -10-70°C; 20-90% RH (non-condensing)
- Power Supply: AC/DC 22-60, AC/DC 100-240
- Surge Test: 2 kVac/min
- Insulation Resistance: >100MΩ with 500 Vdc
- Input Impedence: Voltage: >2V for 20KΩ/V
 $\leq 2V$ for >200MΩ
Current: $\leq 0.2A$ at 100mV
<0.2A at 1V
- Installation: Socket / Plug in

FRONTPANEL & KEYFUNCTIONS

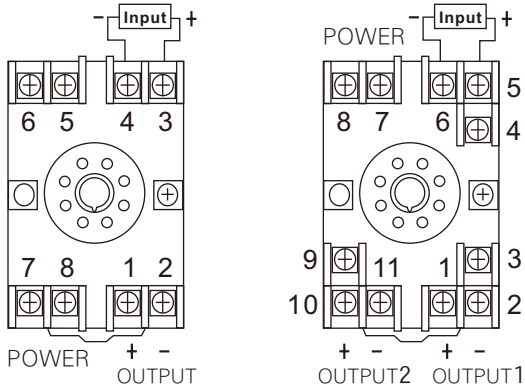


DIMENSION

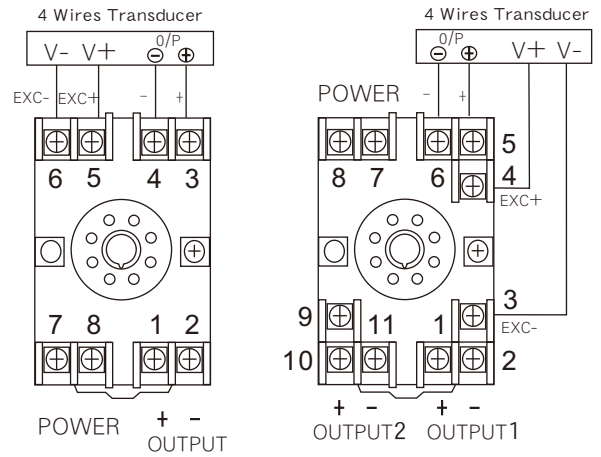


Wiring Diagram:

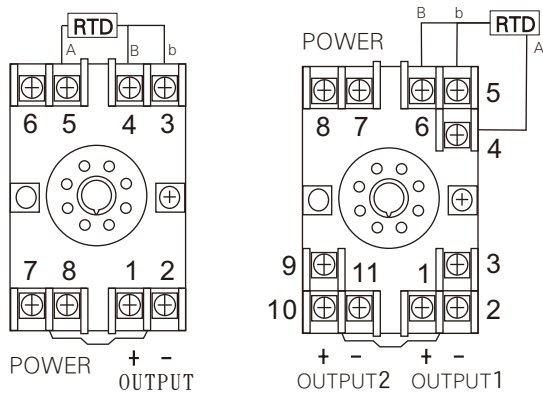
● AC/DC of Voltage, Current Measuring:



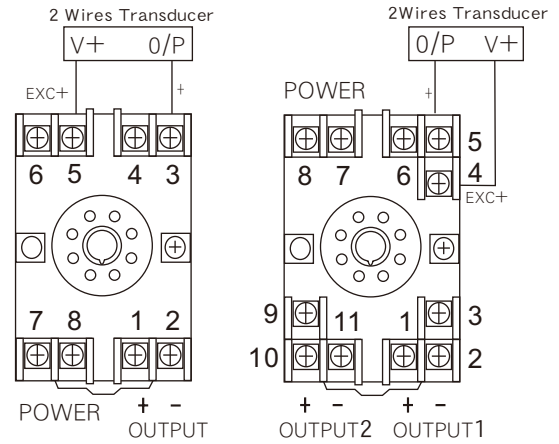
● 4 Wires Transducer/ Load cell:



