

【 INSTRUCTION MANUAL 】

Level Meter











MODEL : LV1000 Series

Series name	Output			Input	Sensor power	Power	Color	Cover	Function	
LV1000									External input function (Hold・Compulsion zero) Linearization function (21 points) 2 preset outputs (c touching relay output) 2 terminal stand covers	
	P4								Optional 2 preset outputs (2 normally-open relay outputs)	
	※P10								Optional 8 preset outputs (NPN open collector output)	
	※P12								Optional 10 preset outputs (2 normally-open relay outputs) (8 NPN open collector outputs)	
	AI								Analog current output (DC4-20mA)	
	AV3								Analog voltage output (DC1-5V)	
	AV4								Analog voltage output (DC0-5V)	
	AV5								Analog voltage output (DC0-10V)	
				※RS4						RS-485 communication (2-wire)
				※RS4W						RS-485 communication (4-wire)
				A2						Analog current input (DC4-20mA)
				A3						Analog voltage input (DC1-5V)
				A4						Analog voltage input (DC0-5V)
				A5						Analog voltage input (DC0-10V)
					None					DC24V Output stabilization (150mA MAX)
					S12					DC12V Output stabilization (200mA MAX)
					S5					DC5V Output stabilization (100mA MAX)
						None				AC power (AC85-264V)
						DC				DC power (DC12-24V)
							None			Gray
						K			Black	

※ The option of P10/P12 and RS4/RS4W cannot be selected at the same time.

Precautions

Please read this Operation Manual including the following precautions carefully to ensure safe use of your meter.

-  **<Caution>** Do not use this product applications outside of product specifications.
-  **<Caution>** User-conducted alterations and modifications of the unit should not be performed as they may impair functioning or cause failure and accidents.
-  **<Caution>** Direct sunshine is avoided, and ratings are used in the place of each onshime and the place shere the be dewy occurs easily.
-  **<Caution>** Do not use it the place with the combustibile gas and the ignition thing.
-  **<Caution>** Do not subject the unit to strong vibrations or shocks.
-  **<Caution>** Do not allow metallic debris, dust, or moisture to penetrate the unit.
-  **<Caution>** Always turn the power OFF before commencing any wiring work.
-  **<Caution>** Please use one which matches rating for the AC, DC power supply to a meter.
-  **<Caution>** After the power supply, it operates at once because there is no power on/off switch for the unit.
-  **<Caution>** Do not touch the terminal while operating. It gets an electric shock.

Mode No.b Setting of 8 step preset output (Optional setting)	37
Mode No.C Setting of communication RS-485(1) (Optional setting)	38
Mode No.d Setting of communication RS-485(2) (Optional setting)	39
12. Mode protect function	40
«The key operation of mode protect»	40
13. About the zero adjustment	41
«The method of zero point adjustment»	41
«How to see the deflection data of zero point adjustment»	41
14. Linearization function	42-45
«Linearization function»	42
«Calling method»	42
«The key operation method of a linearization function»	43-45
«The example of setting of linearization»	46
15. How to set the preset value	47-48
«Calling method»	47
«The key operation of preset value setting»	47-48
16. The method of analog adjustment(In an option setup, an analog output contains)	49-53
«Calling method»	49
«The key operation of analog adjustment»	49-52
«Flow chart for analog adjustment»	53
17. 8-step preset output (Optional setting)	54
18. The method of an 8-step preset value setup (Optional setting)	55-56
«Calling method»	55
«The key operation method 8-step preset value setup»	55-56
19. Communication function (Optional setting)	57-59
«About a communication function»	57
«About a communication operation»	58-59
20. Dimensions	60
21. About a noise countermeasure	61
22. Troubleshooting	62

1. Attachments and Warranty

About confirmation of attachments.

When you received as a product, please confirm whether it includes the following.

- (1) LV1000 (The chosen specification) 1
- (2) LV1000 Operation manual (Attachment) 1
- (3) Unit label (Attachment) 1
- (4) Rubber packing (Attachment) 1
- (5) Plug male of 9D-subpins soldering type (Attachment) 1
[RS4, RS4W, P10, and P12 optional, Attachment]
- (6) 9D-subpin food (Attachment) 1
[RS4, RS4W, P10, and P12 optional, Attachment]
- (7) Terminal stand cover 2

If there are the mistaking parts and the missing parts, please inform a dealer or us.
(There is a case that you don't attach by convenience.)

About a guaranteed period and a guaranteed area.

1. Guaranteed period

The period a product guarantees is 4 years from a delivered day.

2. Guaranteed area

If we trouble by responsibility in whole guaranteed period, it's repaired without charge at our factory.




But if a product conflicted in the following matter, it isn't a guarantee target.



Please understand.

- ① Case of outside of the product specifications.
- ② Case of User-conducted alterations and modifications of the unit.
- ③ Case of besides our responsibility.
- ④ Case of safekeeping and transportation beyond the product specification condition.
- ⑤ Case of an accident.

2. Specifications


【 Standard specifications 】

Item		Specifications
Rate mete	Operation form	Rate meter
	Operation system	A/D conversion operation. Input intervals : About 20ms The resolution: About 1/22000 (To full scale input)
	Scaling	Setting the analog is minimum / maximum input value and minimum / maximum value
	0 adjustment function	Measurement displayed  +  is pressing for 2 sec or more display is adjusted to 0. (Setting mode 3)
	Display accuracy	±0.1% rdg. ±2digit for full scale analog input (23°C±5°C, power on for 30 minutes or more)
	Display	Red LED:5 digits Character height:10mm
	Indication area	-9999 to 9999 (When indication overflowed, 「-9999」 or 「9999」 flashes on and off.)
	Domain" 0" indicated function	It makes between two points arbitrarily set "0" . ("Mode No.1" It is necessary to set it in "Minimum in area 0/maximum in area 0" of the scaling setting.)
	Decimal digits	Displays 0 to 0.000 decimal digits (selectable)
	Sampling time	Rate reading averaged by 0.1-10.0 sec (selectable)
	Least significant digit	Selectable: real, fixed at 0, or 0/5
Ratio	Conversion method	Scaling conversion between two points indicated values at moment of 0.0%, 100.0%
	Indication area	-999.9 to 999.9. 0.0 fixation of the decimal point position. (When indication overflowed, 「-999.9」 or 「999.9」 flashes on and off.)
	Ratio indication lamp	It lights up displaying the ratio value. (When the  key is pushed, the change is rate mete)
Bar meter	Display	1.6mmx0.8mm LED (16 orange LEDs, 4 white LEDs) 20 LEDs in all White LEDs turn on at 25, 50, 75, 100%.
	Scale marks	0, 25, 50, 75, 100
	Display method	0 to 100% LEDs turn on or off according to the rate value every 5.0%.
	Over flow	Over 100.0% (over 100.1%): all LEDs will blink. Under 100.0% (under -0.1%): the least significant LED will blink.
	Display update time	Synclonize with sampling time for the indicated value.
Linearization	Function selection	Effective/invalidity of the linearization function is selected. (Slects it by "Mode No.0") ※ It exists also in the ratio indication.
	Setting method	Straight line approximate value (21ch is possible to set it) The input of each ch can be arbitrarily set by 0.00-105.00%. The output of each ch can be arbitrarily set by -9999-99999. (The decimal point of the output synchronizes with the decimal)
Sensor input	A2-type	Analog current input: DC4-20mA Input resistance: approx 250Ω
	A3-type	Analog voltage input: DC1-5V Input resistance: approx 200kΩ
	A4-type	Analog voltage input: DC0-5V Input resistance: approx 200kΩ
	A5-type	Analog voltage input: DC0-10V Input resistance: approx 200kΩ
	Temperature characteristic	±100ppm/°C (0-50°C)
	Sensor power	DC+24V (±5%) 150mA max output
	Option : S12	DC+12V (±5%) 200mA max output
	Option : S5	DC+ 5V (±5%) 100mA max output


	Cisconnection detection function	It is judged that it disconnects when becoming 「Input signal \leq -20%F.S.」 Rate mete and ratio “  blinking” (A2, A3 type) ※ The disconnection detection can be output from OUT4(Option)
EXT. input	EXT input function	Hold/peak hold/bottom hold/width of input/0 adjustment function. (“mode No.3” selectable) The rear terminal board (6-7) is ON. 50mS or more is ON. (HD turning on the lamp)
	Input	NPN open collector pulse input or ground contact.
Preset output	Output terminal	Output terminals no.1-2-3 (OUT1),14-15-16 (OUT2)
	Comparative system	Upper limit, lower limit (immediately) and lower limit (delay). (selectable)
	Output mode	Comparison, maintenance, (selectable)
	Output selection	Function stop, Rate mete, Raito, (selectable)
	Preset value setting	The presetting program mode setting is also selectable.
	Output judgment	Judgment output is compared with the indication value by preset value.
	Output circuit	Tow-row relay 1c output [Control capacity / Maximum permissible power] AC125V 0.6A (Resistance load) AC250V 0.3A (Resistance load) /75VA MAX DC 30V 2A (Resistance load) /60W MAX [The maximum control current] 2A MAX ※ Can be used within control current 2A and control capacity / permissible power.
	Output indication	During presetting output, the OUT1 and OUT2 LED are activated
	Output reset	The  key to the pushed for 2 sec or more.
	Hysteresis setting	0-3999 (4 digits to disregard decimal point)
	Hysteresis operation	Invalid or selects it from effective. ※ When the output mode is only “Compareson”, it operates.
	Preset output state distinction time	It outputs it continuing set time (0.0-99.9 sec) after it enters the output area at the output area.
Others	Data backup	Each mode stting value is memorized by FRAM (The memory number of times is within 100,000 times, About 10 year safekeeping.)
	Mode protect function	Changes by mode protect function setting. “L-oFF” is possible to change by setting. “L-on” is not possible to change by setting.
	Warm up time	After turning on the power, more than 30 minutes.
	Power source	AC85-264V (50/60 Hz)
	DC-type	DC12-24V (\pm 10%)
	Power consumption	Approx. 23VA
	DC-type	Approx. 10W
	Temperature/humidity conditions	0-50 °C, 30-80 %RH (Non-condensing)
	Weight/dimensions	Approx. 370g, W96×H48×D130mm
	Material of the case	ABS
	Color	Gray
K-type	Black	
Protection class	IP66	

【Optional specification】

<Preset output +2 step output : option P4>

Preset output + 2 step output	Output terminal	Output terminals no.4-5 (OUT3),17-18 (OUT4)
	Comparative system	Upper limit, lower limit (immediately) and lower limit (delay). (selectable)
	Output mode	Comparison, maintenance, (selectable)
	Output selection	Function stop, Rate mete, Raito, (selectable) ※ Only OUT4 can select the disconnection detection.
	Preset value setting	The presetting program mode setting is also selectable.
	Output judgment	Judgment output is compared with the indication value by preset value.
	Output circuit	Tow-row relay 1a output [Control capacity / Maximum permissible power] AC125V 0.6A (Resistance load) AC250V 0.3A (Resistance load) /75VA MAX DC 30V 2A (Resistance load) /60W MAX [The maximum control current] 2A MAX ※ Can be used within control current 2A and control capacity / permissible power.
	Output indication	During presetting output, the OUT3 and OUT4 LED are activated
	Hysteresis setting	0-3999 (4 digits to disregard decimal point)
	Output reset	The  key to the pushed for 2 sec or more.
	Hysteresis operation	Invalid or selects it from effective. ※ When the output mode is only “Compareson” ,it operates.
	Preset output state distinction time	It outputs it continuing set time (0.0-99.9 sec) after it enters the output area at the output area.

<Preset output +8 step output : option P10>

Preset output + 8 step output	Output terminal	D-sub 9 pin connector Output from 2-9 (Pin1 is GND)
	Comparative system	Upper limit, lower limit (immediately) and lower limit (delay). (selectable)
	Output mode	Comparison, maintenance, (selectable)
	Output selection	Function stop, Rate mete, Raito, (selectable)
	Preset value setting	The 8 step presetting program mode setting is also selectable.
	Output judgment	Judgment output is compared with the indication value by preset value.
	Output circuit	8 step NPN open collector output Maximum: DC30V 50mA max
	Output reset	The  key to the pushed for 2 sec or more.

< Preset output + 10 step output specification : option P12 >

Becames a composition of Preset output + 2 step output + 8 step output

Please refer to the specification of option P4, P10.

<Analog output : Option AV3-5, AI>

Analog output	Output terminal	Output terminals no. 19-20	
	Output setting	Indicated value with minimum, maximum analog output is set.	
	Voltage output	AV3	DC1-5V Loadimpedance 2k Ω or more
		AV4	DC0-5V Loadimpedance 2k Ω or more
		AV5	DC0-10V Loadimpedance 2k Ω or more
	Corrent output	AI	DC4-20mA Loadimpedance 500 Ω or less
	Output timing	“The indication value synchronizing” “Sanpling time synchronizing” (selectable)	
	Output accuracy	Within $\pm 0.1\%$ F.S. for indicated value ($23\pm 5^{\circ}\text{C}$, power on f or 30 minutes or more)	
	Temperature characteristic	$\pm 50\text{ppm}/^{\circ}\text{C}$ (0-50 $^{\circ}\text{C}$)	
	Output response	Approx 1ms (But, an output change is time until the 90% arrival)	
	Maximum output resolving ability	D/A conversion operation • DC1- 5V : Maximum 19999 resolution • DC0- 5V : Maximum 19999 resolution • DC0-10V : Maximum 19999 resolution • DC4-20mA : Maximum 19999 resolution Caution) The analog output (AV, AI) rengen is internal logic is set. Please do not change.	
Output area	0%-102.4% • AV3 : 1-5.096V • AV4 : 0-5.12V • AV5 : 0-10.24V • AI : 4-20.384mA ※ Compulsorily outputs it by 0% or 102.4% when becoming an over indication “-9999 Flushing” or “9999 Flushing” The output inclination to scaling depends on the scaling setting.		

<RS-485 communication : Option RS4, RS4W>

RS-485 Communication	Signal terminal	Communication from D-sub connector (9 pin)
	Signal level	In accordance with IEE RS-485
	Synchronous method	RS4 : 2-wire system Half duplex communication RS4W: 4-wire system Half duplex communication
	Baud rate	2400/4800/9600/19200 bps (Selectable)
	Start bit	1 bit
	Stop bit	1 bit
	Data bit	7/8 bits (Selectable)
	Parity bit	Odd/Even/None (Selectable)
	Unit (ID) number	00-99
	Communication system	Communication is controlled by command
	Communication data	Writing the indicated value, Reading and writing setting values of preset output.
	Maximum connection	32
	Communication code	ASCII code

3. Mountin meter

How to mount indicator (meter)

1.

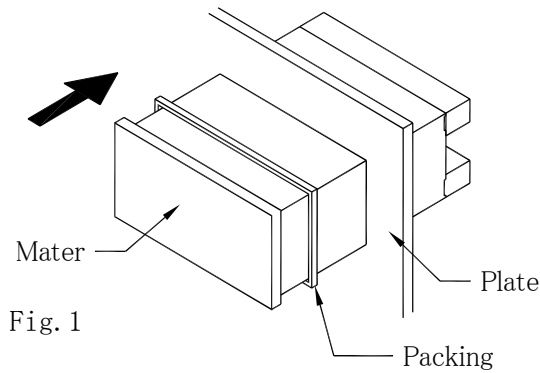
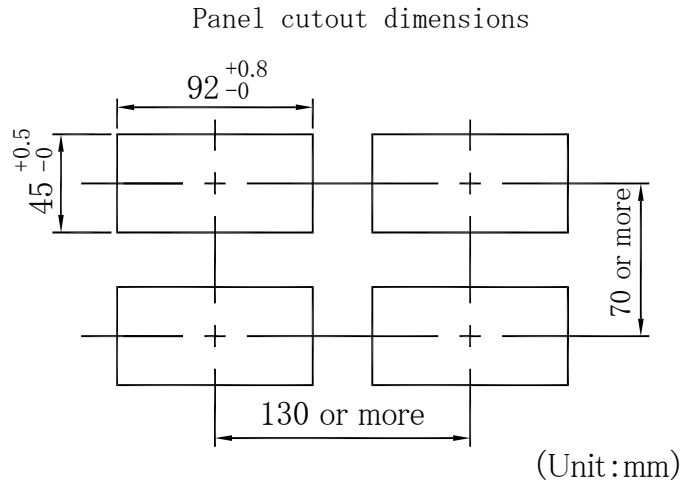


Fig. 1

Cut the panel to insert the indicator (meter) from the front.



2.

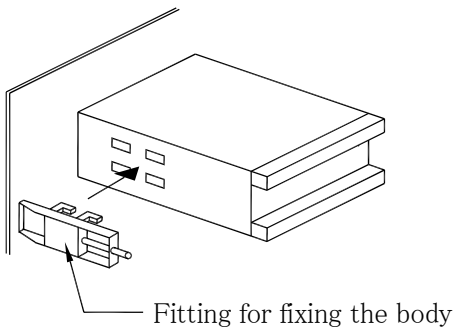


Fig. 2

Please push the Fitting for fixing the body. Into a right and left both sides of the meter.

3.

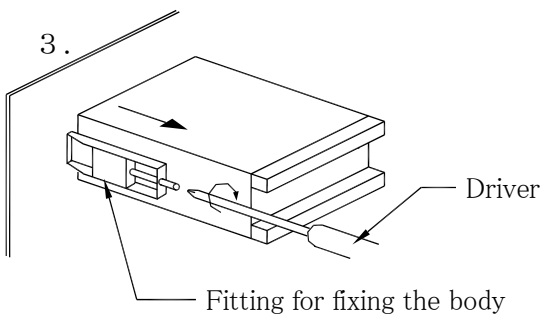


Fig. 3

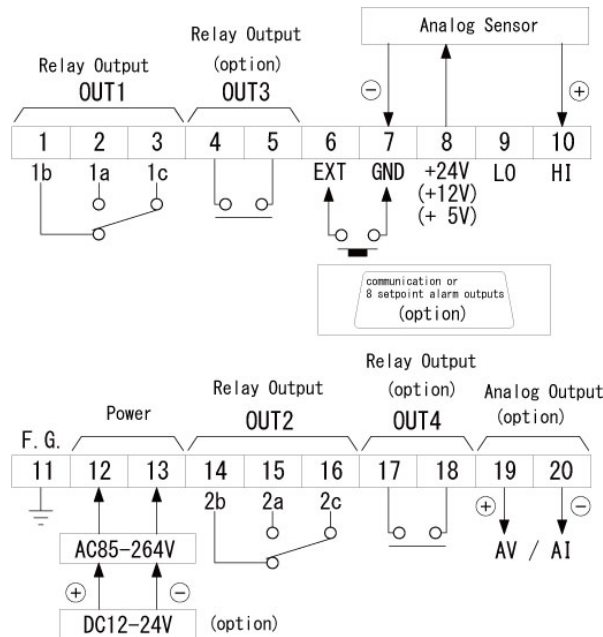
Slide in the rear side (terminal stand side) as for the Fitting for fixing the body. It turns a screw by the driver. The meter is fixed (right and left both sides)

1. Please install it horizontally.
2. Fit the body on to a panel 1.0-4.0mm in thickness.
3. Please do not tighten the screw of the mounting bracket too much. (The case might be damaged when tightening too much.)

4. Connecting terminal board

«Terminal boards»

Fig. 4



[EXT. input (Terminal board 6-7)]

Hold/Peak hold/bottom hold/width of input/0 adjustment function.

Mode setting (P.30-31 “mode3”) (selectable)

[8 step preset output (option)]

Please refer to P.54 “17. 8 step preset output” for the pin layout and the circuit specification.

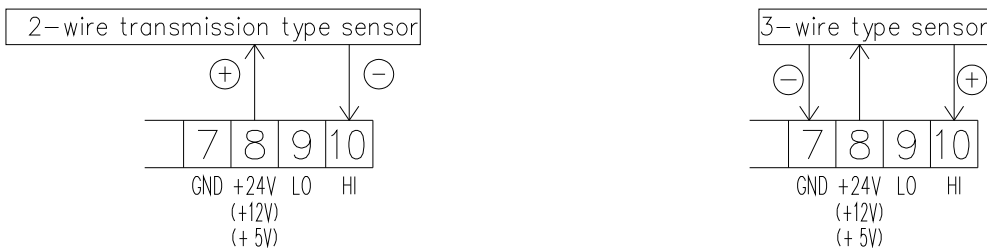
[Communication function (option)]

Please refer to P.57-59 “19.Communication function” for the pin layout and the circuit specification.

«Sensor boards»

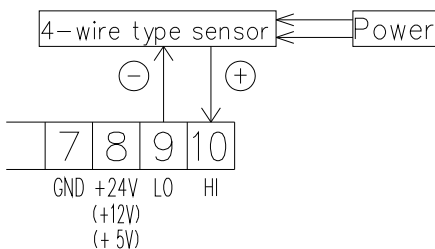
- 1) 2-wire transmission type sensor Fig.5 2) 3-wire type sensor

Fig. 6



- 3) 4-wire type sensor

Fig. 7



⚠ <Caution>

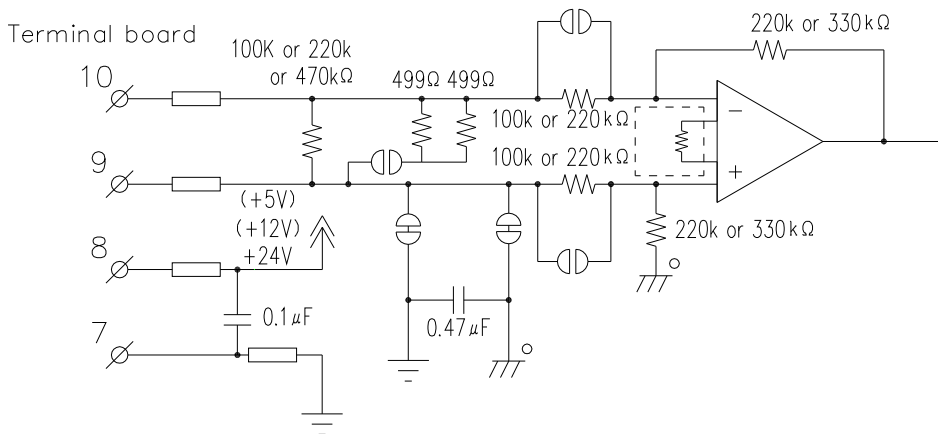
The input circuit is connected with the sensor power GND inside.

Please carry out floating of the input circuit, and when used, consult to our company.

