

# Drawings

Model UT55A  
Digital Indicating Controller  
(UT55A-NNN-xx-xx/x)

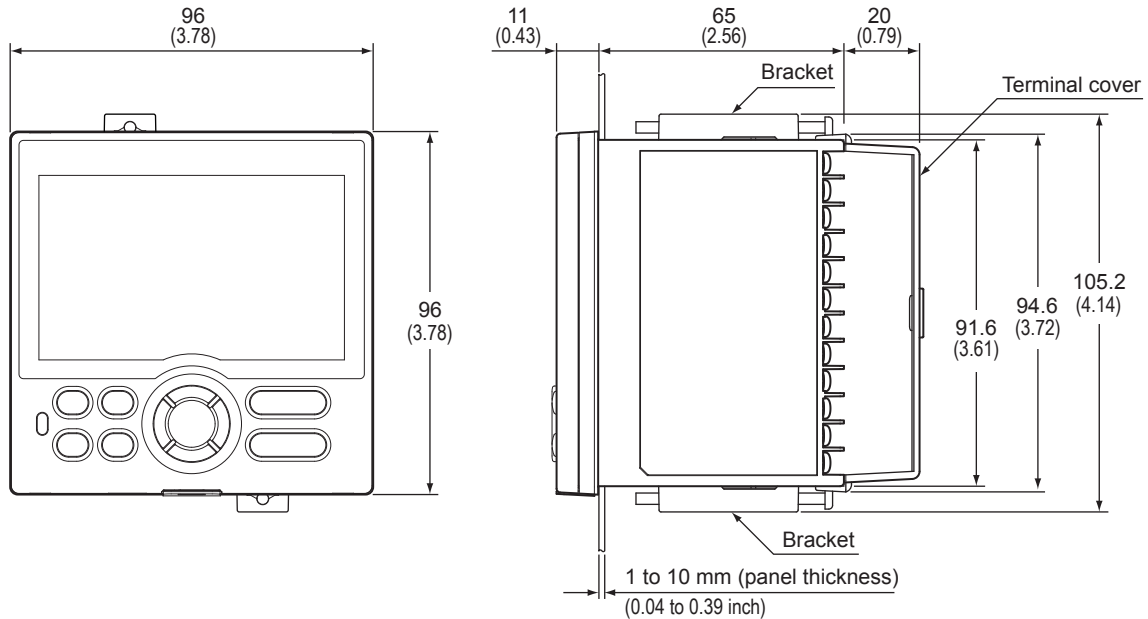


SD 05P01C41-05EN

[Style: S4]

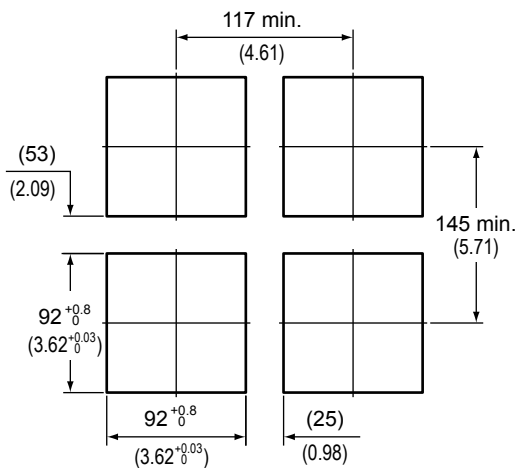
## External Dimensions

Unit: mm  
(approx. inch)

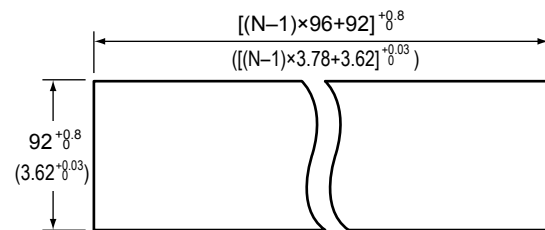


## Panel Cutout Dimensions

### General mounting



### Side-by-side close mounting



"N" stands for the number of controllers to be installed.  
However, the measured value applies if  $N \geq 5$ .

