3-1. Installation site (environmental conditions)

- **CAUTION**
  - Do not use this product under the following conditions. Otherwise, failure, damage and fire may occur.
  - (1) Where flammable gas, corrosive gas, oil mist or dust generate or grow rife.
  - (2) Where the temperature is below -10°C or above 55°C.
  - (3) Where humidity is over 90%RH or where condensation occurs.
  - (4) Where the altitude is above 2,000m.
  - (5) Where inductive interference may easily affect the operation.
  - (6) Where the EMC standard (IEC61326) classifies MAC5 into Class A apparatus.
  - (7) Where waterdrops or direct sunlight exists.

- **CAUTION**
  - Use a fuse which meets the requirements of IEC127.
  - For the input terminals and contact output terminals, a 250VAC fuse must be used.
  - The fuse must be set at a value of 0.5A or less. A fuse must be set at 0.5A or less and be size #5A.
  - The fuse must be connected to a 250VAC power source. A 250VAC fuse must be set at 0.5A or less.
  - A signal wire’s common mode voltage to ground (signal wires other than contact output including power supply and event) should be less than 30V rms, 42.4V peak, and 60 VDC.

- **CAUTION**
  - All the wires for the interior distribution, except for communication and contact output (including power supply and event), should be less than 30m in length. When the wire’s length is 30m or more, or in the case of outdoor wiring, the suitable measure against a lightning surge is required.
  - EMC standard (IEC61326) classifies MAC5 into Class A apparatus.
  - Electromagnetic interference may occur when MAC5 is used at a business district or in the home. Please use after taking sufficient measures.

- **NOTE**
  - Contact our agencies or business offices if you have any problem. We welcome any kind of inquiry such as the defect of the product, shortage of accessory and so on.

- **CHECK**
  - The MAC5 has a built-in fuse. This mark indicates hazardous conditions that could cause damage to equipment and/or facilities. Exercise extreme caution as indicated.
  - The MAC5 series is designed for controlling temperature, humidity, and other physical variables in general industrial facilities. It must not be used in any way that may adversely affect safety, health, or working conditions.

- **CHECK**
  - To avoid damage to the connected equipment, facilities or the product itself due to a fault of the instrument, safety countermeasures must be taken before usage, such as proper installation of the fuse and the overheating protection device. No warranty, expressed or implied, is valid in the case of usage without having implemented proper safety countermeasures.

- **NOTE**
  - An Instruction manual: 1 set. 1 unit label 1 set.

2. Introduction

2-1. Check before use

Before using MAC5, please check the model code, the exterior appearance and accessories. Also, make sure that there are no errors, impairments and shortages. Confirmation of model code: Check that the product you ordered is being delivered properly.

Check the model code of the main body case against the following code table.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC5A</td>
<td>96x96mm size digital controller</td>
</tr>
<tr>
<td>MAC5B</td>
<td>48x96mm size digital controller</td>
</tr>
<tr>
<td>MAC5C</td>
<td>72x72mm size digital controller</td>
</tr>
<tr>
<td>MAC5D</td>
<td>48x48mm size digital controller</td>
</tr>
</tbody>
</table>

Example of model code

MAC5A- M C F E C

Item

1. Series  MAC5A:  MAC5B:  MAC5C:  MAC5D:
2. Input   M: multi,
3. Control Output 1 C: contact, S: voltage pulse, I: current (4~20mA),
4. Power Supply  F: 90 - 264V AC,
5. Event Output  E: Event Output 1 - 2 (two points)
6. Control Output 2 + Event Output Optional Selection of DI N: none, C: contact, S: voltage pulse, #1 E: Event Output (one point), D: external control input (DI) one point
※#1 “S” cannot be installed Out1 “S” or “I”

Check of accessories

Instruction manual: 1 set. 1 unit label 1 set

- **NOTE**
  - Please contact our agencies or business offices if you have any problem. We welcome any kind of inquiry such as the defect of the product, shortage of accessory and so on.