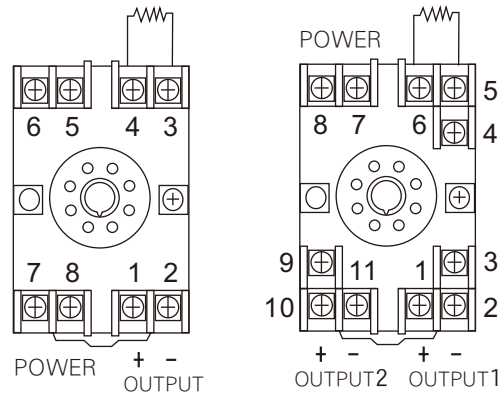
● Temperature Sensor (RTD):



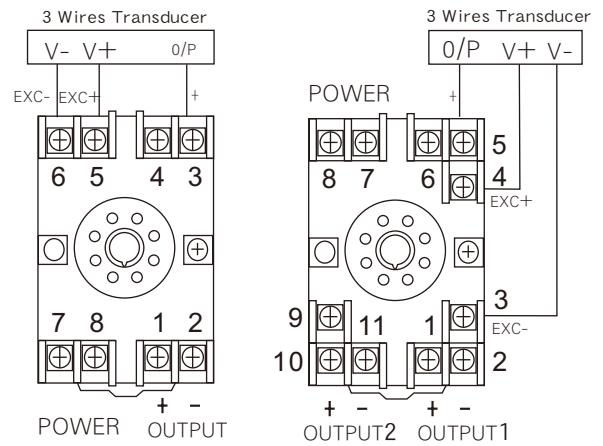
● 2 Wires Transducer:



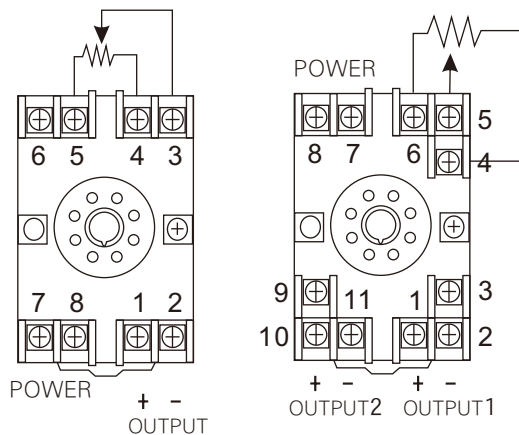
● 2 Wires Resistance meter :



● 3 Wires Transducer:



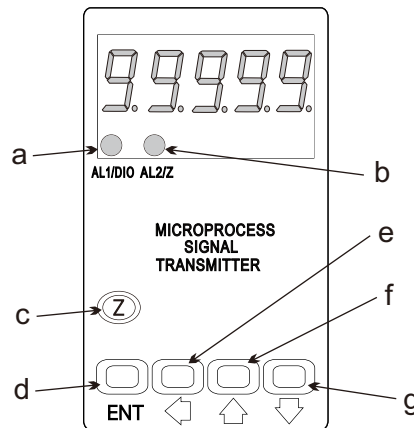
● 3 Wires Potentionmeter:



★Please familiarize with the functions of the keys and indicators before operation.

Description of Panel and Key

- a. Indicator of alarm 1 or communications
- b. Indicator of alarm 2 or activity of function key
- c. Function key
- d. Enter key
- e. Shift key
- f. Up key
- g. Down key



Key Name	Symbol	Descriptions
Function Key (Zero)	⓪	In measurement status, press function key can active/inactive zero function.
Enter Key	ENT	In measurement status, press enter key to enter main setting page, In setting status, press enter key to save the parameter.
Shift Key	←	In setting page, press shift key to enter the setting status, In setting status , press shift key to shift the setting digit.
Up Key (Displaya Setting)	↑	In measurement status, press up key for 3 seconds to enter display value setting, In setting page, press up key to jump to last page. In setting status, press up key to add 1 for setting digit.
Down Key (Linear Output Setting)	↓	In measurement status, press down key for 3 s to enter linear output value setting, In setting status, press up key to jump to next page. In setting status, press up key to minus 1 for setting digit.
Leave Key	↑ + ↓	In any status, press up and down key to jump to measurement status.