Normal tolerance:  $\pm$ (value of JIS B 0401-1998 tolerance grade IT18) / 2

# Terminal Wiring Diagrams

### Control output

**Suffix code: Output 1= -T**  
**Output 1= -R or -U**

**Triac output**

Contact rating: 75 - 250 V AC  
Allowable load current: 0.8 A

**Relay contact output**

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

### Equipped as standard

### Contact output

**External contact output (relay)**

Alarm-3 output (PV high limit)	AL3	104	UT
Common		105	
Alarm-2 output (PV low limit)	AL2	106	
Common		107	
Alarm-1 output (PV high limit)	AL1	108	
Common		109	

Relay contact rating: 240 V AC, 1 A  
30 V DC, 1 A (resistance load)

### Power supply

**100-240 V AC power supply**

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

**24 V AC/DC power supply**

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

### Suffix code: Output 1=-P

### Position proportional control output

**Relay contact output**

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

**Feedback input**

Resistance: 100 Ω to 2.5 kΩ

When feedback input is current

### Cooling-side control output

**Suffix code: Output 2=R or U**  
**Output 2=T**

**Relay contact output**

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

**Triac output**

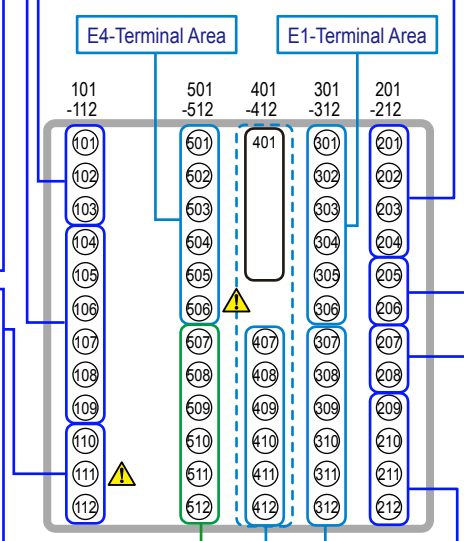
Contact rating: 75 - 250 V AC  
Allowable load current: 0.8 A

### Equipped as standard

### PV input

<b>TC input</b>	<b>RTD input</b>
<b>Current (mA) input</b>	<b>Voltage (mV, V) input</b>

Factory default: PV input type is undefined.



### Equipped as standard

### Contact input

**External contact input**

Factory default: No function

STOP when DI2=ON  
RUN when DI2=OFF

AUTO when DI1=ON  
MAN when DI1=OFF

Common

Contact rating: 12 V DC, 10 mA or more

Function can be assigned to the terminal with no function.

### Suffix code: Output 2=A or U

<b>Current/voltage pulse output</b>	<b>Retransmission output</b>	<b>15 V DC loop power supply</b>
0-20 mA DC, 4-20 mA DC, Voltage pulse (12V)	Default: Undefined, 0-20 mA DC, 4-20 mA DC	14.5-18.0 V DC (Max. 21 mA DC)
	Default: 4-20 mA DC	

### Optional suffix code /RT

### Retransmission output

**Retransmission output** | **15 V DC loop power supply**

Default: PV retransmission

4-20 mA DC or 0-20 mA DC

Load resistance 600 Ω or less | Default: 4-20 mA DC

14.5-18.0 V DC (Max. 21 mA DC)

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

### Suffix code: Output 1= -A or -U

### Control output

<b>Current/voltage pulse output</b>	<b>Retransmission output</b>
0-20 mA DC, 4-20 mA DC, Voltage pulse (12 V)	Default: Undefined, 0-20 mA DC, 4-20 mA DC
	Default: 4-20 mA DC

15 V DC loop power supply

14.5-18.0 V DC (Max. 21 mA DC)

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

Current output range can be changed. In Position proportional type, can be used for retransmission output or 15 V DC loop power supply.