5. Construction of input / output circuit

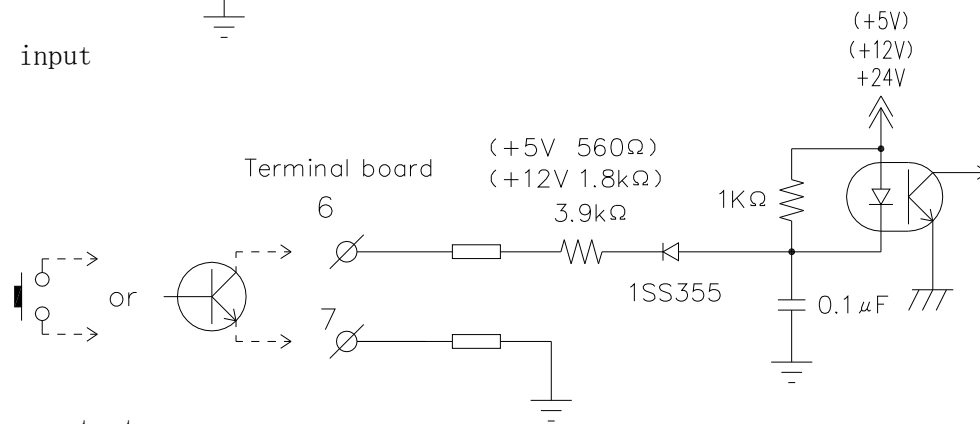
[1] Analog input

Fig. 8



[2] EXT. input

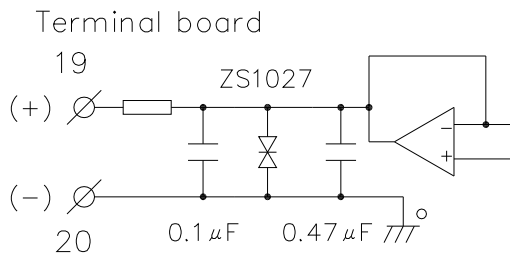
Fig. 9



[3] Analog output

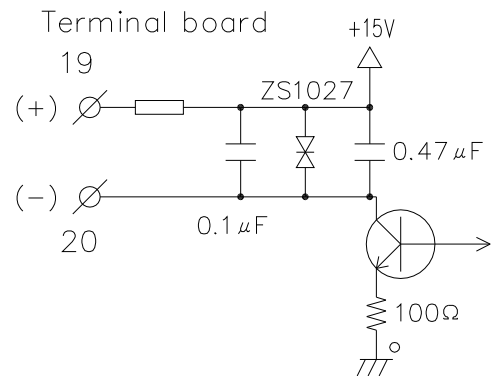
Voltage output (AV)

Fig. 10



Current output (AI)

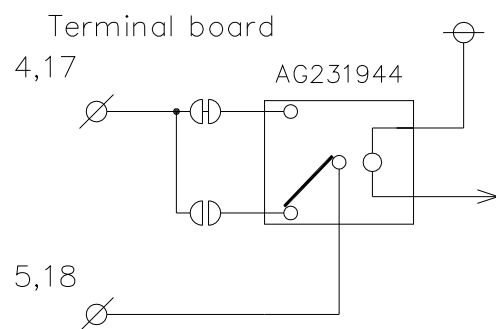
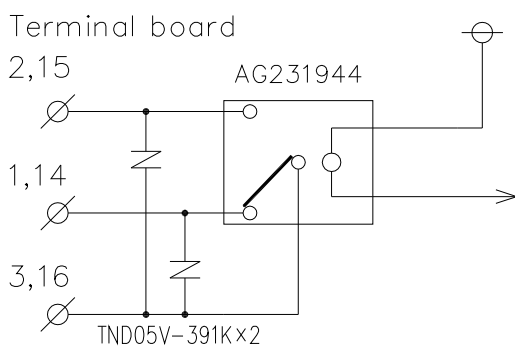
Fig. 11



[4] Preset output

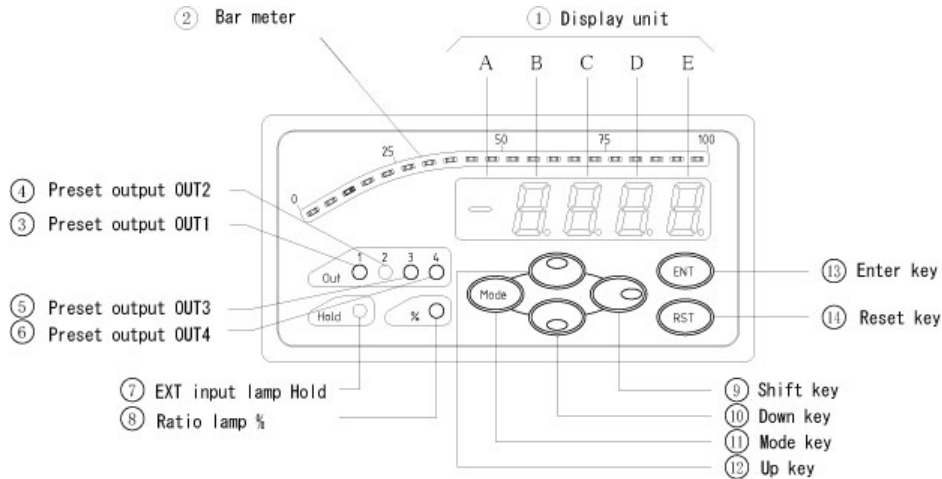
Relay output (1 c Point of contact) Fig. 12

Relay output (1 a Point of contact) Fig. 13



6. Names and functions of components on front

Fig. 14



① Display unit (Rad) (A-E)

- 1) Measurement value indicated at the time of measurement state.
- 2) Initialization
A-E: 「**CLr** (A,B are blanks.), - - - -」 is indicated.
- 3) Set list display
A : Blank
B-E: 「**Pr St** (Pr. St), **Md St** (Md. St), **SC St** (SC. St),
Ln St (Ln. St), **P8 St** (P8. St)」 is indicated.
- 4) Mode set, Adjusting the analog mode set.
A : Setting No is indicated.
B-E: Setting value is indicated.
- 5) Scaling value, Preset value, 8 step preset value, setting.
A : “-”, “0-9” is indicated.
B-E: “0-9” is indicated.
- 6) Linearization setting.
 - At the title indicated.
A-E: 「**Ln 01A** (Ln. 01A) ~ **Ln 21A** (Ln. 21A) ,
Ln 01b (Ln. 01b) ~ **Ln 21b** (Ln. 21b)」 is indicated.
 - At the setup indicated.
A : “0-1” is indicated. (Ln. 01A ~Ln. 21A setting state)
: “-”, “0-9” is indicated. (Ln. 01b ~Ln. 21b setting state)
B-E: “0-9” is indicated.
- 7) Mode protect setting.
A-E: 「**L-off**, **L-on**」 is indicated.

② Bar meter (Orange, White)

- Measurement state: LEDs (0 -100%) turn on or off according to the rate value every 5.0%.
Over 100.0% (over 100.1%): all LEDs will blink.
Under 100.0% (under -0.1%): the least significant LED will blink.
- Setting state: All LEDs turn off.

③-⑥ Preset output lamp (Red) (1-4)

Measurement state: It lights up OUT1-4 at the presetting output.

Setting state: The output lamp setting it now lights when the preset value is set.
The output lamp lights or blinks by each setting when scaling is set.
The output lamp lights or blinks by each setting when 8 presets value is set.

⑦ EXT. input lamp (Green) (HD)


Measurement state: The EXT. input (the terminal board 6-7th) is input, it lights.

⑧ Ratio lamp (Green) (%)

Measurement state: It lights up at the ratio indicated value.



Setting state: The output lamp lights or blinks by each setting when scaling is set.
: The output lamp lights by each setting when 8 presets value is set.



⑩ Shift key

Measurement state: Preset display is adjusted "0" when pushing with  for 2 sec or more.
(When zero adjustment function is made effective, it is necessary to set mode No.3.)
: When pressing for 2 sec or more, the deflection data of the zero point adjustment.

Set list display: It shifts to the setting displayed in the display unit.


Setting state: Moves the flash figure when each setting, to the right.

: When  is pushed while pushing  when the mode is set, the Mode No. (Display unitA) is changed in the descending order.
(d→C→b→A . . . 1→0→d→C→b . . .)

: When  is pushed while pushing  when linearization is set, the title is changed in the descending order.
(Ln. 21b → Ln. 21A → Ln. 20b → . . . → Ln. 01A → Ln. 21b → . . .)

: Present bit value are indicated at the time of analog input adjustments mode setting.

⑩ Down key


Initialization state: The display becomes "----" if  is pushed in the state of the initialization selection ("CLR" display), and it initializes it.
It changes into the measurement operation afterwards.


Measurement state: It uses it when the mode protecting function is called, and it changes.
(2 sec or more: Mode protecting display → 8 sec or more:
Mode protecting changes **L-OFF** ⇄ **L-on**.)

Setting state: Changes the value of the blinking digit during setup procedures.
Each time the key is pressed, the number goes down.

: When analog output adjusted, the output bit value goes down.

⑪ Mode key

Power on state: When a power on while is pushing down , a test mode functions.
(A stop of the test mode function is power off.)

Measurement state: When  is pressing for 2 sec or more, setting list display is called.

Set list display: The setup data display is changed.
(Pr.St → Md.St → Sc.St → Ln.St → P8.St → Pr.St → . . .)

Setting state: Mode No. (indicator A) is switched.
(0→1→2→3 . . . C→d→0→1→2 . . .)

: When the scaling value is set, a set content is changed.

: When the preset value is set, OUT1 to OUT4 are switched.


: When the 8 preset value is set, ch1 to ch8 are switched.



: When the title display of the linearization setting, the title display is changed.
(Ln.01A → Ln.01B → Ln.02A → . . . → Ln.21b → Ln.01A → . . .)

: When the content of linearization set set is displayed, it changes to the title display.

: When the analog adjustment mode set, analog adjustment No. (indicator A) is switched. (Blank → A → b → C → d → Blank → A → b)

⑫ Up key


Measurement state: Present display is adjusted "0" when pushing with  for 2sec or more.
(When zero adjustment function is made effective, it is necessary to set mode No.3.)

: When  is pressing for 5 sec or more, while is pushing down 
The measurement is restarted from the state of the power on.
(*1 Operation reset)



Setting state: Changes the value of the flashing digit during setup procedures.
Each time the key is pressed, the number goes up by one.

: When analog output adjusted, the output bit value goes up.

⑬ Enter key

Power on state: When a power on while is pushing down , "[Lr]" display, and it enters the state of the initialization selection.

Measurement state: The rate meter and the ratio are changed.
(It is necessary to set the Mode No.0)


: When  is pressing for 5 sec or more, while is pushing down 
The measurement is restarted from the state of the power on.
(*1 Operation reset)


Set list display: Shifts to the measurement.

Setting state: A set value is registered when each setting it, and it shifts to a set list.

: When the analog adjustment mode is set, the setting value is registered.


⑭ Reset key

Power on state: When a power on while is pushing down , analog adjustment mode functions.



Initialization state: When initialization is selected ([Lr] display) is pushing down ,
It shifts to the measurement operation without initializing.

Measurement state: When pressing for 2 sec or more, resets the presetting output

Setting state: During setup procedures the display returns to the set list display,
without registering.

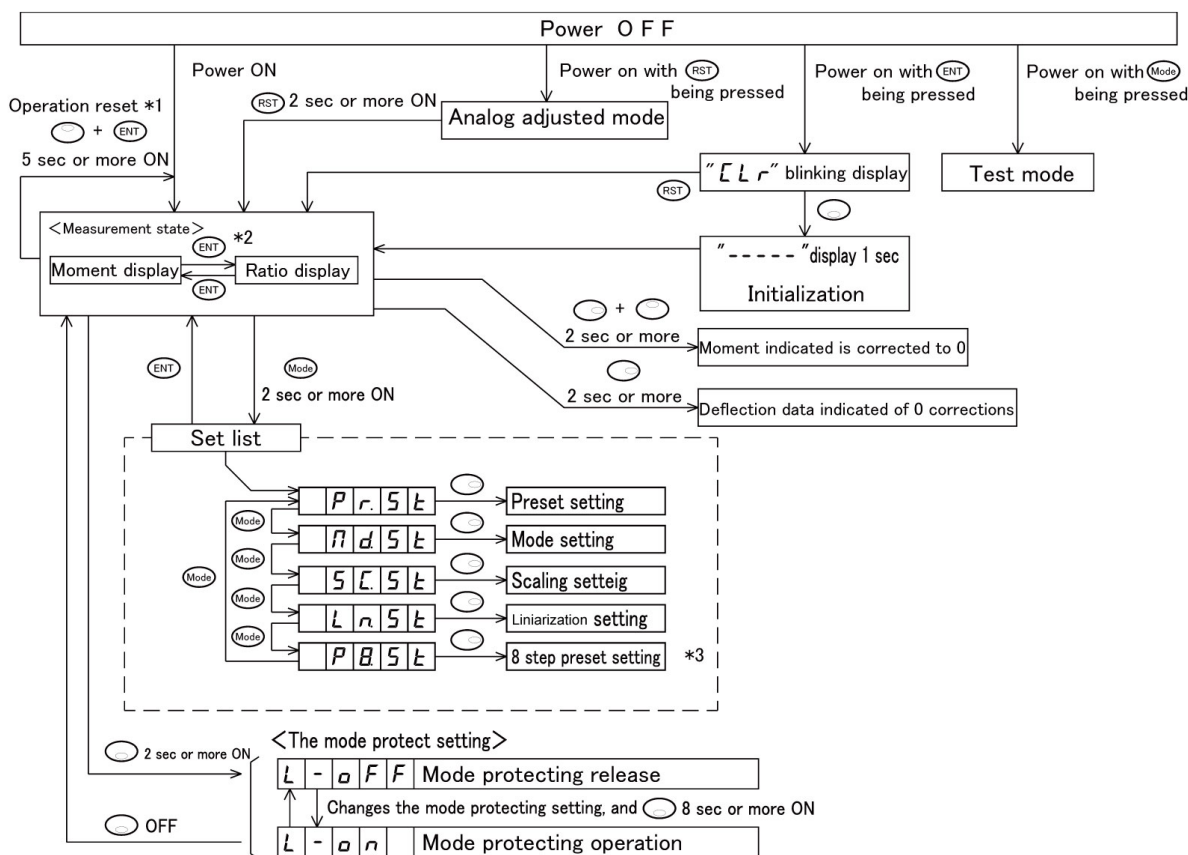
: When  is pressing for 2sec or more, when analog adjusting it,
returns to the measurement.

*1 Operation reset

When  +  is pressing for 5 sec or more while displaying the measurement,
the measurement is started from the state at power on.
Please try for the unstable operation stc.Noise etc.

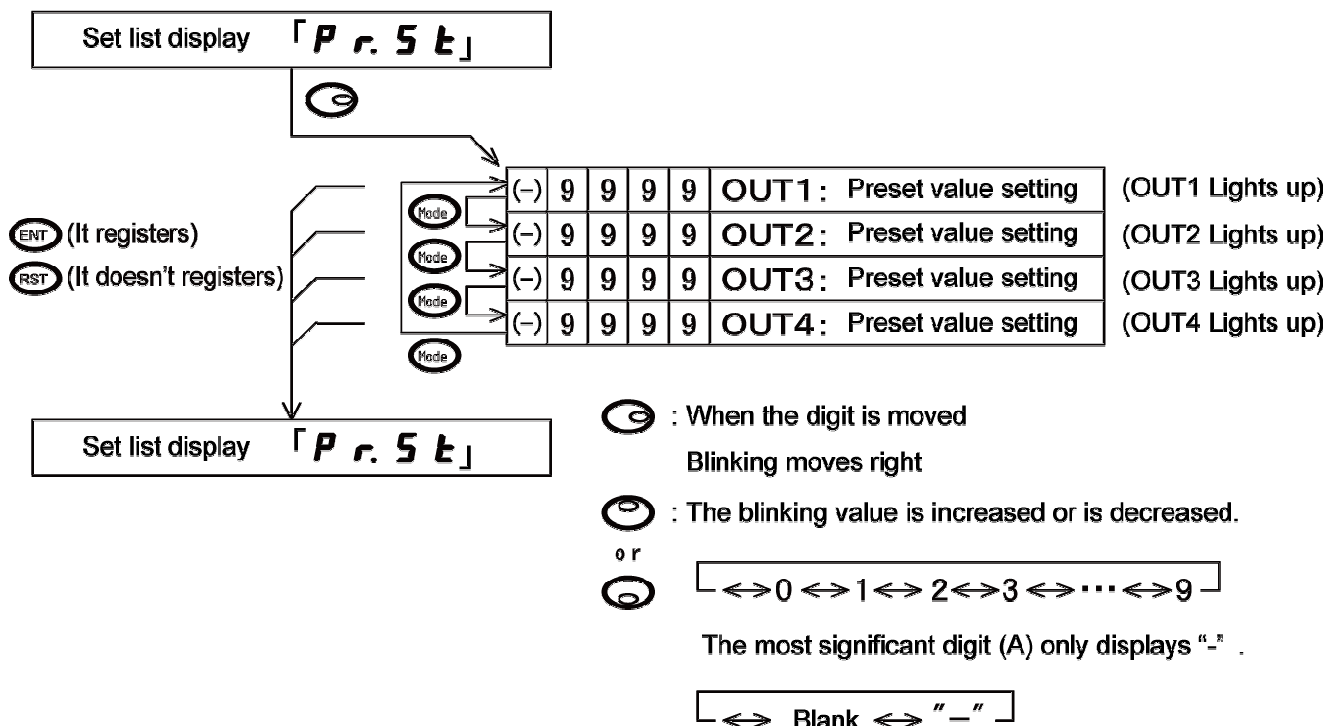
7. The setting menu

« Each mode transition »

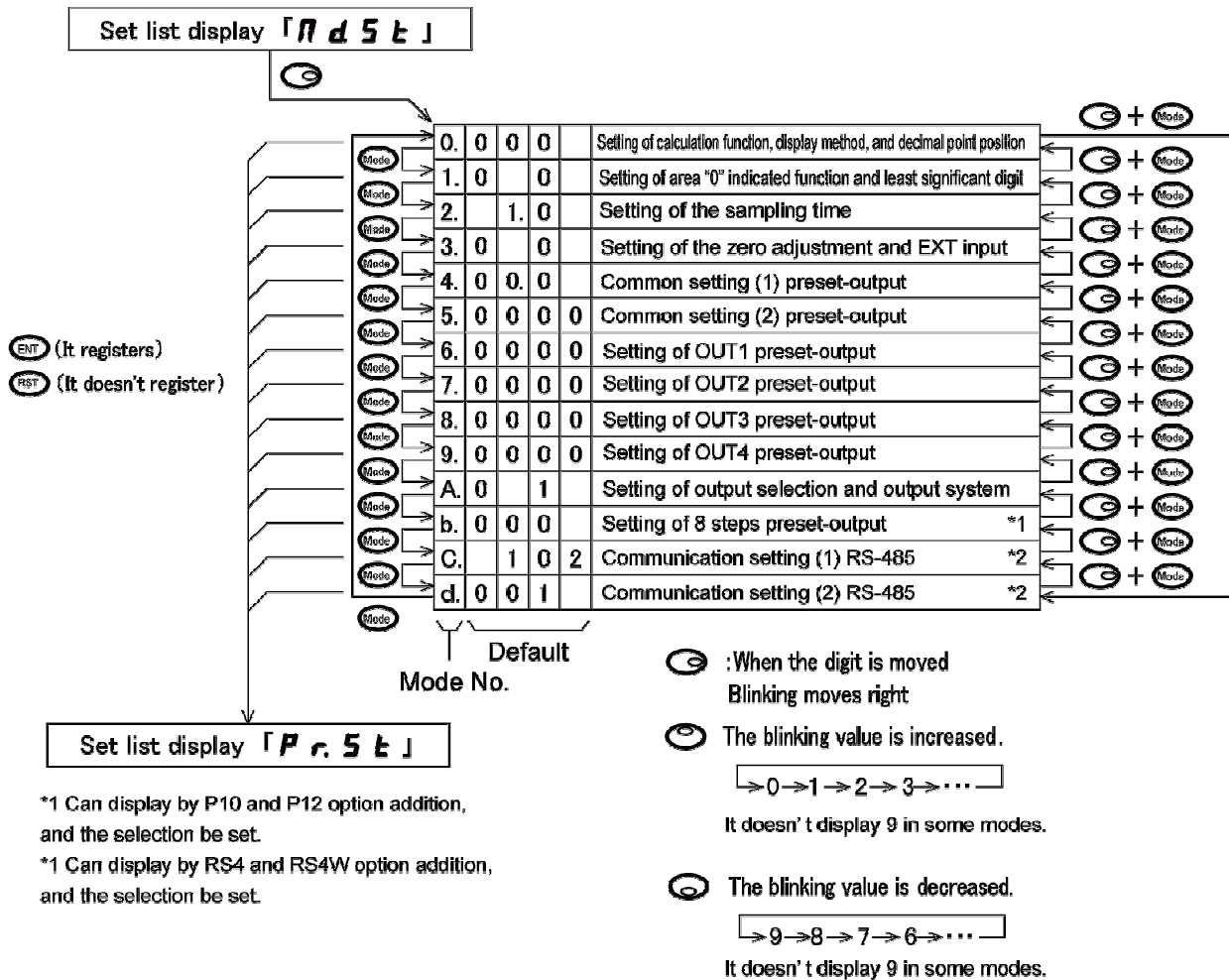


- *1 Operation reset :The measurement is stopped and the measurement is restarted from the state at power ON.
- *2 :It is necessary to set the indicated method of mode No.0.
- *3 : Can it display by P10 and P12 option addition, and the selection be set.