Display Value Setting

Flowchart	Name	Descriptions	Default
Power On	Measurement Status		
Press ↑ for 3s	Display Value Offset Setting (doFSt)	Display Value will deduct this value. Setting range: -19999~99999	00000
Press ENT	Display Value Gain Setting (dGAin)	Display Value will be multiplied by this value. Setting range: 0.0001~9.9999	0 1000
Press ENT	Decimal Point Setting (dP)	Set the position of decimal point to this setting. Setting range: -19999~99999	0
Press ENT	Display Value Low Scale Setting (dSPL)	Display Value will be this value when input the minimum signal. Setting range: -19999~99999	00000
Press ENT	Display Value High Scale Setting (dSPH)	Display Value will be this value when input the maximum signal. Setting range: -19999~99999	99999

Linear Output (A/O) Value Setting

	Name	Descriptions	Default
Power On			
↓			
10000	Measurement status		
Press ↻ for 3s			
↓			
RoFS 1	A/O 1 Value Offset Setting (AoFS1)	Linear Output signal will shift with this value at zero point. Setting Range: -99999-99999	00000
Press: ENT			
↓			
AGR 1.1	A/O 1 Value Gain Setting (AGAi1)	Linear Output signal will shift with this value at span point. Setting Range: -99999-99999	00000
Press: ENT			
↓			
AnLo 1	A/O 1 Value Low Scale Setting (AnLo1)	Linear Output signal will be the zero value when display value equal this value. Setting Range: -99999-99999	00000
Press: ENT			
↓			
AnHi 1.1	A/O 1 Value High Scale Setting (AnHi1)	Linear Output signal will be the span value when display value equal this value. Setting Range: -99999-99999	99999
Press: ENT			
↓			
RoFS2	A/O 1 Value Offset Setting (AoFS1)	Linear Output signal will shift with this value at zero point. Setting Range: -99999-99999	00000
Press: ENT			
↓			
AGR 1.2	A/O 1 Value Gain Setting (AGAi1)	Linear Output signal will shift with this value at span point. Setting Range: -99999-99999	00000
Press: ENT			
↓			
AnLo2	A/O 1 Value Low Scale Setting (AnLo1)	Linear Output signal will be the zero value when display value equal this value. Setting Range: -99999-99999	00000
Press: ENT			
↓			
AnHi 1.2	A/O 1 Value High Scale Setting (AnHi1)	Linear Output signal will be the span value when display value equal this value. Setting Range: -99999-99999	99999
Press: ENT			
↓			
5 iñu	A/O 1 Simulation Output Setting (SiMu)	Set this parameter to yes to enable the A/O 1 simulation output function. Setting Range: Yes, No	no
Press: ENT			
↓			
5 iñuL	A/O 1 Simulation Value Setting (SiMuL)	Simulation linear output value will be this value according to AnLo1 and AnHi1 Value. Setting Range: 0-99999	00000
Press: ENT			

Alarm Output Setting

	Name	Descriptions	Default
Power On			
↓			
10000	Measurement status		
Press ↻ for 3s			
↓			
AL 1	Alarm Point 1 Setting (AI1)	Alarm Output when display value reach this value. Setting Range: -99999-99999	00000
Press: ENT			
↓			
AL 2	Alarm Point 2 Setting (AI2)	Alarm Output when display value reach this value. Setting Range: -99999-99999	00000
Press: ENT			

