**External Dimensions**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNL (SDN)</td>
<td>94.6 (3.72)</td>
<td>mm</td>
</tr>
<tr>
<td>SNL (SDN)</td>
<td>91.6 (3.61)</td>
<td>mm</td>
</tr>
<tr>
<td>SNL (SDN)</td>
<td>105.2 (4.14)</td>
<td>mm</td>
</tr>
<tr>
<td>Bracket (1 to 10 mm) (0.04 to 0.39 inch) (panel thickness)</td>
<td>96 (3.78)</td>
<td>mm</td>
</tr>
<tr>
<td>Terminal cover (SD)</td>
<td>65 (2.56)</td>
<td>mm</td>
</tr>
<tr>
<td>Bracket (SD)</td>
<td>20 (0.79)</td>
<td>mm</td>
</tr>
<tr>
<td>Bracket (MT)</td>
<td>11 (0.43)</td>
<td>mm</td>
</tr>
<tr>
<td>Bracket (MT)</td>
<td>117 (4.61)</td>
<td>mm</td>
</tr>
<tr>
<td>Panel Cutout Dimensions</td>
<td>117 (4.61) min.</td>
<td>mm</td>
</tr>
<tr>
<td>General mounting</td>
<td>117 (4.61) min.</td>
<td>mm</td>
</tr>
<tr>
<td>Side-by-side close mounting</td>
<td>117 (4.61) min.</td>
<td>mm</td>
</tr>
</tbody>
</table>

*Normal tolerance: ±(value of JIS B 0401-1998 tolerance grade IT18)/2*

‘N’ stands for the number of controllers to be installed. However, the measured value applies if N≥5.
Terminal Wiring Diagrams

Control output OUT
(Suffix code: Output 1; -T)

Triac output
101
NO
COM
102
Triac
Contact rating: 75 - 250 V AC
Allowable load current: 0.8 A

Relay contact output
101
NC
COM
102
Relay
Contact rating: 250 V AC, 3 A
30 V DC, 3 A (resistance load)

Output 1; -AU and -AR.

Retransmission output RET
(Optional suffix code /RT)

Refrigeration output
(Exclusive to the model equipped with the refrigeration sensor)

Cooling-side control output OUT
(Suffix code: Output 1 and Output 2: -UU, -UR, -RU or -RR.
Terminal 102 has no function in -AU and -AR.)

External contact output (relay)
ALM (Equipped as standard)

Alarm-1 output
PV high limit
103
AL1

Alarm-2 output
PV low limit
104
AL2

Alarm-3 output
105
AL3

Common
106
107
108
109

Heating/cooling control output E3-terminal area
(Exclusive to the model equipped with the heating/cooling sensor)

Heater break alarm HBA (Optional suffix code /HA)

Heater current detection input

Contact input DI (Equipped as standard)

CAUTION
Do not use a 100-240 V AC power supply for the 24 V AC/DC model; otherwise, the instrument will malfunction.

Position proportional control output VALV

(Voltage pulse (12 V))

4-20 mA DC or
0-20 mA DC,
14.5-18.0 V DC
(30 mA DC)

(Voltage pulse (12V))

4-20 mA DC,
0-20 mA DC,
14.5-18.0 V DC
(21 mA DC)

Power supply 200-240 V AC power supply
(Exclusive to the model equipped with the heating/cooling sensor)

4-20 mA DC power supply:
Optional suffix code (DC)

(Contact input Transistor)

Contact rating: 12 V DC, 10 mA or more

Function can be assigned to the terminals with no function.

Heater break alarm output

Common
507
508
509

Heater break alarm output
HAL1
HAL2
COM

Transistor contact rating: 24 V DC, 50 mA

Heater break alarm 2 output
HAL2
COM

Heater break alarm 1 output
HAL1
COM

Function can be assigned to the terminals with no function.

Retransmission output
4-20 mA DC or
0-20 mA DC,
14.5-18.0 V DC
(21 mA DC)

CAUTION
Can not be used for retransmission output or 15 V DC loop power supply when current/voltage pulse output is used.

Can be used for retransmission output or 15 V DC loop power supply when control output is not used.

Current output range can be changed.

Contact input DI (Equipped as standard)

Current/voltage pulse output RET/OUT2
(Suffix code: Output 2; A or U)

Current/voltage pulse output
RET/OUT2

Control output OUT
(Suffix code: Output 1; -A or -U)

Power supply 50-240 V AC supply
(Exclusive to the model equipped with the heating/cooling sensor)

24 V AC/DC supply:
Optional suffix code (DC)

4-20 mA DC power supply:
Optional suffix code (DC)

60 Hz shared

Allowable ranges:
100-240 V AC (+10%) (free voltage)
50/60 Hz shared

Contact input DI (Equipped as standard)

External contact input
External contact output (relay)

CAUTION
Do not use a 100-240 V AC power supply for the 24 V AC/DC model; otherwise, the instrument will malfunction.

Function can be assigned to the terminals with no function.

Position proportional control output VALV

(24 V AC/DC power supply:
Optional suffix code /DC)

When feedback input is current

Feedback input
Current (mA) input
Current (mA) input
Voltage (mV, V) input
Voltage (mV, V) input

Contact rating: 30 V DC, 3 A (resistance load)

Resistance: 100 Ω to 2.5 kΩ

Contact rating: 250 V AC, 3 A
30 V DC, 3 A (resistance load)

Terminal 102 has no function in -AU and -AR.