3. Installation and wiring

3-1. Installation site (environmental conditions)

- **CAUTION**
  - Do not operate the front panel keys with hard or sharp objects.
  - Do not fail to touch keys lightly with a fingertip.
  - Wipe gently with a dry rag and avoid using solvents such as thinner.

- **CAUTION**
  - On the terminal nameplate affixed to the case of your instrument, the mark is printed. This is to warn you of the risk of electrical shock which may result if the charger is touched while it is energized.
  - The external power circuit connected to the power terminal of this instrument must have a means of turning off the power, such as a switch or breaker. Install the switch or breaker adjacent to the instrument in a position which allows it to be operated with ease, and with an indication that it is a means of turning off the power.
  - Use a switch or breaker, which meets the requirements of IEC127.
  - Fuse:
    - Since the instrument does not have a built-in fuse, do not forget to install a fuse in the power circuit to be connected to the power terminal. The fuse should be positioned between the switch or breaker and the instrument and should be attached to the L side of the power terminal.
    - Fuse Rating: 250V AC 0.5A/medium lagged or lagged type.
  - Use a fuse which meets the requirements of IEC127.
  - Load voltage/current to be connected to the output terminal and the alarm terminal should be within the rated range. Otherwise, the temperature will rise and shorten the life of the product and/or result in problems with the product.
  - Voltage/current that differs from input specification should not be connected to the input terminal. It may shorten the life of the product and/or result in problems with the product.
  - Input, output of voltage pulse, and output of electric current are not insulated. Therefore, do not ground an adjusted power terminal when a ground sensor is employed.
  - A signal wire’s common mode voltage to ground (signal wires other than contact output including power supply and event) should be less than 30V rms, 42.4V peak, and 60 VDC.

- **CAUTION**
  - All the wires for the interior distribution, except for communication and contact output (including power supply and event), should be less than 30m in length. When the wire’s length is 30m or more, or in the case of outdoor wiring, the suitable measure against a lightning surge is required.
  - EMC standard (IEC61326) classifies MAC5 into Class A apparatus.
  - Electromagnetic interference may occur when MAC5 is used at a business district or in the home. Please use after taking sufficient measures.
3-4. Wiring

(1) Make sure that wiring operation is properly done in line with a terminal wire diagram of section 3-5.
(2) Choose a suitable compensation lead wire in the case of thermocouple input.
(3) In the case of resistance bulb input, resistance value of each lead wire must be less than 5Ω and that of three lead wires must be equal.
(4) Do not wires an input signal line inside of an electric wire pipe or a duct same with the high voltage line.
(5) Shield wiring (single point grounding) is effective against static induction noise.
(6) Wiring twisted at equal short intervals is effective against electromagnetic induction noise.

NOTE: Proximity attachment by a single hole is possible only in the case of horizontal direction. When an apparatus that was attached in vertical direction is removed, a dedicated detachment tool is required.
Press **(DOWN) key** one time, and the shown value decreases by one numerical value. By pressing the key continuously, the value consecutively decreases. A decimal point of the smallest digit blinks at this time. This shows that a setting change is in progress.

4. Description of front panel

4-1. **Names of front panel.**

MAC5A 96×96 size front

MAC5C 72×72 size front

MAC5D 48×48 size front

MAC5B 48×96 size front

4-2. **Explanation of front panel section**

① : Display of measured value (PV) (red)

Measured value (PV) and type of setting is displayed on each setting screen.

② : Display of target value (SV) (green)

Target value and set value are displayed on each setting screen.

③ : Monitor LED

(1) RUN monitor LED RUN (green)

If RUN is performed with RUN key, operation model 1 screen, external control input (DI), and communication, it lights up, and put out by standby. It blinks, if a manual output is chosen in output monitoring screen or external control input (DI).

(2) Auto tuning operation monitor LED AT (green)

If AT is chosen in ON or external control input (DI), blinks during AT execution. Lights up when AT is on standby, and puts out with AT automatic termination or release.