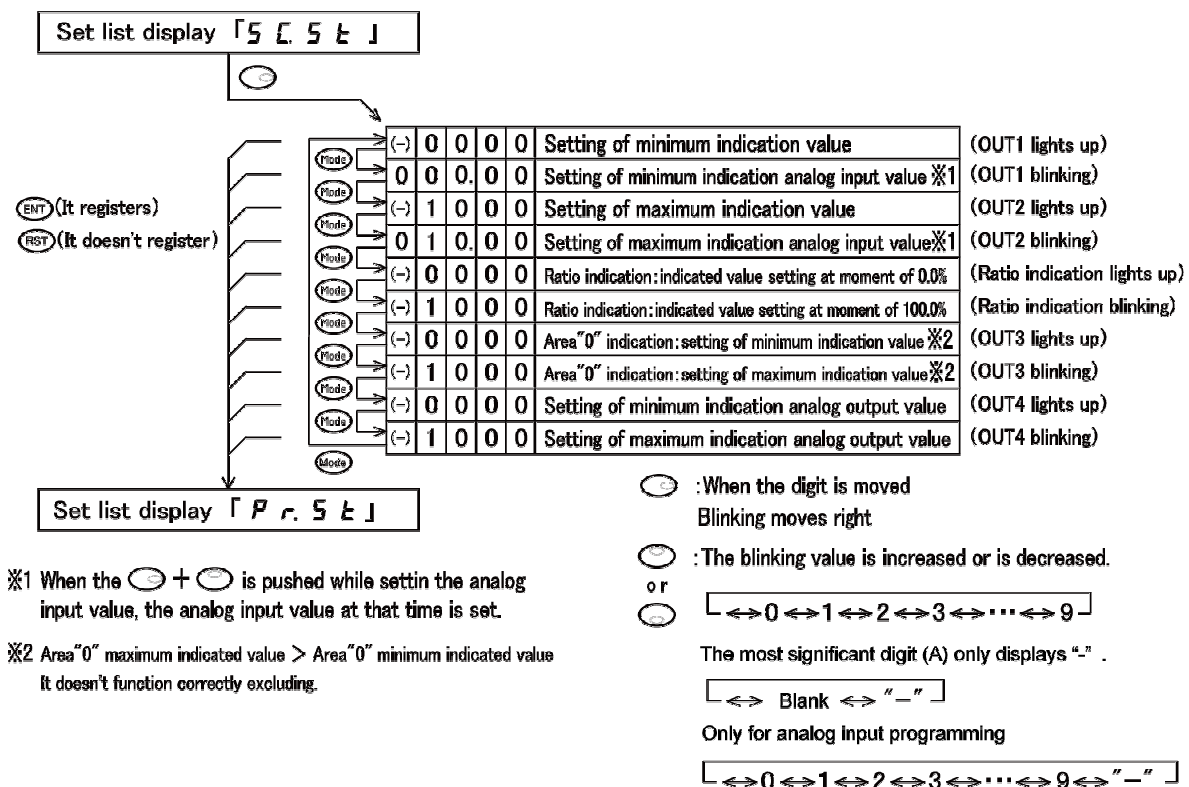
« Preset value setting »



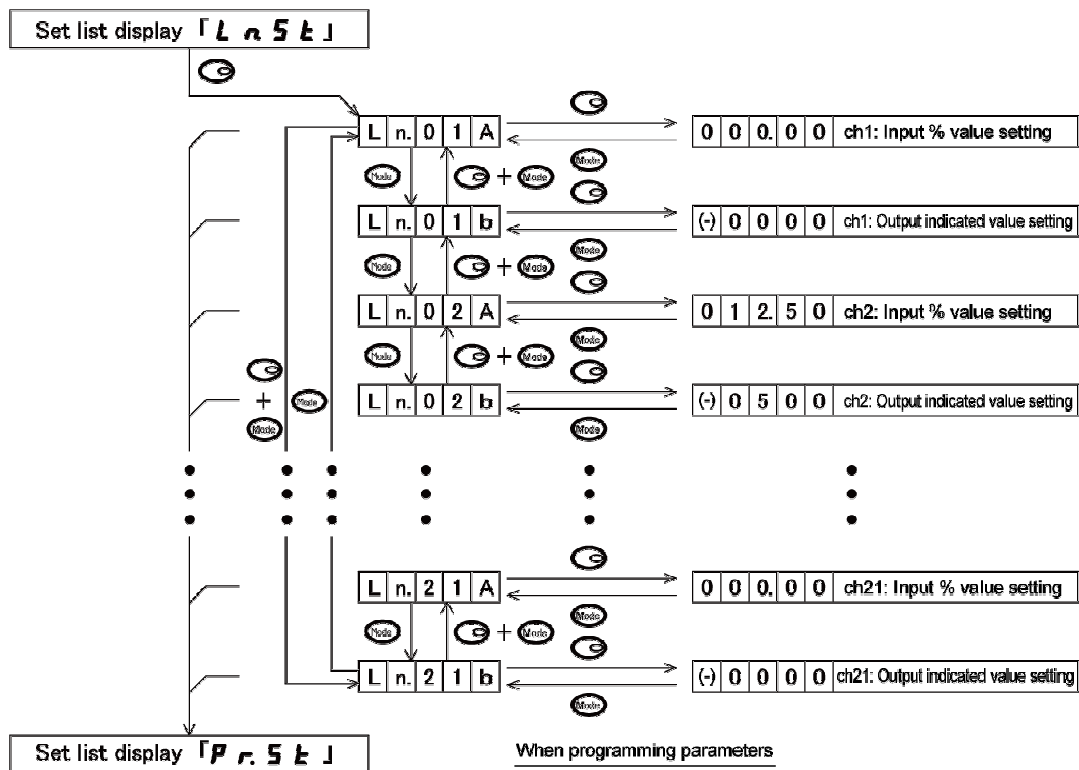
«Mode setting»



«Scaling setting»



《Linearization setting》



- *1 Input % value is in the range of 0.00-105.00
Other settings do not operate correctly.
- *2 Pressing **ENT** + **Mode** makes possible to program the analog input value that is same as the current value, during programming input % value.

When programming parameters

ENT : When the digit is moved
Blinking moves right

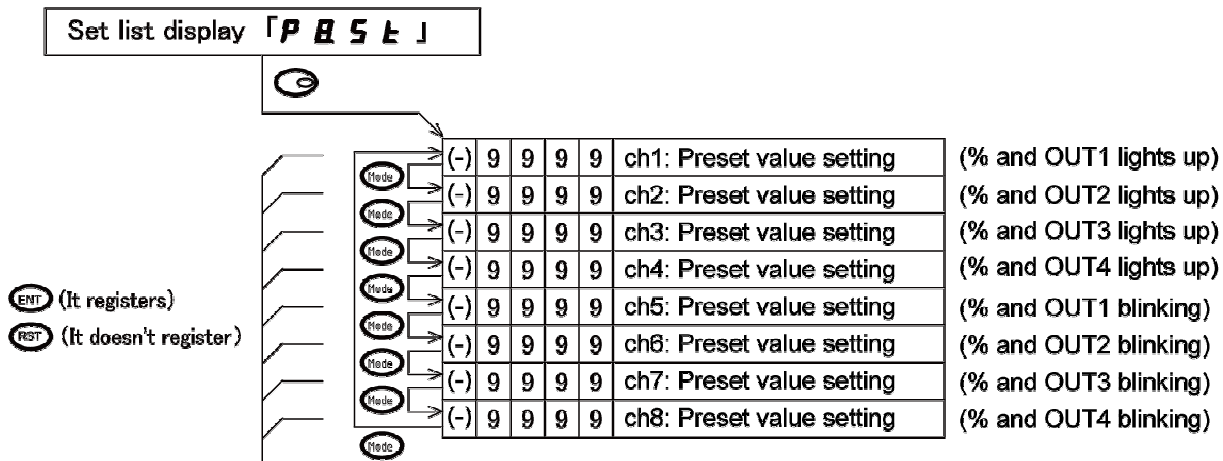
Mode : The blinking value is increased or is decreased.

or **Mode** [↔ 0 ↔ 1 ↔ 2 ↔ 3 ↔ ... ↔ 9]

The most significant digit (A) only displays "-" . Only for analog input programming

[↔ 0 ↔ 1 ↔ "-"] [↔ Blank ↔ "-"]

《8 step preset value setting》



ENT (It registers)
RST (It doesn't register)

ENT : When the digit is moved
Blinking moves right

Mode : The blinking value is increased or is decreased.

or **Mode** [↔ 0 ↔ 1 ↔ 2 ↔ 3 ↔ ... ↔ 9]

The most significant digit (A) only displays "-" .

[↔ Blank ↔ "-"]

8. Initial setting value and initialization

If the specifications desired by the user are requested prior to shipment, the meter will be set these settings. Otherwise, the regular factory settings are shown below.

Value setting of each Mode

Table 1

Mode	Initial setting				Notes				Set item	
	A	B	C	D	E	B	C	D		E
0.	0					—	—	—	—	Setting the calculation function
		0				—	—	—	—	Setting the display method
			0			—	—	—	—	Setting the decimal point
1.	0					—	—	—	—	Setting the least significant digit
			0			—	—	—	—	Setting the area "0" indication function
2.		1.	0			—	—	—	—	Setting the sampling time
3.	0					—	—	—	—	Setting the zero point adjustment
			0			—	—	—	—	Setting the EXT input
4.	0	0.	0						—	Setting the preset output common(1): Preset output state distinction time
5.	0	0	0	0						Setting the preset output common(2): Hysteresis value
6.	0					—	—	—	—	Setting of OUT1:Output display selection
		0				—	—	—	—	Setting of OUT1:Upper limit, lower limit
			0			—	—	—	—	Setting of OUT1:Output mode
				0		—	—	—	—	Setting of OUT1:Hysteresis operation
7.	0					—	—	—	—	Setting of OUT2:Output display selection
		0				—	—	—	—	Setting of OUT2:Upper limit, lower limit
			0			—	—	—	—	Setting of OUT2:Output mode
				0		—	—	—	—	Setting of OUT2:Hysteresis operation
8.	0					—	—	—	—	Setting of OUT3:Output display selection
		0				—	—	—	—	Setting of OUT3:Upper limit, lower limit
			0			—	—	—	—	Setting of OUT3:Output mode
				0		—	—	—	—	Setting of OUT3:Hysteresis operation
9.	0					—	—	—	—	Setting of OUT4:Output display selection
		0				—	—	—	—	Setting of OUT4:Upper limit, lower limit
			0			—	—	—	—	Setting of OUT4:Output mode
				0		—	—	—	—	Setting of OUT4:Hysteresis operation
A.	0					—	—	—	—	Analog output:Output display selection
			1			—	—	—	—	Analog output:Output circuit
b.	0					—	—	—	—	Setting of 8 step preset output:Output display selection
		0				—	—	—	—	Setting of 8 step preset output:Upper limit, lower limit
			0			—	—	—	—	Setting of 8 step preset output:Output mode
C.		1				—	—	—	—	Setting the network transmission RS-485(1): Data bit
			0			—	—	—	—	Setting the network transmission RS-485(1): Parity bit
				2		—	—	—	—	Setting the network transmission RS-485(1): Transmission rate
d.	0	0						—	—	Setting the network transmission RS-485(2): Transmission ID No
			1			—	—	—	—	Setting the network transmission RS-485(2): Sending and receiving change time

Scaling setting value

[A2 input]

Table2-A

Initial setting					Notes					Set item
(-)	B	C	D	E	A	B	C	D	E	
0	0	0	0	0						Minimum indicated value
(-)	0	4.	0	0						Analog input value of minimum indicated
0	1	0	0	0						Maximum indicated value
(-)	2	0.	0	0						Analog input value of maximum indicated
(-)	0	0	0	0						Rate meter indicated value of 0.0%
(-)	1	0	0	0						Rate meter indicated value of 100.0%
(-)	0	0	0	0						Minimum indicated value of domain "0"
(-)	1	0	0	0						maximum indicated value of domain "0"
(-)	0	0	0	0						Analog output minimum indicated value
(-)	1	0	0	0						Analog output maximum indicated value

[A3 input]

Table2-B

Initial setting					Notes					Set item
A	B	C	D	E	A	B	C	D	E	
(-)	0	0	0	0						Minimum indicated value
0	0	1.	0	0						Analog input value of minimum indicated
(-)	1	0	0	0						Maximum indicated value
0	0	5.	0	0						Analog input value of maximum indicated
(-)	0	0	0	0						Rate meter indicated value of 0.0%
(-)	1	0	0	0						Rate meter indicated value of 100.0%
(-)	0	0	0	0						Minimum indicated value of domain "0"
(-)	1	0	0	0						maximum indicated value of domain "0"
(-)	0	0	0	0						Analog output minimum indicated value
(-)	1	0	0	0						Analog output maximum indicated value

[A4 input]

Table2-C

Initial setting					Notes					Set item
A	B	C	D	E	A	B	C	D	E	
(-)	0	0	0	0						Minimum indicated value
0	0	0.	0	0						Analog input value of minimum indicated
(-)	1	0	0	0						Maximum indicated value
0	0	5.	0	0						Analog input value of maximum indicated
(-)	0	0	0	0						Rate meter indicated value of 0.0%
(-)	1	0	0	0						Rate meter indicated value of 100.0%
(-)	0	0	0	0						Minimum indicated value of domain "0"
(-)	1	0	0	0						maximum indicated value of domain "0"
(-)	0	0	0	0						Analog output minimum indicated value
(-)	1	0	0	0						Analog output maximum indicated value

[A5 input]

Table2-D

Initial setting					Notes					Set item
A	B	C	D	E	A	B	C	D	E	
(-)	0	0	0	0						Minimum indicated value
0	0	0.	0	0						Analog input value of minimum indicated
(-)	1	0	0	0						Maximum indicated value
0	1	0.	0	0						Analog input value of maximum indicated
(-)	0	0	0	0						Rate meter indicated value of 0.0%
(-)	1	0	0	0						Rate meter indicated value of 100.0%
(-)	0	0	0	0						Minimum indicated value of domain "0"
(-)	1	0	0	0						maximum indicated value of domain "0"
(-)	0	0	0	0						Analog output minimum indicated value
(-)	1	0	0	0						Analog output maximum indicated value

Linearization setting value

Table3

No.	Initial setting					Notes					Set item
	A	B	C	D	E	A	B	C	D	E	
Ln. 01A	0	0	0.	0	0						ch 01 input %
Ln. 01b	(-)	0	0	0	0						ch 01 output indication
Ln. 02A	0	1	2.	5	0						ch 02 input %
Ln. 02b	(-)	5	0	0	0						ch 02 output indication
Ln. 03A	0	2	5.	0	0						ch 03 input %
Ln. 03b	(-)	6	0	0	0						ch 03 output indication
Ln. 04A	0	3	7.	5	0						ch 04 input %
Ln. 04b	(-)	1	0	0	0						ch 04 output indication
Ln. 05A	0	5	0.	0	0						ch 05 input %
Ln. 05b	(-)	8	0	0	0						ch 05 output indication
Ln. 06A	0	6	2.	5	0						ch 06 input %
Ln. 06b	(-)	0	3	0	0						ch 06 output indication
Ln. 07A	0	7	5.	0	0						ch 07 input %
Ln. 07b	(-)	0	6	0	0						ch 07 output indication
Ln. 08A	0	8	7.	5	0						ch 08 input %
Ln. 08b	(-)	0	2	0	0						ch 08 output indication
Ln. 09A	1	0	0.	0	0						ch 09 input %
Ln. 09b	(-)	1	0	0	0						ch 09 output indication
Ln. 10A	1	0	5.	0	0						ch 10 input %
Ln. 10b	(-)	1	0	5	0						ch 10 output indication
Ln. 11A	0	0	0.	0	0						ch 11 input %
Ln. 11b	(-)	0	0	0	0						ch 11 output indication
Ln. 12A	0	0	0.	0	0						ch 12 input %
Ln. 12b	(-)	0	0	0	0						ch 12 output indication
Ln. 13A	0	0	0.	0	0						ch 13 input %
Ln. 13b	(-)	0	0	0	0						ch 13 output indication
Ln. 14A	0	0	0.	0	0						ch 14 input %
Ln. 14b	(-)	0	0	0	0						ch 14 output indication
Ln. 15A	0	0	0.	0	0						ch 15 input %
Ln. 15b	(-)	0	0	0	0						ch 15 output indication
Ln. 16A	0	0	0.	0	0						ch 16 input %
Ln. 16b	(-)	0	0	0	0						ch 16 output indication
Ln. 17A	0	0	0.	0	0						ch 17 input %
Ln. 17b	(-)	0	0	0	0						ch 17 output indication
Ln. 18A	0	0	0.	0	0						ch 18 input %
Ln. 18b	(-)	0	0	0	0						ch 18 output indication
Ln. 19A	0	0	0.	0	0						ch 19 input %
Ln. 19b	(-)	0	0	0	0						ch 19 output indication
Ln. 20A	0	0	0.	0	0						ch 20 input %
Ln. 20b	(-)	0	0	0	0						ch 20 output indication
Ln. 21A	0	0	0.	0	0						ch 21 input %
Ln. 21b	(-)	0	0	0	0						ch 21 output indication

Preset setting value

Table 4

	Initial setting					Notes				
	A	B	C	D	E	A	B	C	D	E
OUT1	(-)	9	9	9	9					
OUT2	(-)	9	9	9	9					
OUT3	(-)	9	9	9	9					
OUT4	(-)	9	9	9	9					

8 step preset setting value

Table 5

	Initial setting					Notes				
	A	B	C	D	E	A	B	C	D	E
ch 1	(-)	9	9	9	9					
ch 2	(-)	9	9	9	9					
ch 3	(-)	9	9	9	9					
ch 4	(-)	9	9	9	9					
ch 5	(-)	9	9	9	9					
ch 6	(-)	9	9	9	9					
ch 7	(-)	9	9	9	9					
ch 8	(-)	9	9	9	9					


Mode protect setting value


Table 6

Initial setting					Notes				
A	B	C	D	E	A	B	C	D	E
L	-	o	F	F					


About initialization

When a power on while is pushing down  “ELr” display, and it enters the state of the initialization selection.

It initializes (“- - - -”) display when  is pushed at this time, and it shifts to the measurement operation.

 is pushed it shifts to the measurement operation without initializing.


After the initialization, the set values will be as shown in Table 1, Table 2-A to D, and Table 3 to 6. Moreover, the deflection data of zero point adjustment is cleared to “0” .

 <Caution>





1. Since an initialization changes all existing setting values to the initial setting values, be sure to record all the setting values before an initialization. Please initialize without fail, and set each mode, the linearization and the preset value, etc. again when either of data is changed in the analog adjustment mode.
2. When abnormalities occur in a display or a function suddenly from normal operation, please carry out reset of operation first. (P.11 Reference)
Still, please initialize it when the upset condition is not repaired by the above-mentioned. Please set each mode the scaling and the preset value, etc. again after it initializes it.

9. Manner of operation of set list display

«The call method»

1.  is turned on 2 sec or more.
2. It goes into a setting list and “*P r. S t*” is displayed.

«Method of operating key to set display list»

Operation key	Display	The contents of operation
	<pre> A B C D E P r. S t ↓ M d S t ↓ S C. S t ↓ L n S t ↓ P 8 S t ↓ P r. S t ↓ </pre>	<p>A setting display is switched whenever it pushes. 「P r. S t (Preset value setup)」 ↓ 「M d. S t (Mode setup)」 ↓ 「S C. S t (Scaling setup)」 ↓ 「L n. S t (Linearization setup)」 ↓ 「P 8. S t (8 step preset value setup)」 ↓ 「P r. S t (Preset value setup)」</p> <p>Please choose the display to set up. The “P 8. S t” display is displayed at the time of P10,P12 option selection.</p>
		<p>It pushes; it will shift to each setup. Please make a setting change according to operation of each setting item</p>
		<p>It pushes; it will return to a measurement display. Please push  after each end of a setting.</p>

<Caution>

It will become the display of “*P r. S t*” if it returns from each setting menu to a setting list.

1 0. Scaling setting method

«The call method»

1. It will become 「Pr. 5 t」 display if “Mode” is pushed 2 sec or more. (Set list)
2. It will become 「5 C. 5 t」 display if “Mode” is pushed twice.
3. If “C” is pushed, it will become a scaling setup and can perform a setup of an input indicated value and an output indicated value.

«Programming and information lamp operation»

No.	Set item	Set content	Information Lamp operation
①	Minimum value.	The minimum indicated value of set.	OUT1 light
②	Minimum analog input value.	The analog input value to a minimum indicated is set. *1	OUT1 blinking
③	Maximum value.	The maximum indicated value of set.	OUT2 light
④	Maximum analog input value.	The analog input value to a maximum indicated is set. *1	OUT2 blinking
⑤	The indicated value at moment 0.0 %	The rate mete indicated value when ratio 0.0% is set.	% light
⑥	The indicated value at moment 100.0 %	The rate mete indicated value when ratio 100.0% is set.	% blinking
⑦	Domain 0 minimum indicated value.	The minimum indicated value of domain 0 is set. *2	OUT3 light
⑧	Domain 0 maximum indicated value.	The maximum indicated value of domain 0 is set. *2	OUT3 blinking
⑨	Analog output minimum value.	The indicated value when analog minimum outputting is set.	OUT4 Light
⑩	Analog output maximum value.	The indicated value when analog maximum outputting is set.	OUT4 blinking

- ※1 If a “C” (First push) + “C” is preseed when setting up an input value, the analog value inputted now will be rewritten by the setting up value.
- ※2 Please set up on condition of the “domain 0 minimum indicated value < domain 0 maximum indicated value”
- ※3 When you use a linearization function, ①-④ will not work.

【Rate meter : No.①-④】

When linearization measurement is invalid, It scaling it setting the minimum value, the maximum value, and the analog input value to it by the straight line that connects between two points. linearization measurement measures by linearization setup at the time of effective.

The minimum / the maximum indicated value.

Setting range : A2 to A5 type -9999 to 9999. (The decimal point synchronizes with in mode No.0.)

Analog input value of the minimum / the maximum indication.

Setting range: A2 type: 4.00 to 20.00(mA) A5 type: 0.00 to 10.00(V)

A3 type: 1.00 to 5.00(V)

A4 type: 0.00 to 5.00(V)

⚠ <Caution>

1. When setting as <minimum indication value = maximum indication value >, the indication doesn't change.
2. The minimum / the maximum analog input value should not carry out a setup outside a setting range.
3. Please do not carry out a setup of those other than “ the minimum analog setting value” < ” the maximum analog setting value” .

[Example of setting]

The analog input A5 (0 to 10V) range.

At analog input value (0V), the indication value is (-1000).

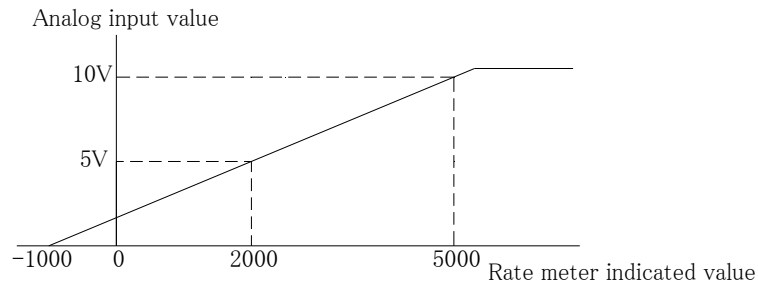
At analog input value (10V), the indication value is (5000).

Minimum indication value	1 2 3 4 ● ○ ○ ○	A B C D E <table border="1"><tr><td>-</td><td>1</td><td>0</td><td>0</td><td>0</td></tr></table>	-	1	0	0	0	(-1 0 0 0)
-	1	0	0	0				
Analog input value of minimum indication	1 2 3 4 ■ ○ ○ ○	A B C D E <table border="1"><tr><td>0</td><td>0</td><td>0.</td><td>0</td><td>0</td></tr></table>	0	0	0.	0	0	(0. 0 0 V)
0	0	0.	0	0				
Maximum indication value	1 2 3 4 ○ ● ○ ○	A B C D E <table border="1"><tr><td>0</td><td>5</td><td>0</td><td>0</td><td>0</td></tr></table>	0	5	0	0	0	(5 0 0 0)
0	5	0	0	0				
Analog input value of maximum indication	1 2 3 4 ○ ■ ○ ○	A B C D E <table border="1"><tr><td>0</td><td>1</td><td>0.</td><td>0</td><td>0</td></tr></table>	0	1	0.	0	0	(1 0. 0 0 V)
0	1	0.	0	0				
Mode No. 0		A B C D E <table border="1"><tr><td>0.</td><td>X</td><td>X</td><td>0</td><td></td></tr></table>	0.	X	X	0		(Decimal point position "0")
0.	X	X	0					

- . . . Light up.
- . . . Light disappears
- . . . Light blinks.
- X . . . Arbitrary setting value

The indication is shown in the figure below.