### Optional suffix code /HA

### Heater break alarm

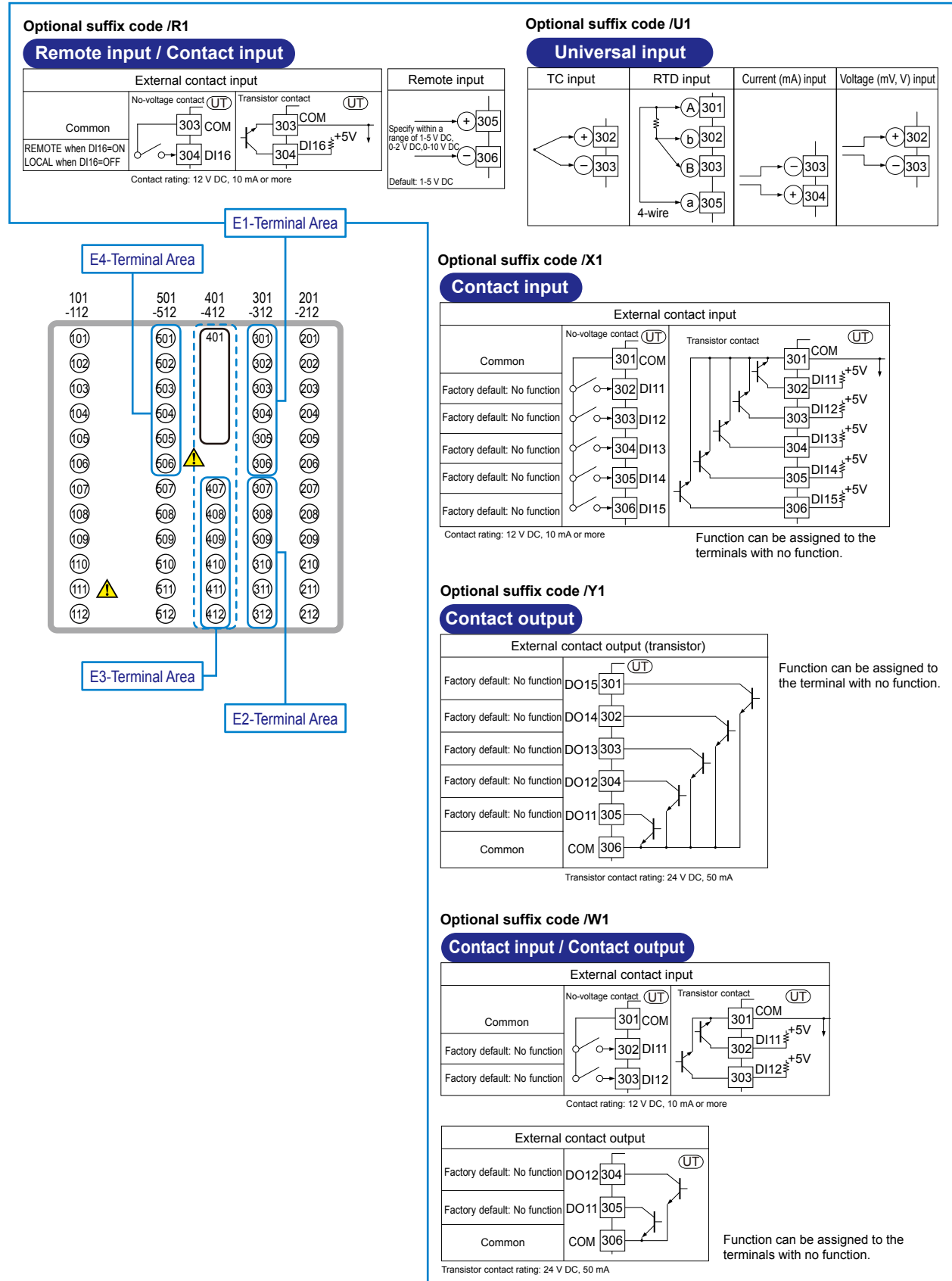
**External contact output (transistor)**

Heater break alarm-1 output	HAL1	507	UT
Heater break alarm-2 output	HAL2	508	
Common		509	

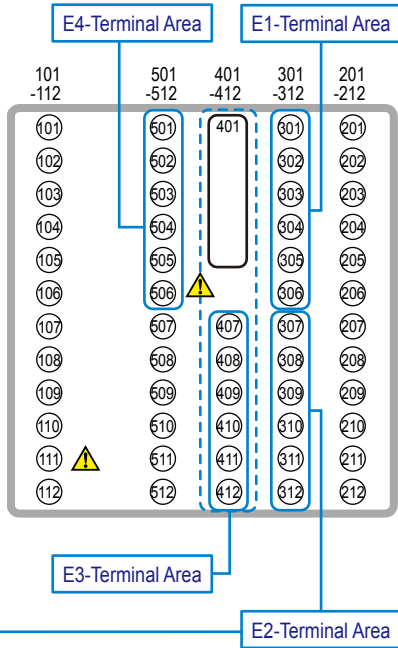
Transistor contact rating: 24 V DC, 50 mA