Retransmission output
4-20 mA DC or
0-20 mA DC,
14.5-18.0 V DC
(21 mA DC)

(Exclusive to the model equipped with the heating/cooling sensor)

CAUTION
Can not be used for retransmission output or 15 V DC loop power supply when current/voltage pulse output is used.

Can be used for retransmission output or 15 V DC loop power supply when control output is not used.

Current output range can be changed.

DI (Equipped as standard)

External contact input
External contact output (relay)

Function can be assigned to the terminals with no function.

Position proportional control output VALV

(24 V AC/DC power supply:
Optional suffix code /DC)

When feedback input is current

Feedback input
Current (mA) input
Current (mA) input
Voltage (mV, V) input
Voltage (mV, V) input

Contact rating: 30 V DC, 3 A (resistance load)

Resistance: 100 Ω to 2.5 kΩ

Contact rating: 250 V AC, 3 A
30 V DC, 3 A (resistance load)

Terminal 102 has no function in -AU and -AR.

Heating/cooling control output E3-terminal area
(Exclusive to the model equipped with the heating/cooling sensor)

Heating/cooling relay contact output

Contact rating: 240 V AC, 3 A
30 V DC, 3 A (resistance load)

Heating/cooling control output OUT
(Suffix code: Output 1 and Output 2: -UU, -UR, -RU or -RR.
Terminal 102 has no function in -AU and -AR.)

External contact output (relay)
ALM (Equipped as standard)

Alarm-1 output
PV high limit
103
AL1

Alarm-2 output
PV low limit
104
AL2

Alarm-3 output
105
AL3

Common
106
107
108
109

Contact input DI (Equipped as standard)

External contact input
External contact output (relay)

Function can be assigned to the terminals with no function.

Position proportional control output VALV

(24 V AC/DC power supply:
Optional suffix code /DC)

When feedback input is current

Feedback input
Current (mA) input
Current (mA) input
Voltage (mV, V) input
Voltage (mV, V) input

Contact rating: 30 V DC, 3 A (resistance load)

Resistance: 100 Ω to 2.5 kΩ

Contact rating: 250 V AC, 3 A
30 V DC, 3 A (resistance load)
Terminal Wiring Diagrams (E1-Terminal Area)

**Contact input** DI (Optional suffix code /X1)

- **External contact input**
  - Common
  - Factory default: No function

- **No-voltage contact**
  - Factory default: 12 V DC, 10 mA or more

- **Transistor contact**
  - Factory default: No function

- **Function** can be assigned to the terminals with no function.

**Contact output** DO (Optional suffix code /Y1)

- **External contact output (transistor)**
  - Factory default: No function

- **Transistor contact rating**: 24 V DC, 50 mA

- **Function** can be assigned to the terminal with no function.

**Contact input / Contact output** DI/DO (Optional suffix code /W1)

- **External contact input**
  - Common
  - Factory default: No function

- **No-voltage contact**
  - Factory default: 12 V DC, 10 mA or more

- **Transistor contact**
  - Factory default: No function

- **Function** can be assigned to the terminals with no function.

Contact rating: 12 V DC, 10 mA or more

Factory default: No function

No-voltage contact Transistor contact
Terminal Wiring Diagrams (E3-Terminal Area)

**RS-485 communication**

- **E3-terminal area**
  - **E4-terminal area**
  - **E1-terminal area**

**Ethernet communication (with gateway function)**

- **ETHR**
  - (Optional suffix code /ET3)
  - **10BASE-T/100BASE-TX**
  - **RJ45 connector**

  - Upper side LED (baud rate)
    - **Color**
      - **Amber**
      - **100M bps**
    - **Unlit**
  - Lower side LED (link activity)
    - **Color**
      - **Green**
      - **Linked**
    - **Unlit**

**PROFIBUS-DP communication (with Modbus master)**

- (Optional suffix code /PD3)

**CC-L**

- (Optional suffix code /CC3)

**DeviceNet communication (with Modbus master)**

- (Optional suffix code /DN3)

**CC-Link communication (with Modbus master)**

- If the UT is located at the end of a segment for the CC-Link communication wiring, terminating resistors are separately needed. These are to be prepared by users. (110 Ω: 1 pc.)
Terminal Wiring Diagrams (E4-Terminal Area)

**24 V DC loop power supply**

LPS24 (Optional suffix code /L4)

**Contact output**

DO (Optional suffix code /Y4)

External contact output

- Factory default: No function
- Factory default: No function
- Factory default: No function
- Factory default: No function
- Factory default: No function

Transistor contact rating: 24 V DC, 50 mA

Function can be assigned to the terminals with no function.

**Contact input**

DI (Optional suffix code /X4)

External contact input

- Common
- Factory default: No function
- Factory default: No function
- Factory default: No function
- Factory default: No function
- Factory default: No function

Contact rating: 12 V DC, 10 mA or more

Function can be assigned to the terminals with no function.

**Contact input / Contact output**

DI/DO (Optional suffix code /W4)

External contact input

- Common
- Factory default: No function
- Factory default: No function

Contact rating: 12 V DC, 10 mA or more

External contact output

- Factory default: No function
- Factory default: No function

Transistor contact rating: 24 V DC, 50 mA

Function can be assigned to the terminals with no function.