Fig. 15



【Ratio indication value : No.⑤-⑥】

The indicated value at moment of 0.0% and the indicated value at moment of 100.0% are set up. It indicates ratio by the inclination which connected two points. And 0 to 100% LEDs turn on and off according to the rate value every 5.0%. *Calculating from 0.0 to 4.9%

- 〔 All LEDs of the bar display will turn on and off when over 100.0% (100.0 to). 〕
- 〔 The least significant digit will turn on and off when under 0.0% (to -0.1%). 〕

Setting range : -9999 to 9999 <A decimal point is interlocked with the mode No.0>

⚠ <Csution>

When it sets to <The indicated value at moment of 0.0% = The indicated value at moment of 100.0%>, "999.9" carries out flashing.

[Example of setting of ratio]

The indicated value (-1000), the indication ratio is (0.0%).

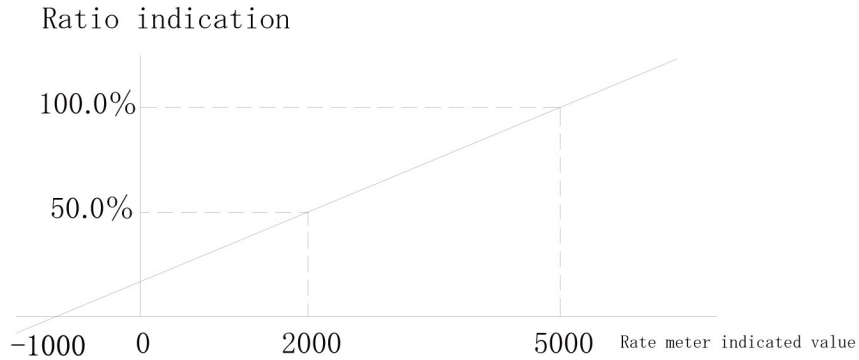
The indicated value (5000), the indication ratio is (100.0%).

The indicated value at moment of 0.0%	% HD 0V ● ○ ○	A B C D E <table border="1"><tr><td>-</td><td>1</td><td>0</td><td>0</td><td>0</td></tr></table>	-	1	0	0	0	(-1 0 0 0)
-	1	0	0	0				
The indicated value at moment of 100.0%	% HD 0V ■ ○ ○	A B C D E <table border="1"><tr><td>0</td><td>5</td><td>0</td><td>0</td><td>0</td></tr></table>	0	5	0	0	0	(5 0 0 0)
0	5	0	0	0				

- . . . Light up ○ . . . Light disappears
- ▒ . . . Light blinks

The ratio indication is shown in the figure below.

Fig. 16



【Area “0” indication value : No.⑦-⑧】

For two points, domain “0” minimum indicated value and domain “0” maximum indicated value is indicated by “0” .

Setting range : -9999 to 9999 <A decimal point is interlocked with the mode No.0>

⚠ <Caution>

Please do not carry out a setup of those other than
 “Domain 0 minimum indicated value” < “Domain 0 maximum indicated value”
 It dose not function correctly.

[Example of setting of domain “0”]

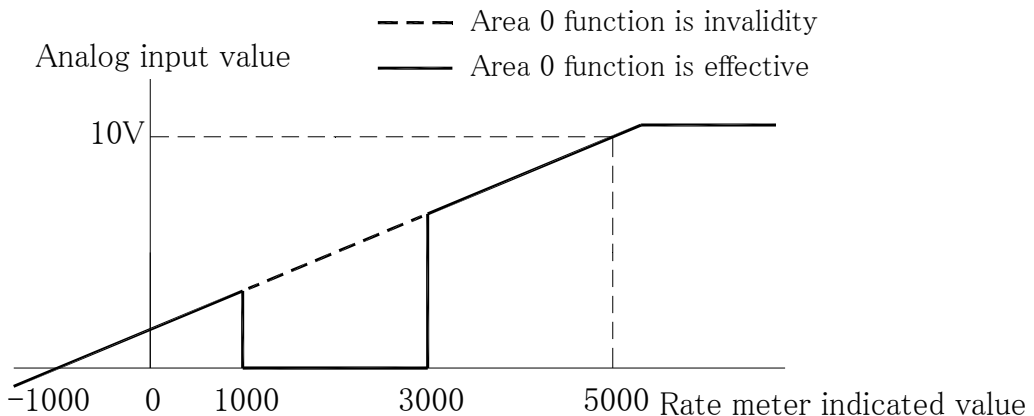
Rate mete value to set between “1000” to “3000” of indicated value to “0” .

	1 2 3 4	A B C D E	
Domain 0 minimum indicated value	○ ○ ● ○	0 1 0 0 0	(1 0 0 0)
Domain 0 maximum indicated value	○ ○ ▒ ○	0 3 0 0 0	(3 0 0 0)
Mode No. 1		A B C D E 1. X 1	(Domain 0 function effective)

- . . . Light up ○ . . . Light disappears
- ▒ . . . Light blinks X . . . Arbitrary setting value

The rate meter indication at the domain 0 functional effective is shown in the figure below.

Fig. 17



【Analog output indication value : No.⑨-⑩】

The indicated value when analogue and minimum outputting it and the indicated value at an analog maximum output are set.

Setting range : -9999 to 9999 <A decimal point is interlocked with the mode No.0>

⚠ <Caution>

When setting as <analog output minimum indication value = analog maximum output indication value>, the analog output becomes minimum value.

[Example of setting analog output]

The analog input AV4 (0 to 5V) range. It outputs it synchronizing with the indication.
 At indication value (-1000), the output is minimum (0V).
 At indication value (5000), the output is maximum (5V).

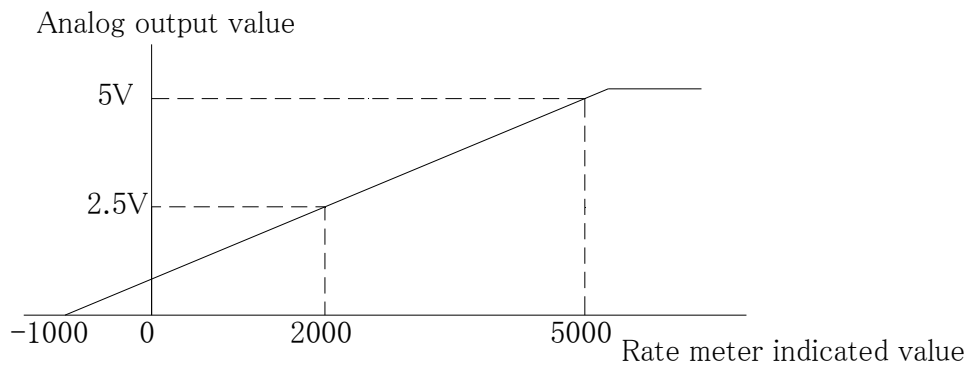
Analog output minimum indicated value.	1 2 3 4	A B C D E											
	○ ○ ○ ●	<table border="1"><tr><td>-</td><td>1</td><td>0</td><td>0</td><td>0</td></tr></table>	-	1	0	0	0	(- 1 0 0 0)					
-	1	0	0	0									
Analog output maximum indicated value.	1 2 3 4	A B C D E											
	○ ○ ○ <table border="1"><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>						<table border="1"><tr><td>0</td><td>5</td><td>0</td><td>0</td><td>0</td></tr></table>	0	5	0	0	0	(5 0 0 0)
0	5	0	0	0									
Mode No. A		A B C D E											
		<table border="1"><tr><td>A.</td><td>0</td><td> </td><td> </td><td> </td></tr></table>	A.	0				(Rate meter indication) (It synchronizes with sampling time)					
A.	0												

- . . . Light up
- . . . Light disappears
- | | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

 . . . Light blinks

The analog output is shown in the figure below.

Fig. 18



⚠ <Caution>


- When the analog output method is set to “Synchronize with the display sampling duration”, it outputs it by internal sampling duration. Please set up “synchronization to an indicated value” to output proportion to an indicated value.
- Although it is proportional to the set-up slope, if it becomes the minimum exaggerated value “-9999 blink” or the maximum exaggerated value “9999 blinks”, it will become 0% or 102.4% of output compulsorily.

[Indicated value setup of the output minimum < Indicated value setup of the output maximum]
 “-9999 blink” 0% output
 “9999 blink” 102.4% output





[Indicated value setup of the output minimum > Indicated value setup of the output maximum]
 “-9999 blink” 102.4% output

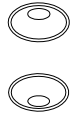




















































































“9999 blink” 0% output



Moreover, also when an analog input signal becomes the following conditions, it becomes 0% or 102.4% of output compulsorily.

When a indication will be “ blink” by “Input signal \leq -20%F.S.”
[Disconnection detection]

«Method of operating key to scaling setup»


Operation key	Display	The contents of operation																																														
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>A</td><td>B</td><td>C</td><td>D</td><td>E</td> </tr> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td> </tr> </table> <table style="width: 100%;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>●</td><td>○</td><td>○</td><td>○</td> </tr> <tr> <td>Hold</td><td></td><td>%</td><td></td> </tr> <tr> <td>○</td><td></td><td>○</td><td></td> </tr> </table>	A	B	C	D	E	0	0	0	0	0	1	2	3	4	●	○	○	○	Hold		%		○		○		<p>Setting value is switched whenever it presses a </p> <p> <Minimum value>→<Minimum analog input value>→ <Maximum value>→<Maximum analog input value>→ <The indicated value at moment of 0.0%>→ <The indicated value at moment of 100.0%>→ <Domain 0 minimum indicated value>→ <Domain 0 maximum indicatedvalue>→ <Analog output minimum value>→<Analog output maximum value> </p> <hr style="border-top: 1px dashed black;"/> <p>The lamp corresponding to each setup light up and blinks at the time of a change.</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Setting of minimum value.</td> <td>OUT1 light</td> </tr> <tr> <td>Setting of minimum analog input value.</td> <td>OUT1 blinks</td> </tr> <tr> <td>Setting of maximum value.</td> <td>OUT2 light</td> </tr> <tr> <td>Setting of maximum analog input value.</td> <td>OUT2 blinks</td> </tr> <tr> <td>Setting of indicated value at moment of 0.0%</td> <td>% light</td> </tr> <tr> <td>Setting of indicated value at moment of 100.0%</td> <td>% blinks</td> </tr> <tr> <td>Srrtting of domain 0 minimum indicated value.</td> <td>OUT3 light</td> </tr> <tr> <td>Setting of domain 0 maximum indicated value.</td> <td>OUT3 blinks</td> </tr> <tr> <td>Setting of analog output minimum value.</td> <td>OUT4 light</td> </tr> <tr> <td>Setting of analog output maximum value.</td> <td>OUT4 blinks</td> </tr> </table>	Setting of minimum value.	OUT1 light	Setting of minimum analog input value.	OUT1 blinks	Setting of maximum value.	OUT2 light	Setting of maximum analog input value.	OUT2 blinks	Setting of indicated value at moment of 0.0%	% light	Setting of indicated value at moment of 100.0%	% blinks	Srrtting of domain 0 minimum indicated value.	OUT3 light	Setting of domain 0 maximum indicated value.	OUT3 blinks	Setting of analog output minimum value.	OUT4 light	Setting of analog output maximum value.	OUT4 blinks
A	B	C	D	E																																												
0	0	0	0	0																																												
1	2	3	4																																													
●	○	○	○																																													
Hold		%																																														
○		○																																														
Setting of minimum value.	OUT1 light																																															
Setting of minimum analog input value.	OUT1 blinks																																															
Setting of maximum value.	OUT2 light																																															
Setting of maximum analog input value.	OUT2 blinks																																															
Setting of indicated value at moment of 0.0%	% light																																															
Setting of indicated value at moment of 100.0%	% blinks																																															
Srrtting of domain 0 minimum indicated value.	OUT3 light																																															
Setting of domain 0 maximum indicated value.	OUT3 blinks																																															
Setting of analog output minimum value.	OUT4 light																																															
Setting of analog output maximum value.	OUT4 blinks																																															
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>A</td><td>B</td><td>C</td><td>D</td><td>E</td> </tr> <tr> <td>→</td><td>0</td><td>→</td><td>0</td><td>→</td><td>0</td><td>→</td><td>0</td> </tr> </table> <table style="width: 100%;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>●</td><td>○</td><td>○</td><td>○</td> </tr> <tr> <td>Hold</td><td></td><td>%</td><td></td> </tr> <tr> <td>○</td><td></td><td>○</td><td></td> </tr> </table>	A	B	C	D	E	→	0	→	0	→	0	→	0	1	2	3	4	●	○	○	○	Hold		%		○		○		<p>Moves the flash figure when each setting, to the right.</p> <p> Please match it to a set value of hope using it together.</p>																	
A	B	C	D	E																																												
→	0	→	0	→	0	→	0																																									
1	2	3	4																																													
●	○	○	○																																													
Hold		%																																														
○		○																																														

	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>→</td><td>1</td><td>→</td><td>0</td><td>→</td><td>0</td><td>→</td><td>0</td></tr> </table> <p style="text-align: center;">↑ └ 0 to 9</p> <p>• Display A setting</p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>1</td><td>0</td><td>0</td><td>0</td></tr> </table> <p style="text-align: center;">↑ └ (-), blank</p> <p>*When the minimum/ maximum analog input value setting (-), 0 to 9</p>	A	B	C	D	E	→	1	→	0	→	0	→	0	A	B	C	D	E		1	0	0	0	<p>When  pushing. Change the blinking numeral value. Every press raises the value by ones. ┌ → 0 → 1 → . . . → 9 → ┐</p> <p>When  pushing. Change the blinking numeral value. Every press reduces the value by ones. ┌ → 9 → 8 → . . . → 0 → ┐</p> <p>• Display A setting The display unit A can be set up (-: minus). The display range of display unit B to D is 0 to 9. *When the minimum/ maximum analog input value setting ┌ ⇔ (-) ⇔ 0 ⇔ 1 . . . ⇔ 9 ⇔ ┐</p> <p style="text-align: center;">Display A will blink during setting.</p> <p> <Caution> 1. Setting of analog input value of the minimum/the maximum. Please be sure to set up into a setting range.</p>			
A	B	C	D	E																								
→	1	→	0	→	0	→	0																					
A	B	C	D	E																								
	1	0	0	0																								
<p>While pushing </p> 	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>0</td><td>0</td><td>0.</td><td>0</td><td>0</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>	A	B	C	D	E	0	0	0.	0	0	1	2	3	4					Hold			%					<p>It is effective operation only the minimum/maximum analog input value setup. If  is pushed, pushing , it is also possible to take in the analog input signal inputted now. [Teaching function] After teaching. The indication of an analog input value setup indicated the analog value which carried out teaching.</p> <p> <Caution> Please be sure to make the range to take in into a setting range.</p>
A	B	C	D	E																								
0	0	0.	0	0																								
1	2	3	4																									
																												
Hold			%																									
																												
	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>P</td><td>r.</td><td>S</td><td>t</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>	A	B	C	D	E		P	r.	S	t	1	2	3	4					Hold			%					<p>Set value is registered, and it returns to the set list display. Please register a set value with this key after the setting ends.</p>
A	B	C	D	E																								
	P	r.	S	t																								
1	2	3	4																									
																												
Hold			%																									
																												
	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>P</td><td>r.</td><td>S</td><td>t</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>	A	B	C	D	E		P	r.	S	t	1	2	3	4					Hold			%					<p>Returns to the set list display. Set value is not registered. It is not same with ENT key.</p>
A	B	C	D	E																								
	P	r.	S	t																								
1	2	3	4																									
																												
Hold			%																									
																												
	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td colspan="5">Measurement indicat</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>	A	B	C	D	E	Measurement indicat					1	2	3	4					Hold			%					<p>It will become a measurement indication if a  is pressed.</p>
A	B	C	D	E																								
Measurement indicat																												
1	2	3	4																									
																												
Hold			%																									
																												
















 **<Caution>**
While registering a preset value (After pushing  until returns to a setting list), please do not power OFF.



1 1. Mode setting method


«The call method»

1. It will become 「P r. S t」 display if “Mode” is pushed 2 sec or more. (Set list)
2. It will become 「n d S t」 display if “Mode” is pushed once.
3. If  is pushed, it will become a mode setup and can perform a setup of measurement operation.


«Method of operating key to mode setting»

Operation key	Display	The contents of operation																										
 <div style="border: 1px dashed black; padding: 2px; display: inline-block;">While pushing </div> 	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>0.</td><td>0</td><td>0</td><td>0</td><td></td></tr> </table> <p>↑ Mode No.</p> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td>%</td><td></td></tr> <tr><td>○</td><td></td><td>○</td><td></td></tr> </table>	A	B	C	D	E	0.	0	0	0		1	2	3	4	○	○	○	○	Hold		%		○		○		<p>Mode No. is changed. There is a mode up to d.</p> <p style="text-align: center;">[→ 0 → 1 → . . . → d →]</p> <p>Whenever it presses a , the mode No changes in order. [Ascending order operation]</p> <p>Whenever it pushes , pushing , the mode No changes conversely. [Descending order operation]</p> <p>The mode No.b is indicated with the option of P10 and P12. The mode No.C and d is indicated with the option RS4(W).</p>
A	B	C	D	E																								
0.	0	0	0																									
1	2	3	4																									
○	○	○	○																									
Hold		%																										
○		○																										
	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>0.</td><td>0</td><td>→ 0</td><td>→ 0</td><td></td></tr> </table> <p style="text-align: center;">↑</p> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td>%</td><td></td></tr> <tr><td>○</td><td></td><td>○</td><td></td></tr> </table>	A	B	C	D	E	0.	0	→ 0	→ 0		1	2	3	4	○	○	○	○	Hold		%		○		○		<p>Moves the flash figure when each setting, to the right. Whenever it pushes once, it moves to the right.</p>
A	B	C	D	E																								
0.	0	→ 0	→ 0																									
1	2	3	4																									
○	○	○	○																									
Hold		%																										
○		○																										
 	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>0.</td><td>0</td><td>0</td><td>0</td><td></td></tr> </table> <p style="text-align: center;">↑</p> <p style="text-align: center;">0 to 3</p> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td>%</td><td></td></tr> <tr><td>○</td><td></td><td>○</td><td></td></tr> </table>	A	B	C	D	E	0.	0	0	0		1	2	3	4	○	○	○	○	Hold		%		○		○		<p>When  pushing. Change the blinkig numeral value. Every press raises the value by ones. [→ 0 → 1 → 2 → 3 →]</p> <p>When  pushing. Change the blinking numeral value. Every press reduces the value by ones. [→ 3 → 2 → 1 → 0 →]</p> <p>⚠ <Caution> Numerical change is different for every setting item. There are some which go up to a maximum of 9. Please set up the required part to mode No.d. in the procedure.</p>
A	B	C	D	E																								
0.	0	0	0																									
1	2	3	4																									
○	○	○	○																									
Hold		%																										
○		○																										
	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>P</td><td>r.</td><td>S</td><td>t</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td>%</td><td></td></tr> <tr><td>○</td><td></td><td>○</td><td></td></tr> </table>	A	B	C	D	E		P	r.	S	t	1	2	3	4	○	○	○	○	Hold		%		○		○		<p>The setting value is registered by  key and returns to a setting list.</p>
A	B	C	D	E																								
	P	r.	S	t																								
1	2	3	4																									
○	○	○	○																									
Hold		%																										
○		○																										
	<table border="1" style="width: 100%; text-align: center;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>P</td><td>r.</td><td>S</td><td>t</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td>%</td><td></td></tr> <tr><td>○</td><td></td><td>○</td><td></td></tr> </table>	A	B	C	D	E		P	r.	S	t	1	2	3	4	○	○	○	○	Hold		%		○		○		<p>Returns to a setting list. Unlike a  key, set value is not registered.</p>
A	B	C	D	E																								
	P	r.	S	t																								
1	2	3	4																									
○	○	○	○																									
Hold		%																										
○		○																										

	<table border="1" style="display: inline-table;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td colspan="5">Measurement indication</td></tr> </table>	A	B	C	D	E	Measurement indication					When  pushing, change the measurement indication.
	A	B	C	D	E							
	Measurement indication											
	<table style="display: inline-table;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> </table>	1	2	3	4	○	○	○	○			
1	2	3	4									
○	○	○	○									
<table style="display: inline-table;"> <tr><td>Hold</td><td>%</td></tr> <tr><td>○</td><td>○</td></tr> </table>	Hold	%	○	○								
Hold	%											
○	○											

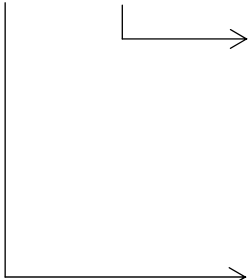

⚠ <Caution>
 While registering a preset value, (After pressing  until it returns to a setting list.) please do not use power OFF.