(3) control out put 1 monitor LED OUT1 (green)

At the time of a contact or a voltage pulse output, it lights up with ON and lights off with OFF. Lights off with 0% power output, and lights up with 100% power. And blinks in intermediate ratio.

(4) Event output monitors LED EV1 and EV2 (yellow)

Lights up when the allotted event output turns to ON.

(5) Control output 2/event output 3 monitors LED OUT2/EV3 (yellow)

When control output 2 is chosen, it operates like control output 1 monitor LED does.

When event output 3 is chosen, it operates like event output monitor LED does.

④ : Key-switch section

(1) **(ENTRY/REGISTER) key**

Press this key to move on the next screen among the screens.

Press **(ENTRY/REGISTER) key** for three seconds on the basic screen, then it jumps to the lead screen of Mode 1. Press **(ENTRY/REGISTER) key** for three seconds on the lead screen of each Mode screens, then it jumps to the basic screen. Press **(ENTRY/REGISTER) key** for three seconds on the lead screen of FIX, then it jumps to the basic screen.

(2) **(Portfolio) key**

Press **(Portfolio) key** one time, and the shown value decreases by one numerical value.

One time press of **(Portfolio) key** decreases by one numerical value. By pressing the key continuously, the value as well consecutively decreases. A decimal point of the smallest digit blinks at this time. This shows that a setting change is in progress.

(3) **(Menu) key**

Press **(Menu) key** one time, and the shown value increases by one numerical value. By pressing continuously, the value By pressing the key continuously, the value consecutively increases. A decimal point of the smallest digit blinks at this time. This shows that a setting change is in progress. key between lead screen in each mode screens.

(4) **(Entry/REGISTER) key**

The setting data changed on each screen is determined (the decimal point of the minimum dig is also lighted off).

Press **(Entry/REGISTER) key** for 3 seconds on the output monitoring screen, then the shift between manual output and automatic output is carried out. Press the key for 3 seconds on the basic screen, then it shifts to FIX head screen. Push at FIX and each mode screens’ lead screen, then shifts to setting screen.

(5) **(Menu) key**

Press **(Menu) key** for three seconds on the basic screen, then it shifts to FIX head screen.

Push at FIX and each mode screens’ lead screen, then shifts to setting screen.

4-3. **Terminal arrangement diagram**

3-5. Terminal arrangement plan of MAC5A and MAC5B

Terminal arrangement plan of MAC5C

Terminal arrangement plan of MAC5D

3-5. Terminal arrangement plan of MAC5A and MAC5B

Terminal arrangement plans of MAC5D

NOTE : If input type is thermocouple or voltage, errors may occur when terminal 11 and terminal 12 terminal are short-circuited

NOTE : If input type is thermocouple or voltage, errors may occur when terminal 8 and terminal 9 terminal are short-circuited

NOTE : If input type is thermocouple or voltage, errors may occur when terminal 5 and terminal 6 terminal are short-circuited

NOTE : If input type is thermocouple or voltage, errors may occur when terminal 5 and terminal 6 terminal are short-circuited

NOTE : If input type is thermocouple or voltage, errors may occur when terminal 11 and terminal 12 terminal are short-circuited

NOTE : If input type is thermocouple or voltage, errors may occur when terminal 8 and terminal 9 terminal are short-circuited

NOTE : If input type is thermocouple or voltage, errors may occur when terminal 5 and terminal 6 terminal are short-circuited
5. Description of screens

5-1. How to move to another screen

Basic Screen

Press the key for 3 seconds on a basic screen, then it shifts to the lead screen of (constant value control) setting screens.

Press the key for 3 seconds on the lead screen of setting screens, then it shifts to the basic screen. The shift is also possible when the \( F \varepsilon \varepsilon \varepsilon \) is chosen on the operation mode 2 screen.

Basic Screen

To change settings, display an appropriate screen and change the setting (value or function) by pressing or key.