**Heater current detection input**

## Terminal Wiring Diagrams (E1-Terminal Area)

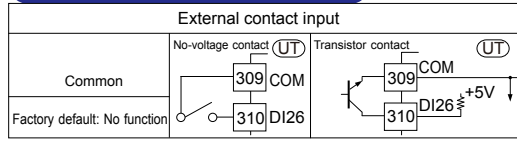


Terminal Wiring Diagrams (E2-Terminal Area)



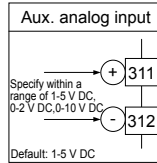
Optional suffix code /A2

Aux. analog input / Contact input



Contact rating: 12 V DC, 10 mA or more

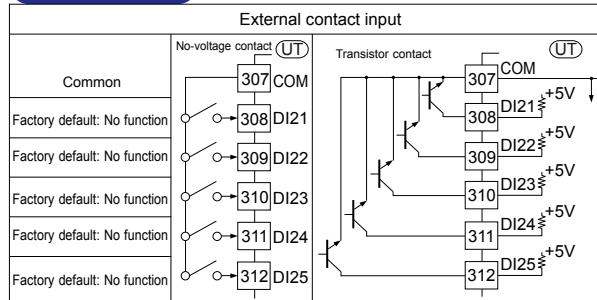
Function can be assigned to the terminals with no function.



Aux. analog input can be used for feedforward input in Single-loop control and Single-loop position proportional control.

Optional suffix code /X2

Contact input

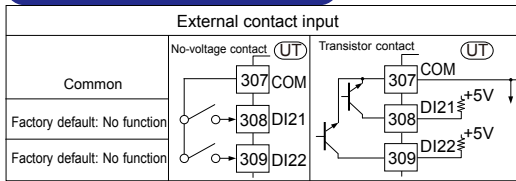


Contact rating: 12 V DC, 10 mA or more

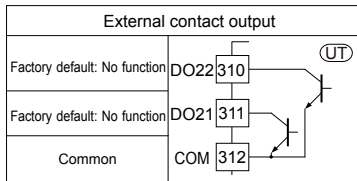
Function can be assigned to the terminals with no function.

Optional suffix code /W2

Contact input / Contact output



Contact rating: 12 V DC, 10 mA or more

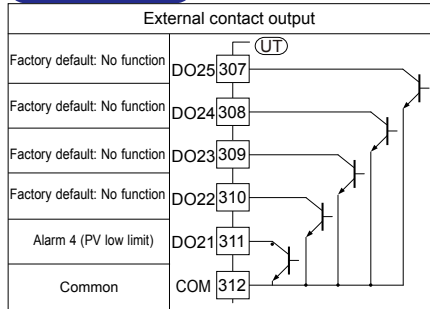


Transistor contact rating: 24 V DC, 50 mA

Function can be assigned to the terminals with no function.

Optional suffix code /Y2

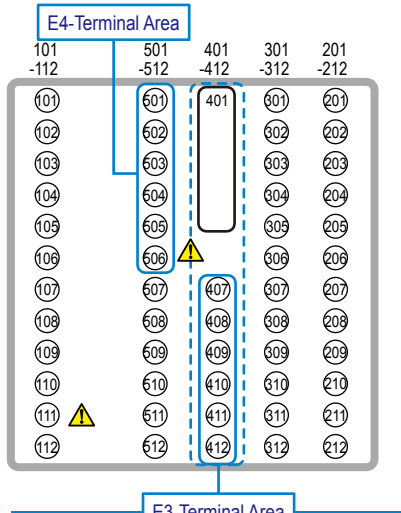
Contact output



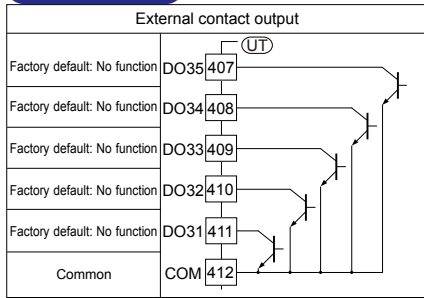
Transistor contact rating: 24 V DC, 50 mA

Function can be assigned to the terminals with no function.