«Contents of each mode set»

Mode No.	Setting the calculation function/indication method/decimal point position																										
0	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 15%;"> <table border="1" style="display: inline-table;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>0.</td><td>0</td><td>0</td><td>0</td><td></td></tr> </table> </td> <td style="width: 10%;"></td> <td style="width: 15%;"></td> <td style="width: 60%;"></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"> → Decimal point position 0 : 0 1 : 0. 0 2 : 0. 0 0 3 : 0. 0 0 0 4 : 0. 0 0 0 0 </td> <td></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"> → Indication method 0 : Rate meter/Ratio is switched 1 : Rate meter is fixed 2 : Ratio is fixed </td> <td></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"> → Calculation function 0 : Usually calculation 1 : Linearization operation </td> <td></td> </tr> </table> <hr style="border-top: 1px dashed black;"/> <p>[Decimal point position] To which position of the display the decimal point is lit is set. For instance, if the decimal point position is set for "1000" the display, "3", it becomes "1.000".</p> <hr style="border-top: 1px dashed black;"/> <p>[Indication method] 0 : Rate meter/Ratio is switched. Rate meter/Ratio is switched in .</p> <p>1 : Rate meter is fixed. Rate meter is fixed and indicated.</p> <p>2 : Ratio is fixed. Ratio is fixed and indicated.</p> <p>⚠ <Caution> When "0 : Rate meter/Ratio is switched" is chosen. The indicated after a power injection will be Rate meter.</p> <hr style="border-top: 1px dashed black;"/> <p>[Calculation function] 0 : Usually calculation It indicates by calculation based on a scaling setup with the present input.</p> <p>1 : Linearization operation Linearization function (P.42 to 46 Reference)</p>	<table border="1" style="display: inline-table;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>0.</td><td>0</td><td>0</td><td>0</td><td></td></tr> </table>	A	B	C	D	E	0.	0	0	0							→ Decimal point position 0 : 0 1 : 0. 0 2 : 0. 0 0 3 : 0. 0 0 0 4 : 0. 0 0 0 0				→ Indication method 0 : Rate meter/Ratio is switched 1 : Rate meter is fixed 2 : Ratio is fixed				→ Calculation function 0 : Usually calculation 1 : Linearization operation	
<table border="1" style="display: inline-table;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>0.</td><td>0</td><td>0</td><td>0</td><td></td></tr> </table>	A	B	C	D	E	0.	0	0	0																		
A	B	C	D	E																							
0.	0	0	0																								
		→ Decimal point position 0 : 0 1 : 0. 0 2 : 0. 0 0 3 : 0. 0 0 0 4 : 0. 0 0 0 0																									
		→ Indication method 0 : Rate meter/Ratio is switched 1 : Rate meter is fixed 2 : Ratio is fixed																									
		→ Calculation function 0 : Usually calculation 1 : Linearization operation																									



Mode No.	Setting the least significant digit correction/domain "0" indication function										
1	<div style="display: flex; align-items: center; margin-bottom: 10px;"> <table border="1" style="border-collapse: collapse; text-align: center; margin-right: 20px;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>1.</td><td>0</td><td></td><td>0</td><td></td></tr> </table> <div> <p>→ Domain "0" indication function 0 : Function is invalid. 1 : Function is effective.</p> <p>→ Least significant digit correction 0 : Real 1 : Fixed at 0 2 : 0 or 5</p> </div> </div> <hr style="border-top: 1px dashed black;"/> <p>[Domain "0" indication function] Please use it, when indication "0" on the domain between any maximum value and the minimum value. 0 : Function is invalid. Domain "0" indication function becomes invalid and dose not function. 1 : Function is effective. Domain "0" indication function becomes effective. It functions by setup of domain 0 minimum / the maximum indicated value of a scaling setup. (P.21 to 26 Reference)</p> <hr style="border-top: 1px dashed black;"/> <p>[Least significant digit correction] The form of indication for the least significant digit(digit on the right end) is selected. 0 : Real Synchronized at the sampling time. 1 : Fixed at 0 Always, "0" . 2 : 0 or 5 0-4 are expressed as 0, and 5-9 as 5.</p>	A	B	C	D	E	1.	0		0	
A	B	C	D	E							
1.	0		0								

Mode No.	Setting the sampling time										
2	<div style="display: flex; align-items: center; margin-bottom: 10px;"> <table border="1" style="border-collapse: collapse; text-align: center; margin-right: 20px;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>2.</td><td></td><td>1.</td><td>0</td><td></td></tr> </table> <div> <p>→ Sampling time 0.1-10.0 seconds(0.0 is 10.0 sec.)</p> </div> </div> <hr style="border-top: 1px dashed black;"/> <p>[Sampling time] Input signals are read by this time, and its average value is calculated and indicated. Use this setting for preventing flickering and for stabilizing indications.</p> <p> <Caution> It becomes effective after the samplint duration before it changes ends when thesampling duration is changed.</p>	A	B	C	D	E	2.		1.	0	
A	B	C	D	E							
2.		1.	0								

Mode No.	Setting the zero point adjustment and auxiliary input										
3	<table border="1" data-bbox="316 197 584 264"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>0</td> <td></td> <td>0</td> <td></td> </tr> </tbody> </table> <p data-bbox="384 277 1069 501">  Auxiliary input 0 : Peak hold 1 : Bottom hold 2 : Hold 3 : Input WIDTH tag 4 : 0 compulsion functions </p> <p data-bbox="384 539 1334 667"> 0 point adjustment 0 : 0 point adjustment invalidity • Clearness 1 : 0 point adjustment is effective 2 : 0 point adjustment invalidity </p> <hr/> <p data-bbox="272 685 549 712">[Auxiliary input]</p> <p data-bbox="284 721 1134 819"> The function when terminal stand no 6 and 7 are on is set. These functions of a Rate meter/Ratio are effective. The Hd lamp is on when an external input terminal is ON. </p> <p data-bbox="288 855 1501 987"> 0 : Peak hold [While functioning, an indicated value lights up.] The maximum value between those is displayed while an external input terminal has been turned on. It returns to the measurement indication when turning it off. </p> <p data-bbox="288 999 1501 1131"> 1 : Bottom hold [While functioning, an indicated value lights up.] The minimum value between those is displayed while an external input terminal has been turned on. It returns to the measurement indication when turning it off. </p> <p data-bbox="288 1142 1489 1276"> 2 : Hold [While functioning, an indicated value lights up.] The indicated value when turning it on is maintained while an external input terminal has been turned on. It returns to the measurement indication when turning it off. </p> <p data-bbox="288 1288 1489 1420"> 3 : Input width indication [While functioning, an indicated value lights up.] When an external input terminal has been in ON state, " maximum indicated value – minimum indicated value " is indicated. It returns to the measurement indication when turning it off. </p> <p data-bbox="252 1453 1528 1518"> For instance, While the external input terminal has been in ON state, when the maximum is 600 and the minimum is 100, it is set to "600-100" and "500" is indicated. </p> <p data-bbox="288 1552 1501 1720"> 4 : 0 compulsion functions [While functioning, an indicated value lights up.] If an external input terminal is turned on, the indication at that time becomes "0" The indicated value of the functional adds and indicated a part for a deviation. It returns to the measurement indication when turning it off. </p> <p data-bbox="252 1753 1453 1854"> For instance, when it is "5V" and the indication is "5000", a present input when an external input terminal is turned on, that indication scales, and indication the measurement value as "input is "5V" = indication is "0"". </p> <p data-bbox="300 1888 464 1917"><Caution></p> <p data-bbox="245 1917 293 1957"></p> <ol data-bbox="347 1924 1509 2123" style="list-style-type: none"> About the preset output/8 step preset output function, a judgment output is carried out to the result of an internal measurement value. About the analog output function, output selection is possible by setup of mode No.A "output system" The indicated value function is updated synchronizing with the mode No.2 "sampling time." (A hold is excluded.) 	A	B	C	D	E	3	0		0	
A	B	C	D	E							
3	0		0								

3. When a setting change is made while the external input terminal has been ON since an external input terminal is recognized with on-edge, please turn ON an external input terminal again.

[0 point adjustment]

It selects whether to make the 0 point adjustment effective (the effect that works by holding  +  by two seconds) when the measurement is displayed or to invalidate it.



0 : 0 point adjustment invalidity • Clearness

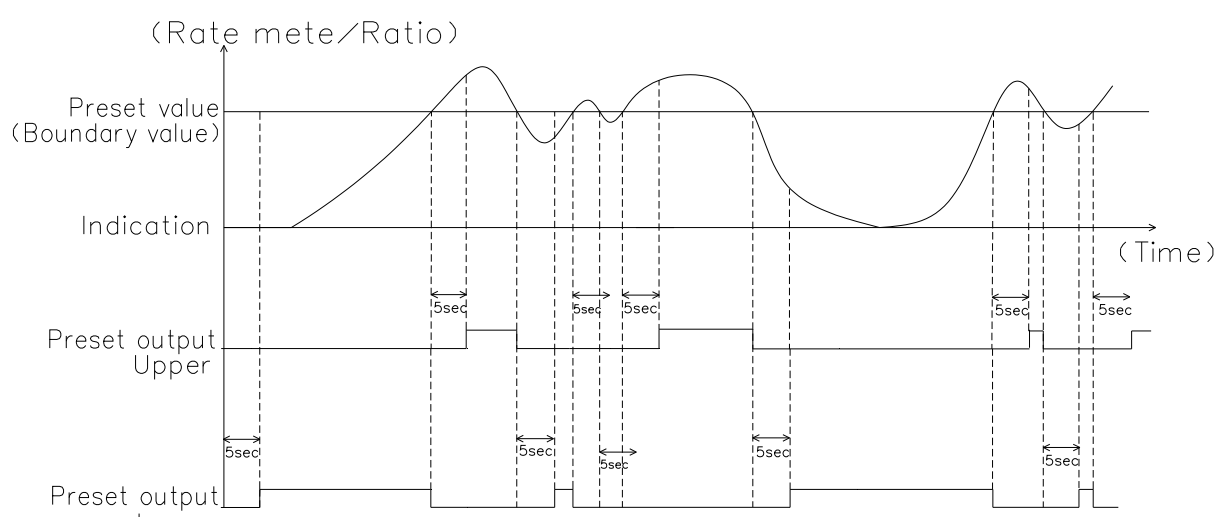
The deflection data is made "0", and 0 adjustment function is stopped.

1 : 0 point adjustment is effective

0 adjustment function operates. (The deflection data is memorized.)

2 : 0 point adjustment invalidity

The deflection data is maintained. When the  +  is pushed for 2 sec, the function to adjust the display to 0 is stopped.

Mode No.	Preset output : Common setting (1)										
4	<table border="1" data-bbox="316 873 587 940"> <tr> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>E</td> </tr> <tr> <td>4.</td> <td>0</td> <td>0.</td> <td>0</td> <td></td> </tr> </table> <p data-bbox="606 963 1356 1064">→ Preset output state distinction time. (OUT1 to 4) 00.1 ~ 99.9 sec (00.0 is functional stop)</p>	A	B	C	D	E	4.	0	0.	0	
A	B	C	D	E							
4.	0	0.	0								
<p>[Preset output state distinction time]</p> <p>After going into a power range exceeding a preset value (Boundary value), when it continues within a set period and is in a power range, it outputs.</p> <p>In additi, if it outside a power range within a set period, preset output state distinction time will be canceled.</p>											
<p data-bbox="271 1288 1300 1332">【Preset output state distinction time setting example】 Fig. 19</p> <p data-bbox="606 1332 1284 1388">Preset output state distinction time : 5.0 sec</p>  <p data-bbox="622 1937 1284 1982">Preset output state distinction time : 5 sec</p>											

Mode No. Preset output : Common setting (2)

5

A	B	C	D	E
5.	0	0	0	0

→ Hysteresis value (OUT1 to 4)
0 0 0 0 to 3 9 9 9

[Hysteresis value]

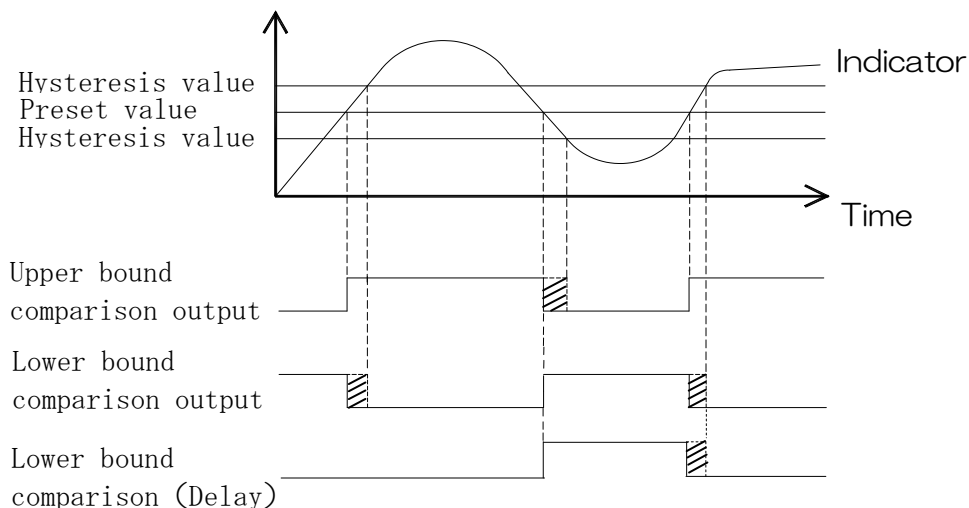
Hysteresis operation is performed with any set-up value from 0000 to 3999 (4 figures which disregarded the decimal point) to the preset value of OUT1 to 4. The value to set up is set up with an indicated value regardless of a rate/ratio indication.

⚠ <Caution>

1. By setup of "Hysteresis operation" of OUT1 to 4 (Mode No.6 to 9) ,if it chooses "1 : Effective" ,it will operate.
When a hysteresis value is "0000" , all of OUT1 to 4 serve as the same operation as "0 : Invalidity" .
2. **Please be sure to choose "0:comparison"** by "output mode" setup of OUT1 to 4 (Mode No.6 to 9) in hysteresis operation.
It does not function in "1 : Holding"
3. The hysteresis value is a **common setting value to OUT1 to 4.**
When "Rate meter" as "Ratio" is separately chosen by "output display selection" setup of OUT1 to 4.
Hysteresis operation is carried out with the value concerned and set as the indicated value range.
When carrying out hysteresis operation, it becomes use by either a **ratemeter or ratio.**

[The timing chart at the time of hysteresis operation effective]

Fig. 20



A shadow area is a portion of a hysteresis value.

Mode No. Preset output : Setting of OUT1

6

A	B	C	D	E
6.	0	0	0	0

- **Hysteresis operation**
0 : Invalidity
1 : Effective
- **Output mode**
0 : Comparison
1 : Holding
- **Up limit/Lower limit selection**
0 : Up limit
1 : Lower limit "Immediately"
2 : Lower limit "Delay"
- **Output indicated selection**
0 : Functional stop
1 : Rate meter
2 : Ratio

It functions by the comparative result of the indicated value and preset value. Please refer to "How to set the preset value" (pages 47-48) for the setting of the preset value.

[Hysteresis operation]

- 0 : Invalidity
Hysteresis operation is not carried out.
- 1 : Effective
Hysteresis operation is carried out with the preset value of "Mode No.5"

[Output mode]

- 0 : Comparison
It outputs, when an indicated value becomes more than a preset value or the following.
It will become the output OFF if an indicated value comes outside a setting range.
- 1 : Holding
It outputs, when an indicated value becomes more than a preset value or the following.
If it outputs once, an output will be held until reset input is turned on.

[Up limit/Lower limit selection]

- 0 : Up limit
Select that this is output when the upper limit is exceeded.
- 1 : Lower limit "Immediately"
Select that this is output when the lower limit is exceeded.
- 2 : Lower limit "Delay"
Select that this is output when the lower limit is exceeded from the state Upper limit exceeded once.

[Output indicated selection]

- 0 : Functional stop
The function of a OUT1 "preset output" is suspended.
- 1 : Rate meter
Rate meter value is compared with a preset value.
- 2 : Ratio
Ratio value is compared with a preset value.

Mode No.	Preset output : Setting of OUT2										
7	<table border="1" style="margin-left: 20px;"> <tr> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>E</td> </tr> <tr> <td>7</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </table> <div style="margin-left: 100px;"> <p>→ Hysteresis operation 0 : Invalidity 1 : Effective</p> <p>→ Output mode 0 : Comparison 1 : Holding</p> <p>→ Up limit/Lower limit selection 0 : Up limit 1 : Lower limit "Immediately" 2 : Lower limit "Delay"</p> <p>→ Output indicated selection 0 : Functional stop 1 : Rate meter 2 : Ratio</p> </div> <hr style="border-top: 1px dashed black;"/> <p>The setting method is similar to "Mode No.6" "Preset output : Setting of OUT1" (page 33) and refer, please.</p>	A	B	C	D	E	7	0	0	0	0
A	B	C	D	E							
7	0	0	0	0							

Mode No.	Preset output : Setting of OUT3 (Option : P4, P12)										
8	<p>※It functions at the time of with option P4, P12 Even when you have no option, preset output OUT3 lamp.</p> <table border="1" style="margin-left: 20px;"> <tr> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>E</td> </tr> <tr> <td>8</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </table> <div style="margin-left: 100px;"> <p>→ Hysteresis operation 0 : Invalidity 1 : Effective</p> <p>→ Output mode 0 : Comparison 1 : Holding</p> <p>→ Up limit/Lower limit selection 0 : Up limit 1 : Lower limit "Immediately" 2 : Lower limit "Delay"</p> <p>→ Output indicated selection 0 : Functional stop 1 : Rate meter 2 : Ratio</p> </div> <hr style="border-top: 1px dashed black;"/> <p>The setting method is similar to "Mode No.6" "Preset output : Setting of OUT1" (page 33) and refer, please.</p>	A	B	C	D	E	8	0	0	0	0
A	B	C	D	E							
8	0	0	0	0							

Mode No.	Preset output : Setting of OUT4	(Option : P4, P12)																		
9	<p>※It functions at the time of with option P4, P12 Even when you have no option, preset output OUT4 lamp.</p>																			
<table border="0"> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> <td style="text-align: center;">C</td> <td style="text-align: center;">D</td> <td style="text-align: center;">E</td> <td></td> </tr> <tr> <td style="text-align: center;">9.</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td colspan="5"></td> <td style="vertical-align: top;"> <p>→ Hysteresis operation 0 : Invalidity 1 : Effective</p> <p>→ Output mode 0 : Comparison 1 : Holding</p> <p>→ Up limit/Lower limit 0 : Up limit 1 : Lower limit "Immediately" 2 : Lower limit "Delay"</p> <p>→ Output indicated selection 0 : Functional stop 1 : Rate mater 2 : Ratio 3 : Disconnection detection</p> </td> </tr> </table>			A	B	C	D	E		9.	0	0	0	0							<p>→ Hysteresis operation 0 : Invalidity 1 : Effective</p> <p>→ Output mode 0 : Comparison 1 : Holding</p> <p>→ Up limit/Lower limit 0 : Up limit 1 : Lower limit "Immediately" 2 : Lower limit "Delay"</p> <p>→ Output indicated selection 0 : Functional stop 1 : Rate mater 2 : Ratio 3 : Disconnection detection</p>
A	B	C	D	E																
9.	0	0	0	0																
					<p>→ Hysteresis operation 0 : Invalidity 1 : Effective</p> <p>→ Output mode 0 : Comparison 1 : Holding</p> <p>→ Up limit/Lower limit 0 : Up limit 1 : Lower limit "Immediately" 2 : Lower limit "Delay"</p> <p>→ Output indicated selection 0 : Functional stop 1 : Rate mater 2 : Ratio 3 : Disconnection detection</p>															
<p>The setting method is similar to "Mode No.6" "Preset output : Setting of OUT1" (page 33) and refer, please.</p>																				
<p>[Output indicated selection] 3 : Disconnection detection When it becomes an "Input signal $\leq -20\%$ F.S.", it is judged as disconnection. When rate mater/ratio is "████████" blinked", disconnection detection is outputted by comparison or holding.</p>																				

[About the disconnection detection function]

When using it in the input signal ranges A2 "DC4 to 20mA", A3 "DC1 to 5V".
Disconnection of an input sensor is detectable.

The conditions and the detection method of disconnection detection are as follows.

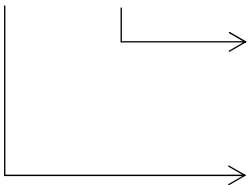
[The conditions and the detection method]

When it becomes an "Input signal $\leq -20\%$ F.S.", it is judged as disconnection.

When rate mater/ratio is "████████" blinked". Disconnection detection is outputted from OUT4 "option" as a flag of disconnection detection.

⚠ <Caution>

1. Disconnection detection is an effective function by A2(DC4 to 20mA), A3(DC1 to 5V) type.
In a case another input type, when it becomes "Input signal $\leq -20\%$ F.S.", it judges as disconnection detection.
2. As for the level of disconnection detection, a detection point is changed by adjustment of the analog minimum / the maximum input value of analog adjustment mode.
3. When it is "████████" blinked" by disconnection detection. Rate mater/ratio is proportional to the inclination which carried out a "5 C 5 t" (scaling setup).
It is transposed to the value of the minimum over value "9999" blinked" or the maximum over value "9999" blinked" on internal data.
A preset output is outputted as compared with thw internal data.
The same may be said of an analog output and it is proportional to the inclination which carried out a "5 C 5 t" (scaling setup).
Compulsorily, 0% or 102.4% of output is carried out.



Mode No.	Analog output : Setting of output indicated selection • output system(Oprion : AV3 to AV5/AI)										
A	<p>※It functions at the time of with option AV3 to AV5 / AI</p> <table border="1" data-bbox="304 331 576 398"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> </thead> <tbody> <tr> <td>A.</td> <td>0</td> <td></td> <td>1</td> <td></td> </tr> </tbody> </table> <p data-bbox="379 409 1209 667">  Output system 0 : Synchronizes for the display 1 : Synchronizes for the measurement Output indicated selection 0 : Rate meter 1 : Ratio </p> <hr/> <p data-bbox="264 689 512 723">[Output system]</p> <p data-bbox="276 734 986 768">The output system of an analog output is set up.</p> <p data-bbox="280 801 1321 936"> 0 : Synchronizes for the display Analog output to the shown value renewed every shown sampling time. When external input is functioning, Analog output to the shown value indicated at present. </p> <p data-bbox="276 969 1536 1037">For example when a peak hold is functioning, analog output by the present shown value (Peak hold value).</p> <p data-bbox="280 1070 1425 1238"> 1 : Synchronizes for the Meeasurement Analog output to the value renewed every time for sampling. “0 : Synchronizes for the display” difference, external input functioning, When external input is functioning. Isn` t the display value. Is output similarlywith the result calculated every sampling time. </p> <hr/> <p data-bbox="264 1261 703 1294">[Output indicated selection]</p> <p data-bbox="276 1294 1225 1328">It is chosen to which indicated an analog output is carried out.</p> <p data-bbox="312 1361 1273 1429"> 0 : Rate meter An analog output is carried out to rate meter indicated value. </p> <p data-bbox="312 1440 1201 1496"> 1 : Ratio An analog output is carried out to ratio indicated value. </p> <hr/> <p data-bbox="233 1518 1433 1619">Please refer to “16.How to adjust an analog output” (pages 49-53)and “10. Scaling setting method” (pages 21-26) when you adjust the analog output.</p>	A	B	C	D	E	A.	0		1	
A	B	C	D	E							
A.	0		1								

Mode No.	Setting of 8 step preset output	(Option : P10, P12)										
b	<p>※It functions at the time of with option P10, P12</p> <table border="1" data-bbox="304 315 576 383"> <tr> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>E</td> </tr> <tr> <td>b.</td> <td>0</td> <td>0</td> <td>0</td> <td></td> </tr> </table> <div style="margin-left: 100px;"> <p>→ Output mode 0 : Comparison 1 : Holding</p> <p>→ Up limit/Lower limit 0 : Up limit 1 : Lower limit "Immediately"</p> <p>→ Output indicated slection 0 : Functional stop 1 : Rate mater 2 : Ratio</p> </div> <p>An 8 step preset output functions by the comparison result of a measurement value and an 8 step preset value. Refer to "18. The method of an 8 step preset value setup" (pages 55-56) for a set up of an 8 step preset value.</p> <hr/> <p>[Output mode] The output form of an 8 step preset output is set up.</p> <p>0 : Comparison It outputs, when an indicated value becomes more than an 8 step preset value or the following. It will become the output OFF if an indicated value comes outside a setting range.</p> <p>1 : Holding It outputs, when an indicated value becomes more than an 8 step preset value or the following. If it outputs once, an output will be held until reset input is turned on.</p> <hr/> <p>[Up limit/Lower limit] It is set up on what kind of conditions it output.</p> <p>0 : Up limit Select that this is output when the upper limit is exceeded.</p> <p>1 : Lower limit "Immediately" Serect that this is output when the lower limit is exceeded.</p> <hr/> <p>[Output indicated slection] It outputs to which display or chooses a functional stop.</p> <p>0 : Functional stop The function of a chl to 8 "preset output" is suspended.</p> <p>1 : Rate meter Rate meter value is compared with an 8 step preset value.</p> <p>2 : Ratio Ratio value is compared with an 8 step preset value.</p>		A	B	C	D	E	b.	0	0	0	
A	B	C	D	E								
b.	0	0	0									