Operation mode

On the output monitor screen of basic screens, you can change the control output from “Automatic” to “Manual”, and save its change of setting. Display the output monitor screen, and then press key for three seconds to shift from Automatic to Manual. Then by pressing or key, you can adjust to the desirable output value. In this case, no operation mode 2 screen.

Press the key for 3 seconds on the lead screen of mode 1 screens, then it shifts to the lead screen of mode 1 screens. The shift is also possible when the is chosen on the operation mode 2 screen.

Operation mode

Every time you press the key on a basic screen, it shifts to each screen of the basic screens.

Press the key for 3 seconds on a basic screen, then it shifts to the lead screen of mode 1 screens.

Press the key on the lead screen of mode 1 screens, then it further advances to mode 2, and mode 3. (Notes: If no corresponding option is found, the mode 4 - 9 is skipped)

Press the key on the lead screen of mode 1 screens, then it further advances to mode 9, and mode 8. (Notes: If no corresponding option is found, the mode 4 - 9 is skipped)

Press the key for 3 seconds on the lead screen of mode 1 ~ 9 screens, then it shifts to the basic screen.

Press the key on the lead screen of mode 1 ~ 9 screens, then it shifts to the first setting screen of each screens.

Press the key on the first setting screen of each screens, then it shifts to the next screen. Every time you press the key, it shifts to the next setting screen.

5-2. Setting Method

To change settings, display an appropriate screen and change the setting (value or function) by pressing \( \Delta \) or \( \nabla \) key.

On the output monitor screen of basic screens, you can change the control output from “Automatic” to “Manual”, and save its change of setting. Display the output monitor screen, and then press \( \text{key} \) for three seconds to shift from Automatic to Manual. Then by pressing \( \Delta \) or \( \nabla \) key, you can adjust to the desirable output value. In this case, no need to press \( \text{key} \) in order to determine the change of setting.

Press \( \text{key} \) for three seconds as well to shift back to Automatic. Excluding when a keylock is OFF, Automatic MANUAL Manual switchover does not work while STBY and AT are in operation.

In the case of two-output type, the switchover between automatic and manual is operatable through output 1 and output 2. The setting is altered simultaneously.

5-3. Power-on and initial screen display

At power-on, the display section shows each screen of initial screens for one second, then moves on to the basic screen.

Output monitor

Output monitor

Output monitor

At the time of FIX, execution SV is displayed and change of setting is conducted.

At the time of automatic output, monitor display only.

Priority is given to DI when RUN is allotted to external control input. DI Key operation cannot be performed unless allotment is canceled.

When measuring range, a unit, scaling, and output characteristics are changed it is initialized a display is displayed.

※1  Out 1 type  ※2  Out 2 type

This is the display when : contact is chosen.

x2 Output 2 Displays only optional addition.

5-4. Explanation of each screen

1. Basic Screens

Basic Screen

Choose \( \text{key} \), decide by \( \text{key} \), then Monitor LED’s RUN lights off and becomes control stop [Output OFF (0%)]

Choose \( \text{key} \) by \( \text{key} \), decide by \( \text{key} \), hen Monitor LED’s RUN lights off and becomes control stop [Output OFF (0%)]

Manual output setting range: 0.0-100.0% (within output limiter)

At the time of automatic output, monitor display only.

Refer to Item 5.2 about automatic and manual switchover, and setting method at the time of manual operation.

A manual output is canceled when an operation mode is mode into \( \text{key} \)

When a power source is intercepted and re-switched on, it returns to the condition just before intercepting.

Choose \( \text{key} \) by \( \text{key} \), decide by \( \text{key} \), then Monitor LED’s RUN lights up to start control operation.

Choose \( \text{key} \) by \( \text{key} \), decide by \( \text{key} \), then Monitor LED’s RUN lights up to start control operation.

Choose \( \text{key} \) by \( \text{key} \), decide by \( \text{key} \), then Monitor LED’s RUN lights up to start control operation.
EV3 (event 3) is displayed when being added as optional option.