### Terminal Wiring Diagrams (E3-Terminal Area)



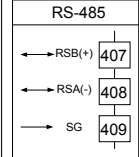
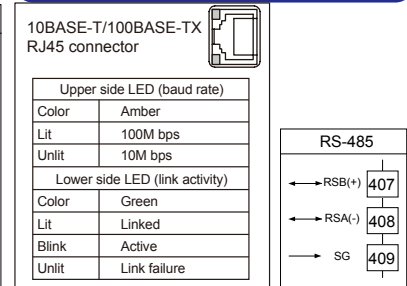
#### Contact output Optional suffix code /Y3



Function can be assigned to the terminals with no function.

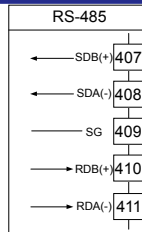
#### Optional suffix code /ET3

##### Ethernet communication (with gateway function)



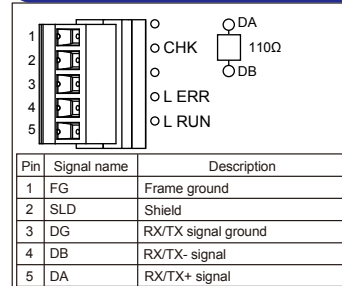
#### Optional suffix code /CH3

##### RS-485 communication

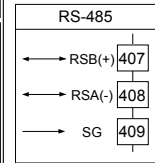


#### Optional suffix code /CC3

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

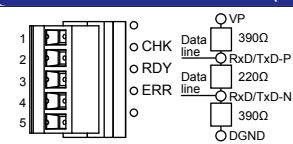


If the UT is located at the end of a segment for the CC-Link communication wiring, terminating resistors are separately needed. These are to be prepared by users. (110 Ω: 1 pc.)



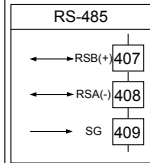
#### Optional suffix code /PD3

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

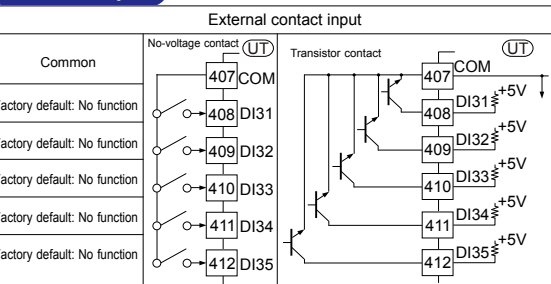


If the UT is located at the end of a segment for the PROFIBUS communication wiring, terminating resistors are separately needed. These are to be prepared by users. (390 Ω: 2 pcs. 220 Ω: 1 pc., or an active terminator.)

LED	Lit	Unlit
CHK (red)	User profile error/ Address error	Normal
RDY (green)	Normal Communicating successfully	No power, or Communication failure
ERR (red)	Not connected, or communication failure (flashing)	Normal

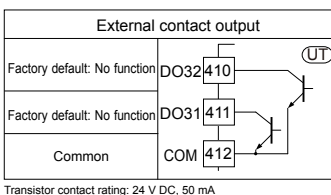
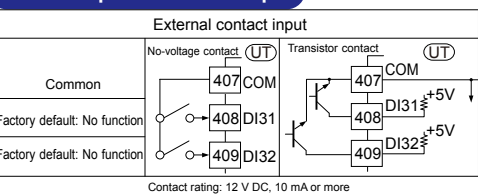


#### Contact input Optional suffix code /X3



Function can be assigned to the terminals with no function.

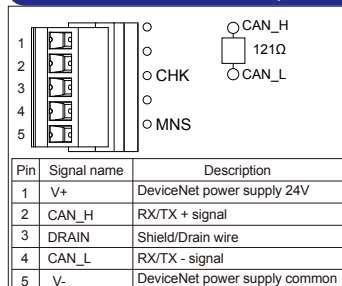
#### Contact input / Contact output Optional suffix code /W3



Function can be assigned to the terminals with no function.

#### Optional suffix code /DN3

##### DeviceNet communication (with Modbus master)



If the UT is located at the end of a segment for the DeviceNet communication wiring, terminating resistors are separately needed. These are to be prepared by users. (121 Ω: 1 pc.)