Mode No.	Setting of communication RS-485(1)	(Option : RS4, RS4W)										
C	<p>※It functions at the time of with option RS4, RS4W</p> <table border="1" data-bbox="327 315 600 383"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> </thead> <tbody> <tr> <td>C.</td> <td></td> <td>1</td> <td>0</td> <td>2</td> </tr> </tbody> </table> <div style="margin-left: 100px;"> <p>→ Baud rate 0 : 2400bps 1 : 4800bps 2 : 9600bps 3 : 19200bps</p> <p>→ Parity bit 0 : None 1 : Even 2 : Odd</p> <p>→ Data bit 0 : 7 bit 1 : 8 bit</p> </div> <p>⚠ <Caution> A start bit stop bit is 1-bit fixation.</p> <p>[RS-485 communication] It is reading of an indicated value by RS-485 communication, It is used when performing reading and the writing of a preset value of OUT1 to 4.</p> <p>Refer to “19. Communication function” (pages 57-59) for a set up of a RS-485 communication.</p> <hr/> <p>[Data bit] The data bit of RS485 communication is set up.</p> <p>0 : 7 bit It communicates at 7 bits.</p> <p>1 : 8 bit It communicates at 8 bits.</p> <hr/> <p>[Parity bit] The parity bit of RS-485 communication is set up.</p> <p>0 : None Parity is not used.</p> <p>1 : Even Even number parity is used.</p> <p>2 : odd Odd number parity is used.</p> <hr/> <p>[Baud rate] The transmission speed (baud rate) of RS-485 communication is set up. It communicates with the selected transmission speed (baud rate).</p>		A	B	C	D	E	C.		1	0	2
A	B	C	D	E								
C.		1	0	2								

Mode No.	Setting of communication RS-485(2) (Option : RS4, RS4W)																						
d	<p>※It functions at the time of with option RS4, RS4W</p> <table border="1" data-bbox="327 324 598 392"> <tr> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>E</td> </tr> <tr> <td>d.</td> <td>0</td> <td>0</td> <td>1</td> <td></td> </tr> </table> <p data-bbox="391 392 1141 705"> </p> <table data-bbox="694 448 1077 616"> <tr> <td colspan="2">Interval time</td> </tr> <tr> <td>0 : 100ms.</td> <td>5 : 50ms.</td> </tr> <tr> <td>1 : 10ms.</td> <td>6 : 60ms.</td> </tr> <tr> <td>2 : 20ms.</td> <td>7 : 70ms.</td> </tr> <tr> <td>3 : 30ms.</td> <td>8 : 80ms.</td> </tr> <tr> <td>4 : 40ms.</td> <td>9 : 90ms.</td> </tr> </table> <p data-bbox="662 638 1141 705"> Slection of the unit (ID number) 00-99 </p> <hr/> <p data-bbox="279 716 885 817"> [Communication ID number] An ID number is given meter. This ID is specified when communicating. </p> <hr/> <p data-bbox="279 840 1460 952"> [Interval time] Wait time switching to receive signal from send signal, or to send signal from receive signal. </p>	A	B	C	D	E	d.	0	0	1		Interval time		0 : 100ms.	5 : 50ms.	1 : 10ms.	6 : 60ms.	2 : 20ms.	7 : 70ms.	3 : 30ms.	8 : 80ms.	4 : 40ms.	9 : 90ms.
A	B	C	D	E																			
d.	0	0	1																				
Interval time																							
0 : 100ms.	5 : 50ms.																						
1 : 10ms.	6 : 60ms.																						
2 : 20ms.	7 : 70ms.																						
3 : 30ms.	8 : 80ms.																						
4 : 40ms.	9 : 90ms.																						

1 2. Mode protect function

If this function is turned ON, change of mode setting will be made impossible.
 ( key and  key is canceled.)

《The key operation method of mode protect》

Operating key	Display unit	Operation procedure																										
	<table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>L</td><td>-</td><td>o</td><td>F</td><td>F</td></tr> </table> <table> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td><input type="radio"/></td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Hold</td><td></td><td>%</td><td></td></tr> <tr><td><input type="radio"/></td><td></td><td><input type="radio"/></td><td></td></tr> </table> (State of mode protect:Present)	A	B	C	D	E	L	-	o	F	F	1	2	3	4	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hold		%		<input type="radio"/>		<input type="radio"/>		Activated for 2 sec or more. Current mode protect state is displayed. [Shipping it is "OFF"]
A	B	C	D	E																								
L	-	o	F	F																								
1	2	3	4																									
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>																									
Hold		%																										
<input type="radio"/>		<input type="radio"/>																										
	<table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>L</td><td>-</td><td>o</td><td>n</td><td></td></tr> </table> <table> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td><input type="radio"/></td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Hold</td><td></td><td>%</td><td></td></tr> <tr><td><input type="radio"/></td><td></td><td><input type="radio"/></td><td></td></tr> </table> (State of mode protect:After it changes)	A	B	C	D	E	L	-	o	n		1	2	3	4	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hold		%		<input type="radio"/>		<input type="radio"/>		Keeps pushing for 8 sec as it is continuously, the state of mode protect is changed.
A	B	C	D	E																								
L	-	o	n																									
1	2	3	4																									
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>																									
Hold		%																										
<input type="radio"/>		<input type="radio"/>																										
	<table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>Measurement</td><td>indicat</td><td></td><td></td><td></td></tr> </table> <table> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td><input type="radio"/></td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Hold</td><td></td><td>%</td><td></td></tr> <tr><td><input type="radio"/></td><td></td><td><input type="radio"/></td><td></td></tr> </table>	A	B	C	D	E	Measurement	indicat				1	2	3	4	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hold		%		<input type="radio"/>		<input type="radio"/>		It usually returns when stopped being pushed.
A	B	C	D	E																								
Measurement	indicat																											
1	2	3	4																									
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>																									
Hold		%																										
<input type="radio"/>		<input type="radio"/>																										

<Caution>

1. The preset value, 8 step preset value, Linearization, Scaling setting is set value revocable regardless of the mode protecting function.
2. Each indicator lamp gives an indication of operation to measurement data also during mode protection.

1 3. About the zero point adjustment

«The method of zero point adjustment»



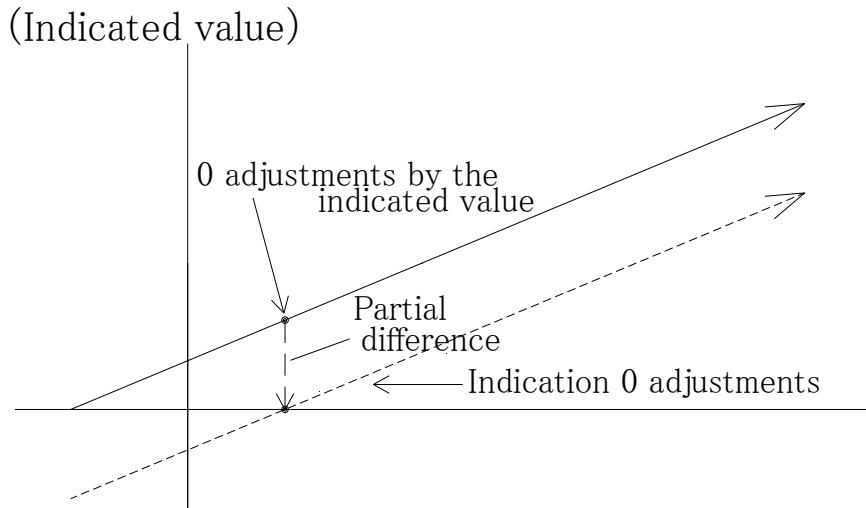



When the zero point adjustment of mode No.3 “Effective”
Present display is adjusted “0” when pushing  +  for 2 sec or more.
The adjusted deflection data is memorized.


Fig. 21



 <Caution>

1. When the zero point adjustment of mode No.3 “Invalidity”
The display is not adjusted “0” when pushing  +  for 2 sec or more.
2. If the contents of a scaling setting are changed, since deflection data needs to be adjusted, please readjust.

«How to see the deflection data of zero point adjustment»

The deflection data is displayed when pushing  for 2 sec or more.
(It displays it only while it is pushing.)

[The example of a settint of zero point adjustment]

A rate mete indicated value performs zero point adjustment at the time of “50.00” .
The display of deflection data will be “-50.00” .

1 4. Linearization function

The output (indicated value) set up to the input set up arbitrarily is carried out.
An input and output can carryout a 21-channel (ch) setup of the setup.

«Linearization function»

[Use of a linearization function]

The use of a linearization function should choose “1: Linearization operation” by
“Calculation function” of the mode No.0

[Input % value setup]

It sets up at a rate (%) of a full-scale input.

There are kinds of setting methods. Key operation and the teaching function to take in an
analog input signal directly. A setting range is 0.00 to 105.00%.

Table 7

Form	0.00%	to	100.00%	to	105.00%
A 2	4.000mA	to	20.000mA	to	20.800mA
A 3	1.000V	to	5.000V	to	5.200V
A 4	0.000V	to	5.000V	to	5.250V
A 5	0.000V	to	10.000V	to	10.500V

⚠ <Caution>




1. While using key operation, it can change into the value of 105.00% or more, but shift to the next ch and registration cannot be performed. Please be sure to set up with less than 105.00% values.
2. When a teaching function is operated at less than 0.00% and 105.00% or more at the time of use, it becomes registration at the minimum and the maximum.
3. By ch, when an input % value setup is the same, output indicated value setup of a front row ch setup becomes effective.
(Example : When ch03,11 and 19 are the same, an output indicated value setup of ch03 is effective.)
4. An input % value setup “000.00” is **input data of 0%**, and is not ch skip setup.
A setup of at least one “000.00” setup will operate linearization between 0% and the latest input % value setup.
When linearization wants to function, without going via 0% of input %setup, it has inputted except 0%, and also please input an input value setup which overlapped with ch.
(Keep in mind that an output indicated value setup in the front row ch becomes effective.)

[Output indicated value setup]











It sets up with an indicated value. (Key operation input)
























Setting range, -9999 to 9999 (A decimal point is interlocked with mode No.0)

«How to call»

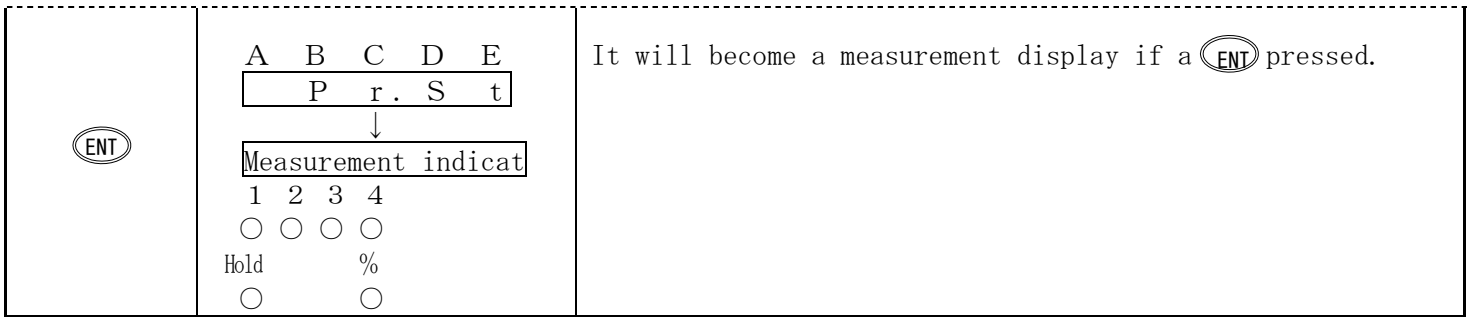
1. It will become “**P r 5 t**” displays if a  is pressed 2 sec or more. (Setting list)
2. Please push a  3 times and make it “**L r 5 t**” display.
3. If a  is pressed, it will become a Rinaraizu setup and can perform a setup of ch1 to ch21.

«The key operation method of a linearization function»


Operating key	Display unit	Operation procedure																																																
 	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>A</td><td>B</td><td>C</td><td>D</td><td>E</td> </tr> <tr> <td>L</td><td>n.</td><td>0</td><td>1</td><td>A</td> </tr> <tr> <td></td><td>↓</td><td></td><td>↑</td><td></td> </tr> <tr> <td>0</td><td>0</td><td>0.</td><td>0</td><td>0</td> </tr> </table> <table style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>○</td><td>○</td><td>○</td><td>○</td> </tr> <tr> <td>Hold</td><td></td><td>%</td><td></td> </tr> <tr> <td>○</td><td></td><td>○</td><td></td> </tr> </table>	A	B	C	D	E	L	n.	0	1	A		↓		↑		0	0	0.	0	0	1	2	3	4	○	○	○	○	Hold		%		○		○		<p>If a  is pressed, it will become “ch1: input % value setup” .</p> <p>If a  is pressed, it will return to the input title of 1ch.</p> <p>※It functions by each ch of “Ln.01A” to” Ln.21A”</p>												
A	B	C	D	E																																														
L	n.	0	1	A																																														
	↓		↑																																															
0	0	0.	0	0																																														
1	2	3	4																																															
○	○	○	○																																															
Hold		%																																																
○		○																																																
<p><When key operation is used></p>																																																		
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>A</td><td>B</td><td>C</td><td>D</td><td>E</td> </tr> <tr> <td>0</td><td>→</td><td>0</td><td>→</td><td>0.</td><td>→</td><td>0</td><td>→</td><td>0</td> </tr> <tr> <td>↑</td><td></td><td></td><td></td><td>↓</td><td></td><td></td><td></td><td></td> </tr> </table> <table style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>○</td><td>○</td><td>○</td><td>○</td> </tr> <tr> <td>Hold</td><td></td><td>%</td><td></td> </tr> <tr> <td>○</td><td></td><td>○</td><td></td> </tr> </table>	A	B	C	D	E	0	→	0	→	0.	→	0	→	0	↑				↓					1	2	3	4	○	○	○	○	Hold		%		○		○		<p>Moves the flash figure when each setting, to the right. Whenever it pushes once, it moves to the right.</p>									
A	B	C	D	E																																														
0	→	0	→	0.	→	0	→	0																																										
↑				↓																																														
1	2	3	4																																															
○	○	○	○																																															
Hold		%																																																
○		○																																																
 	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>A</td><td>B</td><td>C</td><td>D</td><td>E</td> </tr> <tr> <td>0</td><td>→</td><td>0</td><td>→</td><td>0.</td><td>→</td><td>0</td><td>→</td><td>0</td> </tr> <tr> <td></td><td>↑</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td>└</td><td>0 to 9</td><td></td><td></td><td></td><td></td><td></td> </tr> </table> <table style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>○</td><td>○</td><td>○</td><td>○</td> </tr> <tr> <td>Hold</td><td></td><td>%</td><td></td> </tr> <tr> <td>○</td><td></td><td>○</td><td></td> </tr> </table>	A	B	C	D	E	0	→	0	→	0.	→	0	→	0		↑										└	0 to 9						1	2	3	4	○	○	○	○	Hold		%		○		○		<p>When  pushing. Change the blinking numeral value. Every press raises the value by ones.</p> <p style="text-align: center;">[→ 0 → 1 → . . . → 9 →]</p> <p>When  pushing. Change the blinking numeral value. Every press reduces the value by ones.</p> <p style="text-align: center;">[→ 9 → 8 → . . . → 0 →]</p> <p>The display range of the display for indication A is 0 to 1. The display range of the display for indication B to D is 0 to 9.</p> <p> <Caution> Each should set up an input % value setup to 105.00% or less at any cost.</p> <p>When the value exceeding 105.00% is set up, output title shift and registration cannot be performed.</p>
A	B	C	D	E																																														
0	→	0	→	0.	→	0	→	0																																										
	↑																																																	
		└	0 to 9																																															
1	2	3	4																																															
○	○	○	○																																															
Hold		%																																																
○		○																																																
<p><When a teaching function is used></p>																																																		

<p>While pushing</p> 	<table border="1" style="width: 100%; text-align: center;"> <tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr> <tr><td>0</td><td>0</td><td>0.</td><td>0</td><td>0</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td>○</td><td></td><td></td><td>○</td></tr> </table>	A	B	C	D	E	0	0	0.	0	0	1	2	3	4	○	○	○	○	Hold			%	○			○	<p>If  is pushed, pushing , it is also possible to take in the analog input signal inputted now. [Teaching function] The indicated value of an input % value setup display afterteaching the value (%) which carried out teaching.</p> <p>! <Caution> Please operate it in 0.00 to 105.00% of range to an input range. When it is operated with less than 0.00% or 105.00% or more of value, It becomes registration at the minimum and the maximum.</p>																											
A	B	C	D	E																																																			
0	0	0.	0	0																																																			
1	2	3	4																																																				
○	○	○	○																																																				
Hold			%																																																				
○			○																																																				
<p>Mode</p> 	<table border="1" style="width: 100%; text-align: center;"> <tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr> <tr><td>L</td><td>n.</td><td>0</td><td>1</td><td>A</td></tr> </table> <p style="text-align: center;">  ↓ ↑  +  </p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>L</td><td>n.</td><td>0</td><td>1</td><td>b</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td>○</td><td></td><td></td><td>○</td></tr> </table>	A	B	C	D	E	L	n.	0	1	A	L	n.	0	1	b	1	2	3	4	○	○	○	○	Hold			%	○			○	<p>If  is pushed, it will become an output title of ch1.</p> <p>If  is pushed, input / output title of each ch will change. [Ascending operation]</p> <p>If  is pushed, pushing , input / output title of each ch will change conversely. [Descending operation]</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>[Ascending operation]</p> <table style="margin: auto;"> <tr><td>L n. 0 1 A</td></tr> <tr><td>↓</td></tr> <tr><td>L n. 0 1 b</td></tr> <tr><td>↓</td></tr> <tr><td>L n. 0 2 A</td></tr> <tr><td>↓</td></tr> <tr><td>L n. 0 2 b</td></tr> <tr><td>⋮</td></tr> <tr><td>L n. 2 1 b</td></tr> <tr><td>↓</td></tr> <tr><td>L n. 0 1 A</td></tr> </table> </div> <div style="text-align: center;"> <p>[Descending operation]</p> <table style="margin: auto;"> <tr><td>L n. 2 1 b</td></tr> <tr><td>↓</td></tr> <tr><td>L n. 2 1 A</td></tr> <tr><td>↓</td></tr> <tr><td>L n. 2 0 b</td></tr> <tr><td>↓</td></tr> <tr><td>L n. 2 0 A</td></tr> <tr><td>⋮</td></tr> <tr><td>L n. 0 1 A</td></tr> <tr><td>↓</td></tr> <tr><td>L n. 2 1 b</td></tr> </table> </div> </div>	L n. 0 1 A	↓	L n. 0 1 b	↓	L n. 0 2 A	↓	L n. 0 2 b	⋮	L n. 2 1 b	↓	L n. 0 1 A	L n. 2 1 b	↓	L n. 2 1 A	↓	L n. 2 0 b	↓	L n. 2 0 A	⋮	L n. 0 1 A	↓	L n. 2 1 b
A	B	C	D	E																																																			
L	n.	0	1	A																																																			
L	n.	0	1	b																																																			
1	2	3	4																																																				
○	○	○	○																																																				
Hold			%																																																				
○			○																																																				
L n. 0 1 A																																																							
↓																																																							
L n. 0 1 b																																																							
↓																																																							
L n. 0 2 A																																																							
↓																																																							
L n. 0 2 b																																																							
⋮																																																							
L n. 2 1 b																																																							
↓																																																							
L n. 0 1 A																																																							
L n. 2 1 b																																																							
↓																																																							
L n. 2 1 A																																																							
↓																																																							
L n. 2 0 b																																																							
↓																																																							
L n. 2 0 A																																																							
⋮																																																							
L n. 0 1 A																																																							
↓																																																							
L n. 2 1 b																																																							
<p>Mode</p> 	<table border="1" style="width: 100%; text-align: center;"> <tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr> <tr><td>L</td><td>n.</td><td>0</td><td>1</td><td>b</td></tr> </table> <p style="text-align: center;">  ↓ ↑  </p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td>○</td><td></td><td></td><td>○</td></tr> </table>	A	B	C	D	E	L	n.	0	1	b	0	0	0	0	0	1	2	3	4	○	○	○	○	Hold			%	○			○	<p>If a  is pressed, it will become “ch1: output indicated value setup.”</p> <p>If a  is pressed, it will return to the output title of ch1.</p> <p>※It functions by each ch of “Ln.01b” to “Ln.21b.”</p>																						
A	B	C	D	E																																																			
L	n.	0	1	b																																																			
0	0	0	0	0																																																			
1	2	3	4																																																				
○	○	○	○																																																				
Hold			%																																																				
○			○																																																				
<p>Mode</p> 	<table border="1" style="width: 100%; text-align: center;"> <tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr> <tr><td>L</td><td>n.</td><td>0</td><td>1</td><td>b</td></tr> </table> <p style="text-align: center;">  ↓ ↑  +  </p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>L</td><td>n.</td><td>0</td><td>2</td><td>A</td></tr> </table> <table style="width: 100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td>○</td><td></td><td></td><td>○</td></tr> </table>	A	B	C	D	E	L	n.	0	1	b	L	n.	0	2	A	1	2	3	4	○	○	○	○	Hold			%	○			○	<p>If a  is pressed, ascending operation will be carried out and it will become an input title of ch2.</p> <p>If  is pushed, pushing , descending operation will be carried out.</p> <p>※ Please set up the input and output of each ch of “Ln.02A” to “Ln.21b.”</p>																						
A	B	C	D	E																																																			
L	n.	0	1	b																																																			
L	n.	0	2	A																																																			
1	2	3	4																																																				
○	○	○	○																																																				
Hold			%																																																				
○			○																																																				

<p style="text-align: center;">(ENT)</p>	<p style="text-align: center;">A B C D E L n. 2 1 b</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">P r. S t</p> <p style="text-align: center;">1 2 3 4</p> <p>○ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	<p>Set value is registered by a (ENT) and it returns to a set list display.</p>
<p style="text-align: center;">(RST)</p>	<p style="text-align: center;">A B C D E L n. 2 1 b</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">P r. S t</p> <p style="text-align: center;">1 2 3 4</p> <p>○ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	<p>Returns to the set list display. Set value is not registered.</p>



⚠ <Caution>

While registering a preset value (after pressing a ) until it returns to a setting list), please do not use the power OFF.

«The example of setting of linearization»

< 1 > The input type of meter and a setup are carried out as follows.

- DC4 to 20mA input (A2) type.
- An indicated value when the minimum input (4.000mA) is inputted is “00000”
- An indicated value when the maximum input (20.000mA) is inputted is “10000”

< 2 > The data of linearization is set up.

Table 8

c h	Input (%)	Output (Indicated value)
01	000.00 (4.000mA)	00000
02	012.50 (6.000mA)	05000
03	025.00 (8.000mA)	06000
04	037.00 (10.000mA)	01000
05	050.00 (12.000mA)	08000
06	062.50 (14.000mA)	03000
07	075.00 (16.000mA)	06000
08	087.50 (18.000mA)	02000
09	100.00 (20.000mA)	10000
10	105.00 (20.800mA)	10500
11 to 21	000.00 (4.000mA)	00000

< 3 > Measurement is begun. An indicated value become as in Table 8.