Latching release screen

EV1 (event 1) operating-point setting screen

EV2 (event 2) operating-point setting screen

EV3 (event 3) is displayed when being added as optional option.

Return to basic screen.

(2) FIX (constant value control) setting screens

At the time of no program option and with program option and \( \frac{FC}{CE} \) is chosen on Action mode 2 screen of basic screens, lead screen of FIX setting screens is displayed when [Fix] key is pressed for 3 seconds.

If [Set] key is pressed for 3 seconds on lead screen, it returns to basic screen.

Basic screen

Lead screen of FIX setting

Return to basic screen.

(3) Mode 1 screens key lock and SV limiter Setting

Mode 1 lead screen

Key lock setting screen

SV limiter lower limit setting screen

SV limiter upper limit setting screen
(4) Mode 2 screens Scale and PV setting

Mode 2 lead screen

Press ▲ key in mode 1 lead screen, or press ▼ key in mode 3 lead screen, then being displayed.

PV offset correction (PV bias) setting screen
Initial value: 0
Setting range: ±500 ~ ±5000 Digits
Used for correction of input errors such as sensor.
If offset correction is performed, control is also performed with the corrected value.

PV gain correction setting screen
Initial value: 0.00
Setting range: ±5.00%
Setting change cannot be performed.

PV filter setting screen
Initial value: 0
Setting range: 0 ~ 10000 digits
When input change is violent or noise is overlapped, used to ease the influences.
In 0 second setting, filter does not function.

Measuring range setting screen
Initial value: Chosen from 5-5, measuring range code table.
Combination of input type and measuring range is set by code.

Temperature unit setting screen
Initial value: °C
Setting range: °C, °F
The temperature unit at the time of sensor input is set up from °C, °F.
Not displayed when the linear input is chosen.

Input scaling lower limit value setting screen
Initial value: 0.0
Setting range: 0.00 ~ 9989.99 digits
Scaling lower limit value at the time of linear input is set up.

Input scaling upper limit value setting screen
Initial value: 100.0
Setting range: 1989.99 ~ 9989.99 digits
Scaling upper limit value at the time of linear input is set up.

NOTE: Suppose that the difference between a lower limit value and upper limit value is 10 or less, or over 10,000. In this setting, upper limit value is compulsorily changed into that of +10 or ±10000 digits. Upper limit value cannot be set as lower limit value of ±10 digits or less, or that of over 10,000 digits.

Input scaling Decimal point position Setting screen
Initial value: the first place after decimal point (0.0)
Setting range: no decimal point 0 ~ the third place after decimal point (0.000)
Decimal point position of input scaling is set.

NOTE: The screen of input scaling serves as a monitor at the time of a sensor input.
Setting change cannot be performed.

Return to mode 2 lead screen.

(5) Mode 3-4 screens

Output 1 PID1 proportional-band (P) setting screen
Initial value: 3.0%
Setting range: OFF, 0.1 ~ 999.9%

Output 1 PID1 integral time (I) setting screen
Initial value: 120 seconds
Setting range: OFF, 1 ~ 6000 seconds

Output 1 PID1 derivative time (D) setting screen
Initial value: 30 seconds
Setting range: OFF, 1 ~ 3600 seconds

Output 1 PID1 maximum limiter setting screen
Initial value: 100.0
Setting range: output limiter lower limiter values +0.1 ~ 100.0%

Output 1 PID2 proportional band (P) setting screen
Initial value: 3.0%
Setting range: OFF, 0.1 ~ 999.9%

Output 1 PID2 integral time (I) setting screen
Initial value: 120 seconds
Setting range: OFF, 1 ~ 6000 seconds

Output 1 PID2 derivative time (D) setting screen
Initial value: 30 seconds
Setting range: OFF, 1 ~ 3600 seconds

Output 1 PID2 manual reset setting screen
Initial value: 0.0
Setting range: ±50.0 ~ 50.0%
NOTE: The offset correction at the time of I=OFF (P operation, PD operation) is performed.