System Setting

	Name	Descriptions	Default
Power On	Measurement Status		
10000 Press:ENT	Pass Code (P.Cod)	If pass code set, the setting will be locked.	00000
Pass Code Correct NO YES		If pass code correct, it will enter setting page group, else, it will jump to measurement status.	
SYS	System Setting Group (SYS)		
Press:ENT AvG	Display Value Average Times Setting(AvG)	Average times can smooth the display value. Setting Range: 1~99	000 10
Press:ENT LCUt	Display Value Low Cut Setting (LCUt)	If display value lower than this value, display value will be zero. Setting Range: 0~9999	00000
Press:ENT Zb	Zero Band Setting (Zb)	Display value will be zero when variation value less than a tracking value, Zero Band Value = (Tracking Value/Maximum Display Value) X 1000 Setting Range: 0.000~9.999	00.000
Press:ENT Zdt	Zero Tracking Time Setting (Zdt)	Zero band function will be executed after this setting time, Setting Range: 0~99 (s)	00000
Press:ENT Hb	Input Holding Band Setting (Hb)	Display value will be stable when variation value less than a tracking value, Holding Band Value = (Tracking Value/Maximum Display Value) X 1000 Setting Range: 0.000~9.999	00.000
Press:ENT Hdt	Input Holding Tracking Time Setting (Hdt)	Holding band function will be executed after this setting time, Setting Range: 0~99 (s)	00000
Press:ENT FiLt	Display Value Filter Setting (FiLt)	Display value will be changed when variation value equal this value. Setting Range: 1, 2, 5, 0(10)	1
Press:ENT doFLv	Display Overflow Setting (doFLv)	Display value will be "doFLv" when display value exceed this value. Setting Range: 0~99999	99999
Press:ENT SQrt	Display Value Roots Setting (SQrt)	Set to yes to enable the root function, display value will be rooted to show. Setting Range: Yes, No	no
Press:ENT diSP	Display Value Setting (diSP)	Setting display value. Setting Range: RATE (input value), AI1 (alarm point 1), SIMUL (simulation value)	rAtE
Press:ENT indi	Indication LED Setting (indi)	Setting indication LED. Setting Range: FKEY (function key status), AI2 (alarm 2 action status)	FKEY
Press:ENT FKEY	Function Key Setting (FKEY)	Setting function of function key. Setting Range: AZ (zero display value), MAX (hold max display value), HD (hold display value)	AZ
Press:ENT CodE	Pass Code Setting (CodE)	Setting pass code. Setting Range: 00000~19999	00000
Press:ENT LoCK	Panel Key Lock Setting (LoCK)	set to yes to lock the panel key, just enter key can be used. Setting Range: Yes, No	no

Output Setting

	Name	Descriptions	Default
SYS →	Alarm Output Setting Group (roP)	Press shift key to select at "SYS" page.	
Press:ENT roP	Alarm Output 1 Action Direction Setting(ACT1)	If setting Hi, alarm execute when display value is greater then alarm point, else, alarm execute when display value is less then alarm point. Setting Range: Hi, Lo	Hi
Press:ENT ACT1	Alarm Output 2 Action Direction Setting(ACT2)		
Press:ENT ACT2	Alarm Output 1 Hysteresis Setting(HyS1)	Alarm execute when display value reach alarm point + this value, Setting Range: 0-9999	00000
Press:ENT HYS1	Alarm Output 2 Hysteresis Setting(HyS2)		
Press:ENT HYS2	Alarm Output 1 Action Delay Setting(dEL1)	Alarm execute after this value. Setting Range: 0-99(s)	00000
Press:ENT dEL1	Alarm Output 2 Action Delay Setting(dEL2)		
Press:ENT dEL2	Alarm Output Start Band Setting(Sb)	Alarm execute when display value exceeds this value. Setting Range: -99-99	00000
Press:ENT Sb	Alarm Output Start Delay Time Setting(Sdt)	Alarm start to run after this value. Setting Range: 0-99(s)	00000
Press:ENT Sdt	Linear Output Setting Group (AoP)	Press shift key to select at "SYS" page.	
Press:ENT AoP	Linear Output 1 Polarity Setting (PoLA1)	Set Yes to enable the polarity function of linear output Setting Range: Yes, No	no
Press:ENT PoLA1	Linear Output 2 Polarity Setting (PoLA2)		
Press:ENT PoLA2	Communication Setting Group (doP)	Press shift key to select at "SYS" page.	
Press:ENT doP	Device Address Setting (Addr)	Setting device address. Setting Range: 0-255	00000
Press:ENT Addr	Baud Rate Setting (bAUd)	Setting baud rate Setting Range: 38400, 19200, 9600, 4800 (bps)	38400
Press:ENT bAUd	Parity Setting (PAr1)	Setting parity check, Setting Range: n82, n81, Even, Odd	n.8.2
Press:ENT PAr1	Frame Setting (FrAmE)	Setting data frame, Setting Range: Yes (LSB to MSB), No (MSB to LSB)	no
Press:ENT FrAmE			

Erro Screen

Display	Description	Display	Description
1oFL	input signal over 120%	doFL	Input signal out of display range(99999)
-1oFL	input signal over -120%	-doFL	Input signal out of display range(-19999)
AdEr	input signal over 180% or circuit destruction	E-00	EEPROM Error