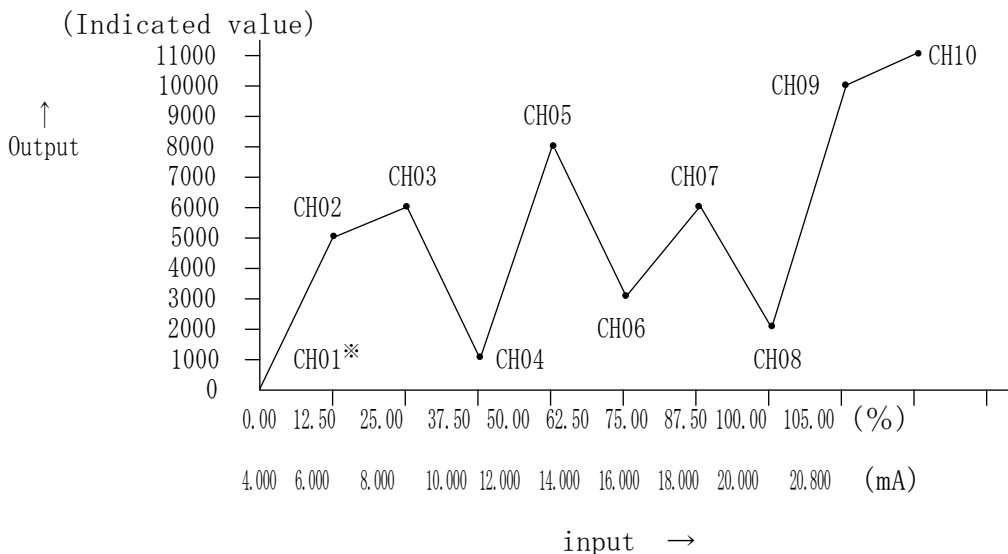


Fig. 22

*Since an input % value setup of ch01 and ch11 to 21 is the same, ch01 of the front row is effective.

1 5. How to set the preset value

Set the preset values "OUT1 to OUT4".

The setting ranges are **-9999 to 9999**

Setting conditions differ by rate meter or ratio to output.











«The call method»

1. It will become 「**P r. S t**」 display if "Mode" is pushed 2 sec or more. (Set list)

2. If "Mode" is pushed, it will become a preset value setup and can perform a setup of OUT1 to OUT4.


«The key operation method of the preset value setting»

Operation key	Display	The contents of operation
Mode	<p>A B C D E</p> <p>9 9 9 9</p> <p>1 2 3 4</p> <p>● → ○ → ○ → ○</p> <p>Hold %</p> <p>○ ○</p>	<p>OUT1 to OUT4 setup is switched whenever it presses a Mode</p> <p>→OUT1→OUT2→OUT3→OUT4→</p> <p>The lamp corresponding to each preset value of OUT1 to OUT4 lights up at the time of a switched.</p>
	<p>A B C D E</p> <p>(-) → 9 → 9 → 9 → 9</p> <p>↑</p> <p>←</p> <p>1 2 3 4</p> <p>● ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	<p>Moves the flash figure when each setting, to the right. Whenever it pushes once, it moves to the right.</p>
	<p>A B C D E</p> <p>(-) 9 9 9 9</p> <p>↑</p> <p>└ 0-9</p> <p>1 2 3 4</p> <p>● ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p> <p><Programming displayA></p> <p>A B C D E</p> <p>(-) 9 9 9 9</p> <p>↑</p> <p>└ (-), Blank</p>	<p>When Mode pushing. Change the blinking numeral value. Every press raises the value by ones.</p> <p>→ 0 → 1 → . . . → 9 →</p> <p>When Mode pushing. Change the blinking numeral value. Every press reduces the value by ones.</p> <p>→ 9 → 8 → . . . → 0 →</p> <p>The display for indication A can be set up (-: minus). The display range of the display for indication B to D is 0 to 9.</p> <p><Programming display A></p> <p>It is able to program "-(minus)" indication for display A. When programming, B - F displays turn on and off.</p> <p>⇔ (-) ⇔ Blank ⇔</p>

	<table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>9</td><td>9</td><td>9</td><td>9</td></tr> </table> <table> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td><input type="radio"/></td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td><input type="radio"/></td><td></td><td></td><td><input type="radio"/></td></tr> </table>	A	B	C	D	E		9	9	9	9	1	2	3	4	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hold			%	<input type="radio"/>			<input type="radio"/>	<p>When  pushed. It will become OUT2 setup. Please use the preset value of hope by  and  .</p> <p>OUT3 and OUT4 setup are also the same.</p>
A	B	C	D	E																								
	9	9	9	9																								
1	2	3	4																									
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>																									
Hold			%																									
<input type="radio"/>			<input type="radio"/>																									
	<table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>P</td><td>r.</td><td>S</td><td>t</td></tr> </table> <table> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td><input type="radio"/></td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td><input type="radio"/></td><td></td><td></td><td><input type="radio"/></td></tr> </table>	A	B	C	D	E		P	r.	S	t	1	2	3	4	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hold			%	<input type="radio"/>			<input type="radio"/>	<p>Set value is registered by a  and it returns to a set list display.</p>
A	B	C	D	E																								
	P	r.	S	t																								
1	2	3	4																									
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>																									
Hold			%																									
<input type="radio"/>			<input type="radio"/>																									
	<table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>P</td><td>r.</td><td>S</td><td>t</td></tr> </table> <table> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td><input type="radio"/></td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td><input type="radio"/></td><td></td><td></td><td><input type="radio"/></td></tr> </table>	A	B	C	D	E		P	r.	S	t	1	2	3	4	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hold			%	<input type="radio"/>			<input type="radio"/>	<p>Returns to the set list display. Set value is not registered.</p>
A	B	C	D	E																								
	P	r.	S	t																								
1	2	3	4																									
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>																									
Hold			%																									
<input type="radio"/>			<input type="radio"/>																									
	<table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td colspan="5">Measurement indicat</td></tr> </table> <table> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td><input type="radio"/></td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td><input type="radio"/></td><td></td><td></td><td><input type="radio"/></td></tr> </table>	A	B	C	D	E	Measurement indicat					1	2	3	4	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hold			%	<input type="radio"/>			<input type="radio"/>	<p>It will become a measurement display if a  pressed.</p>
A	B	C	D	E																								
Measurement indicat																												
1	2	3	4																									
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>																									
Hold			%																									
<input type="radio"/>			<input type="radio"/>																									

Refer to P.31 to 35 "Mode No.4 to 9" 「Common setting」、and 「Setup of OUT1 to OUT4」 for a setup of a preset output.

 **<Caution>**

1. While registering a preset value (after pressing a  until it returns to a setting list), please do not use the power OFF.
2. A decimal point position is interlocked with the position set up by "Mode No.0" when an output display is "Rate mete."
 In "Ratio", it becomes an absolute location of 0.0.
 In "a functional stop", it becomes having no decimal point.

1 6. The method of analog adjustment











⚠ <Caution>








Although adjusting according to a visitor's specification, when you carry out analog adjustment, please change according to the following procedure.

<<The call method>>

1. Power is switched on pushing . It becomes the 「A2 to A5」 display. (Analog adjustment mode)

<<The key operation method of analog adjustment>>

Operating key	Display unit	Operation procedure												
	<p>A B C D E</p> <p>A 2</p> <p>1 2 3 4</p> <p>○ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	<p>A2 to A5 input range is switched whenever it presses a </p> <p>┌ → A 2 → A 3 → . . . → A 5 → ┐</p> <p>Please choose the input range which suited specification.</p> <table border="1"> <tr> <td>A2</td> <td>DC4 to 20mA</td> <td>input</td> </tr> <tr> <td>A3</td> <td>DC1 to 5V</td> <td>input</td> </tr> <tr> <td>A4</td> <td>DC0 to 5V</td> <td>input</td> </tr> <tr> <td>A5</td> <td>DC0 to 10V</td> <td>input</td> </tr> </table>	A2	DC4 to 20mA	input	A3	DC1 to 5V	input	A4	DC0 to 5V	input	A5	DC0 to 10V	input
A2	DC4 to 20mA	input												
A3	DC1 to 5V	input												
A4	DC0 to 5V	input												
A5	DC0 to 10V	input												
	<p>A B C D E</p> <p>A 5</p> <p>1 2 3 4</p> <p>○ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	<p>When  pushed, will register the input range currently displayed.</p> <p>When a range is made, a scaling preset value initializes.</p>												
	<p>A B C D E</p> <p>A. 0 1 2 3</p> <p>1 2 3 4 (bit-data)</p> <p>○ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	<p>When  pushed, it becomes the analog minimum input value adjustment.</p> <p>The input value (bit-data) inputted now is displayed.</p>												
	<p>A B C D E</p> <p>A. 0 1 2 3</p> <p>During registration, it blinks 3 times.</p> <p>1 2 3 4</p> <p>○ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	<p>If a  is pressed inputting the minimum of the registered input range, the input value (bit-data) in the time will be registered as a minimum input.</p> <p>As a signal registration, bit-data blink 3 times in about 1 sec.</p> <p>⚠ <Caution></p> <p>Key operation cannot be carried out during bit-data registration.</p>												
	<p>A B C D E</p> <p>A. 0 1 2 3.</p> <p>Lighting</p> <p>1 2 3 4</p> <p>■ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	<p>When registered bit-data is checked, It displays, while pressing the .</p> <p>※When displaying bit-data registered, The decimal point of a least significant digit lights up.</p>												

	<table border="1" style="margin: auto;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>b.</td><td>4</td><td>5</td><td>6</td><td>7</td></tr> </table> <p style="text-align: center;">↑</p> <p>1 2 3 4 (bit-data)</p> <p>○ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	A	B	C	D	E	b.	4	5	6	7	<p>When  pushed, it becomes the analog minimum input value adjustment.</p> <p>The input value (bit-data) inputted now is displayed.</p>
A	B	C	D	E								
b.	4	5	6	7								
	<table border="1" style="margin: auto;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>b.</td><td>4</td><td>5</td><td>6</td><td>7</td></tr> </table> <p style="text-align: center;">↑</p> <p>During registration, it blinks 3 times.</p> <p>1 2 3 4</p> <p>○ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	A	B	C	D	E	b.	4	5	6	7	<p>If a  is pressed inputting the maximum of the registered input range, the input value (bit-data) in the time will be registered as a maximum input.</p> <p>As a signal registration, bit-data blink 3 times in about 1 sec.</p> <p> <Caution></p> <p>Key operation cannot be carried out during bit-data registration.</p>
A	B	C	D	E								
b.	4	5	6	7								
	<table border="1" style="margin: auto;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>b.</td><td>4</td><td>5</td><td>6</td><td>7.</td></tr> </table> <p style="text-align: center;">↑</p> <p style="text-align: right;">Lighting</p> <p>1 2 3 4</p> <p>○ ○ ○ ○</p> <p>Hold %</p> <p>○ ○</p>	A	B	C	D	E	b.	4	5	6	7.	<p>When registered bit-data is checked, It displays, while pressing the .</p> <p>※When displaying bit-data registered, The decimal point of a least significant digit lights up.</p>
A	B	C	D	E								
b.	4	5	6	7.								

In the case of A2 (4 to 20mA) input

Adjustment item	Current value
Minimum adjustment	4.000mA
Maximum adjustment	20.000mA

In the case of A4 (0 to 5V) input

Adjustment item	Voltage value
Minimum adjustment	0.000V
Maximum adjustment	5.000V



















In the case of A3 (1 to 5V) input



Adjustment item	Voltage value
Minimum adjustment	1.000V
Maximum adjustment	5.000V

In the case of A5 (0 to 10V) input

Adjustment item	Voltage value
Minimum adjustment	0.000V
Maximum adjustment	10.000V

※Please set up analog minimum/analog maximum adjustment at the time of with an analog output option.

<p></p>	<p>A B C D E C. 1 2 A 0</p> <p>1 2 3 4 (bit-data) ○ ○ ○ ○ Hold % ○ ○</p>	<p>When  pushed, it becomes the analog minimum input value adjustment. The input value (bit-data) inputted now is displayed.</p>
<p> </p>	<p>A B C D E C. 1 2 A 0</p> <p>1 2 3 4 (bit-data) ○ ○ ○ ○ Hold % ○ ○</p>	<p>Please unite bit-data to become the minimum output value as an output form(AV3 to 5, AI). When  pushed, it becomes an output increasing. When  pushed, it becomes an output decreasing. The bit-data variable range of the analog minimum output adjustment. [0 7 b 0 to 1 d 9 0]</p>
<p></p>	<p>A B C D E C. 1 2 A 0</p> <p>During registration, it blinks 3 times.</p> <p>1 2 3 4 ○ ○ ○ ○ Hold % ○ ○</p>	<p>When  pushed, the bit-data (output) in the time will be registered as a maximum output. As a signal registration, bit-data blink 3 times in about 1 sec.  <Caution> Key operation cannot be carried out during bit-data registration.</p>
<p></p>	<p>A B C D E d. E d 6 0</p> <p>1 2 3 4 (bit-data) ○ ○ ○ ○ Hold % ○ ○</p>	<p>When  pushed, it becomes the analog maximum output value adjustment. The maximum output value (bit-data) outputted now is displayed.</p>
<p> </p>	<p>A B C D E d. E d 6 0</p> <p>1 2 3 4 (bit-data) ○ ○ ○ ○ Hold % ○ ○</p>	<p>Please unite bit-data to become the minimum output value as an output form (AV3 to 5, AI) . When  pushed, it becomes an output increasing. When  pushed, it becomes an output decreasing. The bit-data variable range of the analog maximum output adjustment. [E 2 7 0 to F 8 5 0]</p>
<p></p>	<p>A B C D E d. E d 6 0</p> <p>During registration, it blinks 3 times.</p> <p>1 2 3 4 ○ ○ ○ ○ Hold % ○ ○</p>	<p>When  pushed, the bit-data (output) in the time will be registered as a maximum output. As a signal registration, bit-data blink 3 times in about 1 sec.  <Caution> Key operation cannot be carried out during bit-data registration.</p>

	<table border="1" style="display: inline-table;"> <tr> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>E</td> </tr> <tr> <td colspan="5" style="text-align: center;">Measurement indicat</td> </tr> </table>	A	B	C	D	E	Measurement indicat					<p>After the end of registration, if a  is pressed 2 sec or more, it will shift to a measurement. Or please re-switch on a power.</p>
	A	B	C	D	E							
	Measurement indicat											
	<table border="1" style="display: inline-table;"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> </table>	1	2	3	4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
1	2	3	4									
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>									
<table border="1" style="display: inline-table;"> <tr> <td>Hold</td> <td style="text-align: right;">%</td> </tr> <tr> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> </table>	Hold	%	<input type="radio"/>	<input type="radio"/>								
Hold	%											
<input type="radio"/>	<input type="radio"/>											

In the case of AI (4 to 20mA) output

Adjustment item	Current value
Minimum adjustment	4.000mA
Maximum adjustment	20.000mA

In the case of AV4 (0 to 5V) output

Adjustment item	Voltage value
Minimum adjustment	0.000V
Maximum adjustment	5.000V

In the case of AV3 (1 to 5V) output

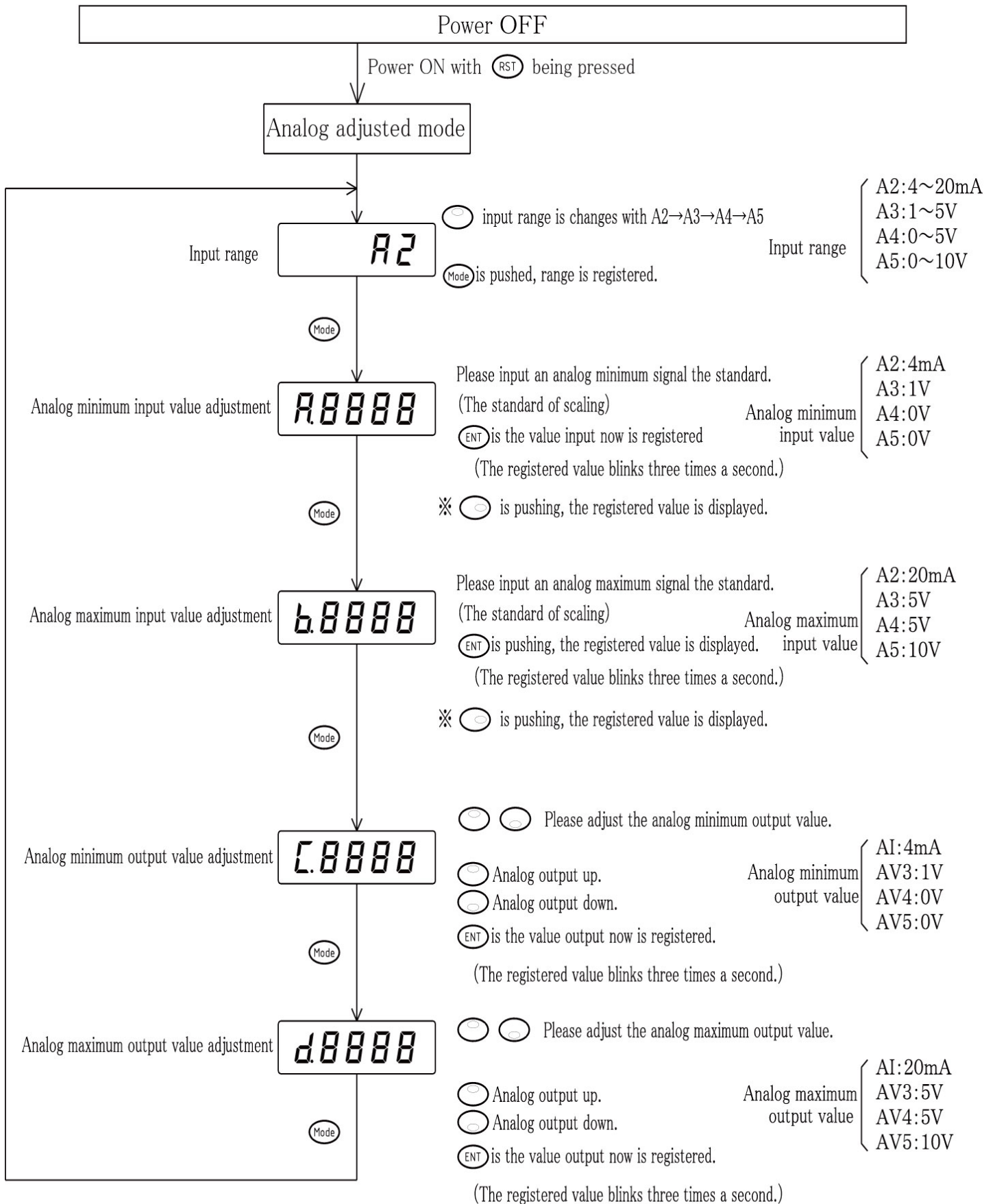
Adjustment item	Voltage value
Minimum adjustment	1.000V
Maximum adjustment	5.000V

In the case of AV5 (0 to 10V) output

Adjustment item	Voltage value
Minimum adjustment	0.000V
Maximum adjustment	10.000V

About operating flow detail, refer to "Analog adjustment flow chart".

《Analog adjustment mode flow chart》



※ When the RST is pushed in the analog adjustment mode for 2 sec or more, it shifts to the measurement display.

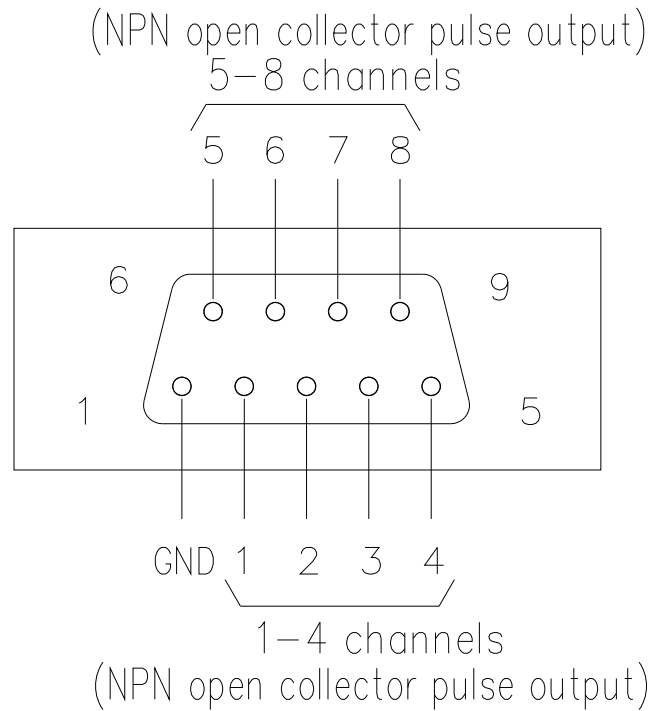
※ It is not necessary minimum/to analog adjust the maximum output value when there is no optional analog output.

8 step preset output is a NPN open collector output (DC30V 50mA MAX), and it outputs it from D-sub9 pin on the back.

※As P10, P12 option, D-sub9 pin (soldering type) and a hood are attached.

- D-SUB connector pin configuration (meter body)

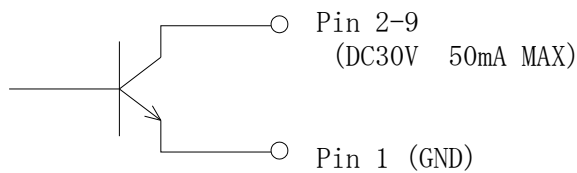
Fig. 23



Meter side connector : OMRON make XM3B-0922


- 8 step preset output circuit (NPN open collector output)

Fig. 24




















The preset value (preset value) of an 8 step preset (ch1 to ch8) is set up.
 The setting range is **-9999 to 9999**.
 In addition, setting conditions differ by rate mete or ratio it output.

«Calling method»


1. It will became 「**P r. S t**」 display if “Mode” is pushed 2 sec or more. (Set list)
2. It will became 「**P B S t**」 display if “Mode” is pushed 4 times.
3. If  is pushed, it will become 8 step preset value setup and can perform a setup of ch1 to ch8.