Output 1 PID1 minimum limiter setting screen
Initial value: 0.0
Setting range: 0.0 ~ 99.9%
Output lower limit value of output 1 PID1 is set up.

Output 1 PID1 differential-gap setting screen
Initial value: 5
Setting range: 1 ~ 999 unit
The differential gap at the time of ON-OFF operation is set.
Displayed at the time of P=OFF (ON-OFF operation) setup.

Output 1 PID2 proportional band (P) setting screen
Initial value: 3.0%
Setting range: OFF, 0.1 ~ 999.9%

Output 1 PID2 integral time (I) setting screen
Initial value: 120 seconds
Setting range: OFF, 1 ~ 6000 seconds

Output 1 PID2 derivative time (D) setting screen
Initial value: 30 seconds
Setting range: OFF, 1 ~ 3600 seconds

Output 1 PID2 manual reset setting screen
Initial value: 0.0
Setting range: ±50.0 ~ 50.0%
NOTE: Contents is the same with output 1 PID1.

Output 1 PID2 differential gap setting screen
Initial value: 5
Setting range: ±5.00%
Contents is the same with output 1 PID1.

Output 1 PID2 manual reset setting screen
Initial value: 0.0
Setting range: ±50.0 ~ 50.0%
NOTE: The offset correction at the time of I=OFF (P operation, PD operation) is performed.

NOTE: Contents is the same with output 1 PID1.

Return to mode 2 lead screen.
Output 1 PID2 minimum limiter setting screen
- Initial value: 0.0
- Setting range: 0.0 ~ 99.9%
- Contents is the same with output 1 PID1.

Output 1 PID2 maximum limiter setting screen
- Initial value: 100.00
- Setting range: output limiter lower limit value +0.1 ~ 100.0%
- Contents is the same with output 1 PID1.

Output 1 PID3 proportional band (P) setting screen
- Initial value: 3.0%
- Setting range: OFF, 0.1 ~ 999.9%
- Contents is the same with output 1 PID1.

Output 1 PID3 integral-time (I) setting screen
- Initial value: 120 seconds
- Setting range: OFF, 1 ~ 6000 seconds
- Contents is the same with output 1 PID1 & 2.

Output 1 PID3 derivative-time (D) setting screen
- Initial value: 30 seconds
- Setting range: OFF, 1 ~ 3000 seconds
- Contents is the same with output 1 PID1.

Output 1 PID3 differential band (P) setting screen
- Initial value: 5
- Setting range: 1 ~ 999 unit
- Contents is the same with output 1 PID1.

Output 1 PID3 minimum limiter setting screen
- Initial value: 0.0
- Setting range: 0.0 ~ 99.9%
- Contents is the same with output 1 PID1.

Output 1 PID3 maximum limiter setting screen
- Initial value: 100.0
- Setting range: output limiter lower limit values +0.1 ~ 100.0%
- Contents is the same with output 1 PID1 & 2.

Output 1 soft starting time setting screen
- Initial value: OFF
- Setting range: OFF, 0.5 ~ 120.0 seconds (setting resolution 0.5 second)
- This is the function that eases change of output at the time of a power-on and startup.
- Does not function at the time of OFF setup.

Output 1 proportional periodic time setting screen
- Initial value: Contact output 30.0 seconds
- Voltage pulse output 3.0 seconds
- Setting range: 0.5 ~ 120.0 seconds (setting resolution 0.5 second)
- Proportional periodic time of output 1 is set.
- Not displayed when output 1 is current.

Output 1 characteristics setting screen
- Initial value: normal open, normal closing
- Setting range: normal open, normal closing
- Characteristics of control output is chosen from A (heating characteristics) and dA (cooling characteristics)

Mode 4 Out 2 setting screen
- Displayed when being added as optional option Out 2 contents are the same with out 1

Return to mode 3 lead screen

Output 1 PID1 dead-band setting screen
- Initial value: 0
- Setting range: −1999 ~ 5000 unit
- Output 2’s operation zone to output 1 is set with dead-band.