«The key operation method 8 step preset value setup»

Operation key	Display unit	Operation procedure																																										
	<table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding: 2px;">A</td> <td style="padding: 2px;">B</td> <td style="padding: 2px;">C</td> <td style="padding: 2px;">D</td> <td style="padding: 2px;">E</td> </tr> <tr> <td style="border: 1px solid black; text-align: center;">9</td> <td style="border: 1px solid black; text-align: center;">9</td> <td style="border: 1px solid black; text-align: center;">9</td> <td style="border: 1px solid black; text-align: center;">9</td> <td style="border: 1px solid black; text-align: center;">9</td> </tr> </table> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding: 2px;">1</td> <td style="padding: 2px;">2</td> <td style="padding: 2px;">3</td> <td style="padding: 2px;">4</td> </tr> <tr> <td style="text-align: center;">●</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td style="padding: 2px;">Hold</td> <td></td> <td style="padding: 2px;">%</td> <td></td> </tr> <tr> <td style="text-align: center;">○</td> <td></td> <td style="text-align: center;">●</td> <td></td> </tr> </table>	A	B	C	D	E	9	9	9	9	9	1	2	3	4	●	○	○	○	Hold		%		○		●		<p>Ch1 to ch8 setup is switched whenever it presses a </p> <div style="text-align: center; border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> → c h 1 → c h 2 → . . . → c h 8 → </div> <hr style="border-top: 1px dashed black;"/> <p>The lamp corresponding to each preset value of ch1-ch8 lights up at the time of a change.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; width: 100%;"> <tr> <td style="padding: 2px;">At the time of ch1 setup</td> <td style="padding: 2px;">% lighting+OUT1 lighting</td> </tr> <tr> <td style="padding: 2px;">At the time of ch2 setup</td> <td style="padding: 2px;">% lighting+OUT2 lighting</td> </tr> <tr> <td style="padding: 2px;">At the time of ch3 setup</td> <td style="padding: 2px;">% lighting+OUT3 lighting</td> </tr> <tr> <td style="padding: 2px;">At the time of ch4 setup</td> <td style="padding: 2px;">% lighting+OUT4 lighting</td> </tr> <tr> <td style="padding: 2px;">At the time of ch5 setup</td> <td style="padding: 2px;">% lighting+OUT1 lighting</td> </tr> <tr> <td style="padding: 2px;">At the time of ch6 setup</td> <td style="padding: 2px;">% lighting+OUT2 blink</td> </tr> <tr> <td style="padding: 2px;">At the time of ch7 setup</td> <td style="padding: 2px;">% lighting+OUT3 blink</td> </tr> <tr> <td style="padding: 2px;">At the time of ch8 setup</td> <td style="padding: 2px;">% lighting+OUT4 blink</td> </tr> </table>	At the time of ch1 setup	% lighting+OUT1 lighting	At the time of ch2 setup	% lighting+OUT2 lighting	At the time of ch3 setup	% lighting+OUT3 lighting	At the time of ch4 setup	% lighting+OUT4 lighting	At the time of ch5 setup	% lighting+OUT1 lighting	At the time of ch6 setup	% lighting+OUT2 blink	At the time of ch7 setup	% lighting+OUT3 blink	At the time of ch8 setup	% lighting+OUT4 blink
A	B	C	D	E																																								
9	9	9	9	9																																								
1	2	3	4																																									
●	○	○	○																																									
Hold		%																																										
○		●																																										
At the time of ch1 setup	% lighting+OUT1 lighting																																											
At the time of ch2 setup	% lighting+OUT2 lighting																																											
At the time of ch3 setup	% lighting+OUT3 lighting																																											
At the time of ch4 setup	% lighting+OUT4 lighting																																											
At the time of ch5 setup	% lighting+OUT1 lighting																																											
At the time of ch6 setup	% lighting+OUT2 blink																																											
At the time of ch7 setup	% lighting+OUT3 blink																																											
At the time of ch8 setup	% lighting+OUT4 blink																																											
	<table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding: 2px;">A</td> <td style="padding: 2px;">B</td> <td style="padding: 2px;">C</td> <td style="padding: 2px;">D</td> <td style="padding: 2px;">E</td> </tr> <tr> <td style="border: 1px solid black; text-align: center;">(-)</td> <td style="border: 1px solid black; text-align: center;">9</td> <td style="border: 1px solid black; text-align: center;">9</td> <td style="border: 1px solid black; text-align: center;">9</td> <td style="border: 1px solid black; text-align: center;">9</td> </tr> </table> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding: 2px;">1</td> <td style="padding: 2px;">2</td> <td style="padding: 2px;">3</td> <td style="padding: 2px;">4</td> </tr> <tr> <td style="text-align: center;">●</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td style="padding: 2px;">Hold</td> <td></td> <td style="padding: 2px;">%</td> <td></td> </tr> <tr> <td style="text-align: center;">○</td> <td></td> <td style="text-align: center;">●</td> <td></td> </tr> </table>	A	B	C	D	E	(-)	9	9	9	9	1	2	3	4	●	○	○	○	Hold		%		○		●		<p>Moves the flash figure when each setting, to the right. Whenever it pushes once, it moves to the right.</p>																
A	B	C	D	E																																								
(-)	9	9	9	9																																								
1	2	3	4																																									
●	○	○	○																																									
Hold		%																																										
○		●																																										

 	<div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>(-)</td><td>9</td><td>9</td><td>9</td><td>9</td></tr> </table> <p style="text-align: center;">↑ └─ 0 to 9</p> <table style="margin: auto;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>●</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td>○</td><td></td><td></td><td>●</td></tr> </table> <p><Programming displayA></p> <table border="1" style="margin: auto;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td>(-)</td><td>9</td><td>9</td><td>9</td><td>9</td></tr> </table> <p style="text-align: center;">↑ └─ (-), Blank</p> </div>	A	B	C	D	E	(-)	9	9	9	9	1	2	3	4	●	○	○	○	Hold			%	○			●	A	B	C	D	E	(-)	9	9	9	9	<p>When  pushing. Change the blinking numeral value. Every press raises the value by ones.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;">→ 0 → 1 → . . . → 9 →</p> </div> <p>When  pushing. Change the blinking numeral value. Every press reduces the value by ones.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;">→ 9 → 8 → . . . → 0 →</p> </div> <p>The display for indication A can be set up (-: minus). The display range of the display for indication B to D is 0 to 9.</p> <p><Programming display A> It is able to program “-(minus)” indication for display A. When programming, B - F displays turn on and off.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;">⇔ (-) ⇔ Blank ⇔</p> </div>
A	B	C	D	E																																		
(-)	9	9	9	9																																		
1	2	3	4																																			
●	○	○	○																																			
Hold			%																																			
○			●																																			
A	B	C	D	E																																		
(-)	9	9	9	9																																		
	<div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>9</td><td>9</td><td>9</td><td>9</td></tr> </table> <table style="margin: auto;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>●</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td>○</td><td></td><td></td><td>●</td></tr> </table> </div>	A	B	C	D	E		9	9	9	9	1	2	3	4	○	●	○	○	Hold			%	○			●	<p>When  pushed. It will become ch2 setup. Please use the preset value of hope by  and  . ch3 and ch8 setup are also the same.</p>										
A	B	C	D	E																																		
	9	9	9	9																																		
1	2	3	4																																			
○	●	○	○																																			
Hold			%																																			
○			●																																			
	<div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>P</td><td>r.</td><td>S</td><td>t</td></tr> </table> <table style="margin: auto;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td>○</td><td></td><td></td><td>●</td></tr> </table> </div>	A	B	C	D	E		P	r.	S	t	1	2	3	4	○	○	○	○	Hold			%	○			●	<p>Set value is registered by a  and it returns to a set list display.</p>										
A	B	C	D	E																																		
	P	r.	S	t																																		
1	2	3	4																																			
○	○	○	○																																			
Hold			%																																			
○			●																																			
	<div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td></td><td>P</td><td>r.</td><td>S</td><td>t</td></tr> </table> <table style="margin: auto;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td>○</td><td></td><td></td><td>○</td></tr> </table> </div>	A	B	C	D	E		P	r.	S	t	1	2	3	4	○	○	○	○	Hold			%	○			○	<p>Returns to the set list display. Set value is not registered.</p>										
A	B	C	D	E																																		
	P	r.	S	t																																		
1	2	3	4																																			
○	○	○	○																																			
Hold			%																																			
○			○																																			
	<div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> <tr><td colspan="5">Measurement indicat</td></tr> </table> <table style="margin: auto;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Hold</td><td></td><td></td><td>%</td></tr> <tr><td>○</td><td></td><td></td><td>○</td></tr> </table> </div>	A	B	C	D	E	Measurement indicat					1	2	3	4	○	○	○	○	Hold			%	○			○	<p>It will become a measurement display if a  pressed.</p>										
A	B	C	D	E																																		
Measurement indicat																																						
1	2	3	4																																			
○	○	○	○																																			
Hold			%																																			
○			○																																			

Refer to P. 37 “Mode No.b” 「8 step preset output setting」 for a setup of a preset output.

 **<Caution>**

- While registering a preset value (after pressing a  until it returns to a setting list), please do not use the power OFF.
- A decimal point position is interlocked with the position set up by “Mode No.0” when an output display is “Rate mete.”
In “Ratio”, it becomes an absolute location of 0.0.
In “Mode No.b” “a functional stop”, it becomes having no decimal point.

When use RS-485 communication, please set up baud rate, bit, parity, ID, and transceiver switchingtime by mode No.C and d.

※RS4(W) option, D-sub9 pin(soldering type) and a hood are attached.

《About a communication function》

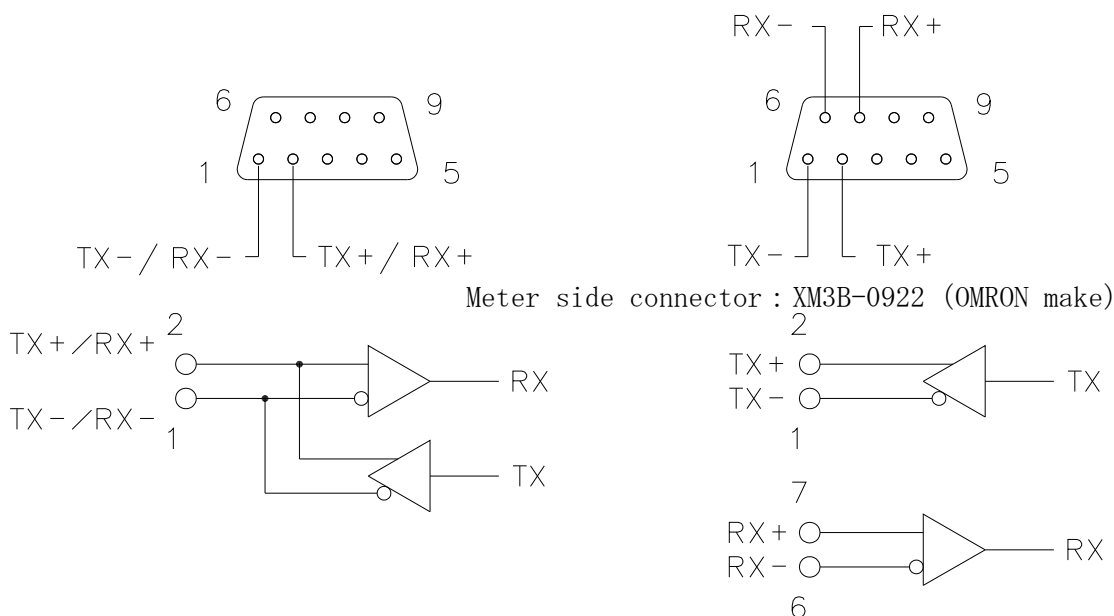
1. Signal level . . . IEE RS-485 conformity
2. Correspondence procedure . . . RS4 : 2-wire system Half-duplex system
RS4W : 4-wire system Half-duplex system
3. Baud rate . . . (Mode setup is referred to "Mode No.C")
2400 bps
4800 bps
9600 bps (Factory setting)
19200 bps
4. Start bit
1-bit fixation
5. Stop bit
1-bit fixation
6. Data bit (Mode setup is referred to "Mode No.C")
7-bit · 8-bit
7. Parity bit (Mode setup is referred to "Mode No.C")
Nothing · Odd number · Even number
8. Communication code
ASCII code
9. Communication connector pin configuration (Meter side : D-sub9 pin)

※Since communication stops, in setting up at the time of each setup, please stop communication or retry by timeout.

RS4 connector

RS4W connector

Fig. 25



«About communication operation»

1. Checksum

①Checksum computing range

(Command 1)

@ × × R D 1 △ △ CR

└─ This range is object of a checksum.

(Command 2)

@ × × W P 1 ± 0 1 2 3 4 5 △ △ CR

└─ This range is object of a checksum.

※The object of a checksum is a range from header character "@" to before a checksum.

②Checksum computing type

A checksum computing type is 2 bytes of character string notation of the HEX value by MOD.

[Example] In the case of @ 0 1 R D 1 △ △ CR

(The indicated value demand of the ID number 01)

A commsnd is transposed to an ASCII code (hexadecimal number), and is added.

@	0	1	R	D	1							
↓	↓	↓	↓	↓	↓							
40H	+	30H	+	31H	+	52H	+	44H	+	31H	=	168H

A value is transposed to a checksum.

168H is 168(hexadecimal number) Lower 2 figure 68 becomes a checksum.

If 68 is considered to be a character in order to consider it as 2 bytes of ASCII notation,

6	8
↓	↓
36H	38H

A transmitting command becomes "@ 0 1 R D 1 6 8 CR"

If the above is denoted by an ASCII code (hexadecimal code),

@	0	1	R	D	1	6	8	CR
↓	↓	↓	↓	↓	↓	↓	↓	↓
40H	30H	31H	52H	44H	31H	36H	38H	0DH

2. Status

① The view of status

Status has written the hexadecimal number by 2 bytes of character string.

② Status allotment

0 0 Normal communication.
0 1 Communication fault.

3. Communication format


Table 9

Measurement data lead (Rate mete)	Command format	@ × × R D 1 △ △ CR
	Response format	@ × × ◇ ◇ ± 0 □ □ □ □ □ △ △ CR
Measurement data read (Ratio)	Command format	@ × × R D 2 △ △ CR
	Response format	@ × × ◇ ◇ ± 0 □ □ □ □ □ △ △ CR
OUT1 preset-value read	Command format	@ × × R P 1 △ △ CR
	Response format	@ × × ◇ ◇ ± 0 □ □ □ □ □ △ △ CR
OUT2 preset-value read	Command format	@ × × R P 2 △ △ CR
	Response format	@ × × ◇ ◇ ± 0 □ □ □ □ □ △ △ CR
OUT3 preset-value read	Command format	@ × × R P 3 △ △ CR
	Response format	@ × × ◇ ◇ ± 0 □ □ □ □ □ △ △ CR
OUT4 preset-value read	Command format	@ × × R P 4 △ △ CR
	Response format	@ × × ◇ ◇ ± 0 □ □ □ □ □ △ △ CR
OUT1 preset-value write	Command format	@ × × W P 1 ± 0 □ □ □ □ □ △ △ CR
	Response format	@ × × ◇ ◇ △ △ CR
OUT2 preset-value write	Command format	@ × × W P 2 ± 0 □ □ □ □ □ △ △ CR
	Response format	@ × × ◇ ◇ △ △ CR
OUT3 preset-value write	Command format	@ × × W P 3 ± 0 □ □ □ □ □ △ △ CR
	Response format	@ × × ◇ ◇ △ △ CR
OUT4 preset-value write	Command format	@ × × W P 4 ± 0 □ □ □ □ □ △ △ CR
	Response format	@ × × ◇ ◇ △ △ CR

× × ID number
△ △ Checksum

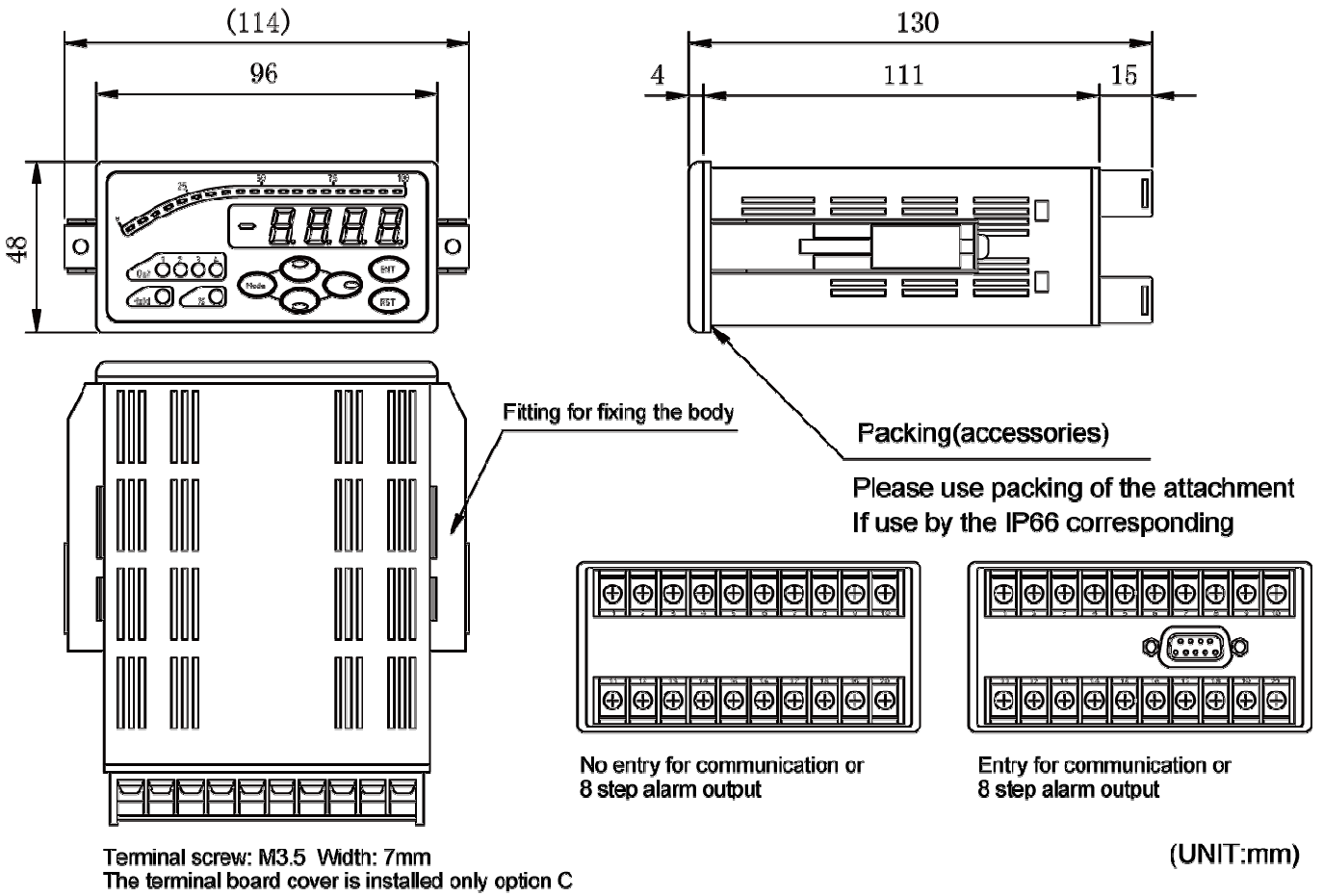
◇ ◇ Status
□ □ □ □ . . Indicated value data

⚠ <Caution>

1. A decimal point does not go into transmission and received data.
2. Indicated value data is set to “-9999” or “99999 (Ratio 9999)” when a main part display is “ blink” in a measurement data read

2 0. Dimensions

Fig. 26



2 1. About a noise coutermeasure

When influence of noise occurred, please be careful about the following.

When doing a blackout and a malfunction by influence of noise, please try operation reset (refer to page 11) or initialization (refer to page 19)

Please take notes of the value setting of each mode. If it becomes normal, please take the following measure.

And please setting it once again.

- (1) Please use cores of shielding wire for a sensor, separate as much as possible from a source of noise.
- (2) Please shorten the sensor code as much as possible.
Please avoid sources of noises such as the power lines and inverters, select the route that doesn't pick up the noise as much as possible, and wire.
- (3) When you receive the influence of the noise from the power line
Please separate from the noise source, shorten wiring as much as possible, and give the treatment such as EMI filters.
- (4) Wiring technique of sensor code
Around the sensor code, there are an electric power line and a power line.
When the influence of the noise such as serge is received, let's use piping.
Or, please separate by 50 centimeters or more.

Fig. 27

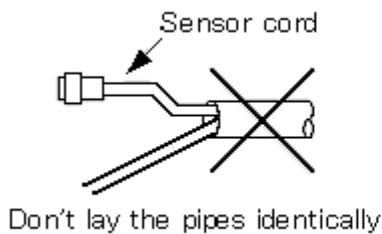
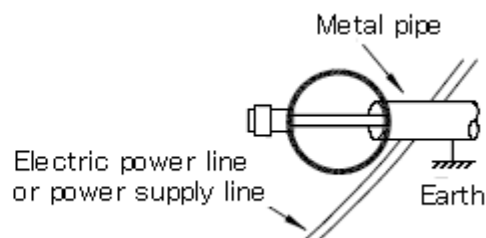
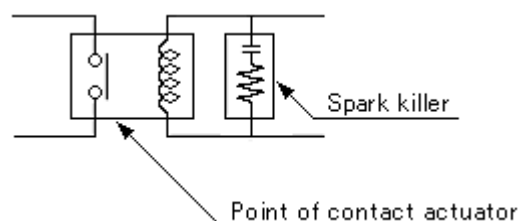


Fig. 28



- (5) Stop the noise generation caused by an external factor.
Please put and plan the spark killer as shown in Fig. 29 when the serge noise by the opening and shutting of the having points of contact of the electromagnetic switch, the thermo regulator, the solenoid-controlled valve, and the relay, etc. from which a strong noise seems to be generated in the control board in which the meter is installed and the circumference influences.

Fig. 29



- (6) Especially, please consult the handling shop or our company when there are use in a big noise area and a point of uncertainty.

2 2. Troubleshooting

When abnormality occurred, please check it as follows.

No.	Problem	Checking point	Solution
1	Display does not appear at all.	→Has it connected with the rear terminal correctly? Is the screw tightened certainly? Is the power connection correct?	→Connect correctly according to “Connecting terminal boards” (Refer to page 7) ↓ When display still does not appear, have it serviced.
2	Unusual LED lighting, key switch operation, preset-output, analog output.	→Check with the test mode (Refer to page 15).	→Initialize (Refer to page 19) ↓ When it still does not resume normal status, have it serviced.
3	Rate meter remains at “0” and does not count.	→Is the setting for each mode correct? ↓ →Is the sensor input normal? ↓ →Is the input system of this meter suitable for the output signal of the sensor?	→Check the setting again. →Check the connection of the sensor. Check with the test mode (Refer to page 15) →Operation manual check. ↓ When it still does not resume normal status, have it serviced.
4	Indicator is flashing ” 9999” , “-9999” .	→Check whether the indication value is not too large. ↓ →Overflow indication. ↓ →Influence of noise.	→Change the scaling setting value. (Refer to page 21-26) →Change the scaling setting value. (Refer to page 21-26) →About a noise countermeasure. (Refer to page 61 for “About a noise countermeasure” .) ↓ When it still does not resume normal status, have it serviced.

These specifications and the like may be revised for improvement without prior notice, which please understand and accept.



Head Office : 123-1, Kami, Nishi-ku, Sakai-city, Osaka, Japan.
TEL. 81-72-274-6001 FAX. 81-72-274-6005

Tokyo Branch : TEL. 81-3-5256-8311 FAX. 81-3-5256-8312

URL : <http://www.uinics.co.jp/en/>