※2 is available at Out 2 setting screen in stead of ※1

Output 1 PID characteristics setting screen
- Output periodic time setting screen
- Soft starting time setting screen
- PID3 maximum limiter setting screen
- PID3 minimum limiter setting screen
- PID3 proportional band setting screen
- PID3 integral-time setting screen
- PID3 derivative-time setting screen
- PID3 differential band setting screen
- PID1 dead-band setting screen
- PID1 minimum limiter setting screen
- PID1 maximum limiter setting screen
- PID1 proportional band setting screen
- PID1 integral-time setting screen
- PID1 derivative-time setting screen
- PID1 differential band setting screen

※1 ※2

Event 1 operation-mode setting screen
- Initial value: non
- Setting range: Chosen from event type characteristic table.
- Event type allotted to event 1 is chosen from characteristic table.
- Event type characteristic table

Event 1 differential-gap setting screen
- Initial value: 5 digits
- Setting range: 1 ~ 9999 digits
- ON-OFF differential gap of event 1 is set.
- Not displayed, when the event 1 mode are as follows:
  - On-Off differential gap: event output state is held.
  - When latching is set as once event is output, even if event is OFF state event output state is held.
  - When deviation alarm’s SV is performed.
  - When each alarm’s operating point is changed.
  - When deviation alarm’s SV is performed.

Event 1 standby-operation setting screen
- Initial value: OFF
- Setting range: OFF, 1.2
- : No standby operation, 1: standby-operation only at the time of a power-on.
- : Standby-operation in the following cases: At the time of power-on.
  - When each alarm’s operating point is changed.
  - When deviation alarm’s SV is performed.
  - When RUN/STBY (RST) is switched.
  - When AUTO/MAN is switched.
  - When deviation alarm’s SV is performed.

Event 1 latching setting screen
- Initial value: OFF
- Setting range: OFF, ON
- When latching is set as once event is output, even if event is OFF state event output state is held.
- Not displayed when event 1 mode is non.

Event 1 output characteristics setting screen
- Initial value: non
- Setting range: non, open
- Output characteristics event 1 is chosen from non: normal open,
  - non: normal closing.
- Not displayed when event 1 mode is non.

Event 2 operation mode setting screen
- Initial value: non
- Setting range: Chosen from event type characteristic table.
- Type allotted to event 2 should be chosen from characteristic table.
- Change in measuring range, scaling, unit, and the event 1 mode make it initialize.

Event 2 differential-gap setting screen
- Initial value: 5 digit
- Setting range: 1 ~ 9999 digit
- Contents is the same with output 1 PID1.

No setup.

Press key, it shifts to the first setting screen, event 1 operation-mode setting screen.

Press key, it shifts to the first setting screen, event 2 operation-mode setting screen.
DI operation character table and restrictions concerning DI

**Event 2 standby operation setting screen**

**Event 2 latching setting screen**

**Event 2 output characteristics setting screen**

**Event 3**

Displayed when being added as optional option event 3 contents are the same with event 1-2

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### 5-5. Measuring rangecode table

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Code</th>
<th>Measuring Range</th>
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**Notes:**
- Apart from DI 4 is displayed when being added as additional option.
- When AT is allotted, release in the middle of AT operation is performed, AT is released.
- While AT is performed, if STBY or a manual output is performed, AT is released.
- Even when a keylock is not OFF, conducting of DI is effective.
- Operation allotted to DI takes priority over DI. Key operation cannot be performed.
- Execution of DI operation is possible to perform. But neither release of AT nor numerical change of SV and manual output is possible to perform.
- In DI input, 5VDC 0.5mA is impressed. Use endurable switch, transistor and so on.
- Wiring distance of DI should be less than 30m.