Drawings

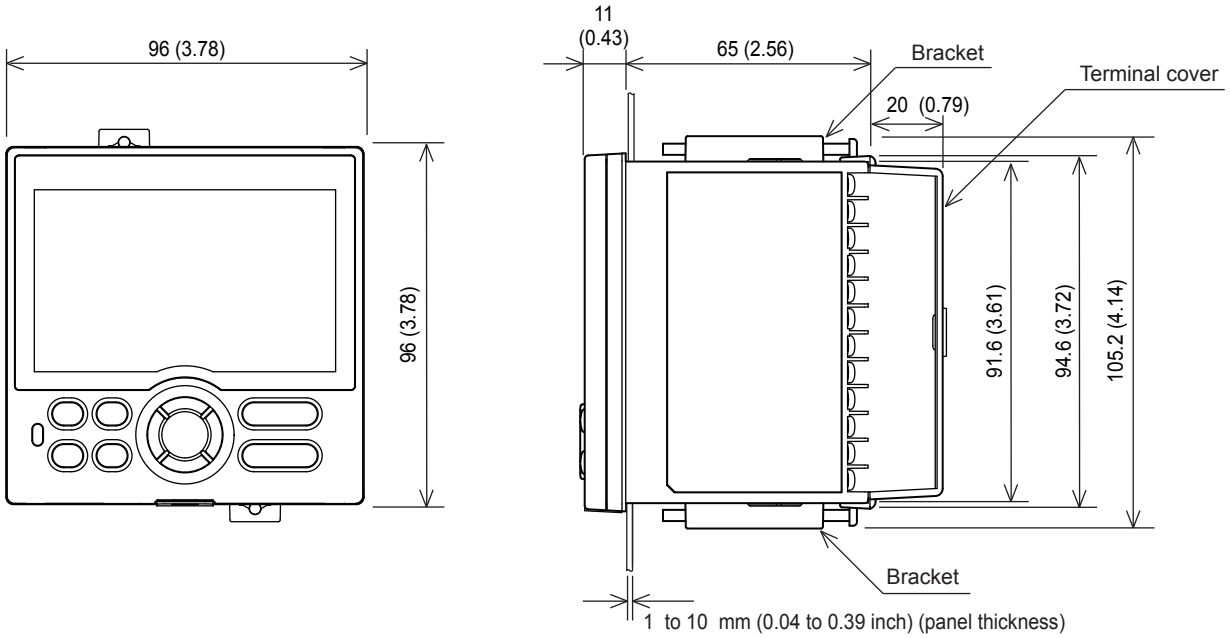
Model UT35A
Digital Indicating Controller
(UT35A-NNN-xx-xx/x)

SD 05P01D41-05EN

[Style: S3]

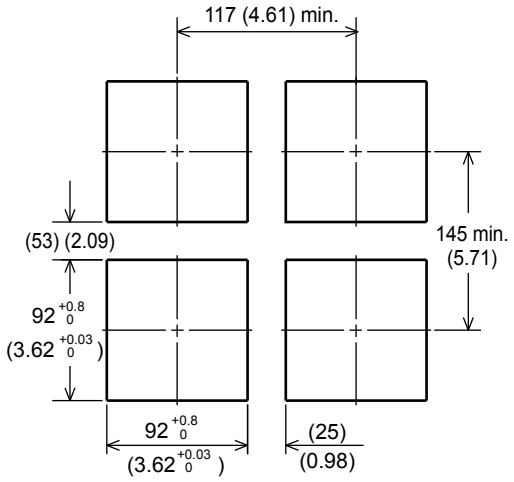
Unit: mm
(approx. inch)

External Dimensions

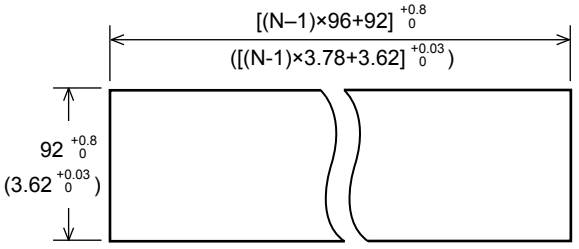


Panel Cutout Dimensions

General mounting



Side-by-side close mounting



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

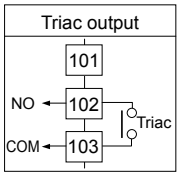
Normal tolerance: ±(value of JIS B 0401-1998 tolerance grade IT18) /2

Terminal Wiring Diagrams

Control output OUT

(Suffix code: Output 1; -T)

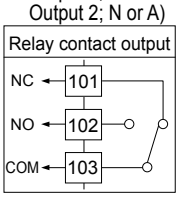
Triac output



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

(Suffix code: Output 1; -R or -U and Output 2; N or A)

Relay contact output

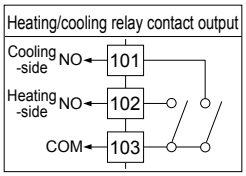


Contact rating: 250 V AC, 3 A
30 V DC, 3 A
(resistance load)

Heating/cooling control output

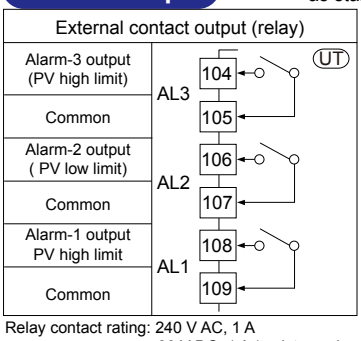
(Suffix code: Output 1 and Output 2; -UU, -UR, -RU or -RR.
Terminal 102 has no function in -AU and -AR.)

OUT2
OUT



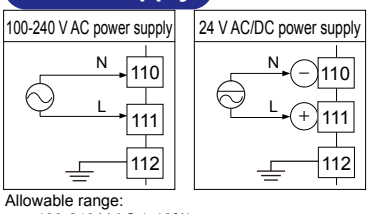
Contact rating: 240 V AC, 3 A
30 V DC, 3 A (resistance load)

Contact output ALM (Equipped as standard)



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

Power supply



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

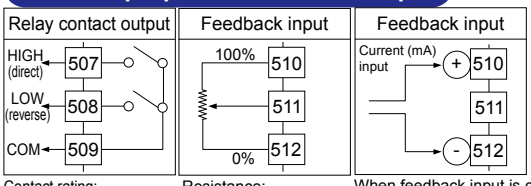
(24 V AC/DC power supply: Optional suffix code /DC)

CAUTION

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

(Suffix code: Output 1=-P)

Position proportional control output VALV

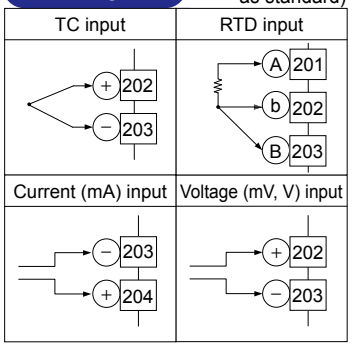


Contact rating:
250 V AC, 3A
30 V DC, 3 A
(resistance load)

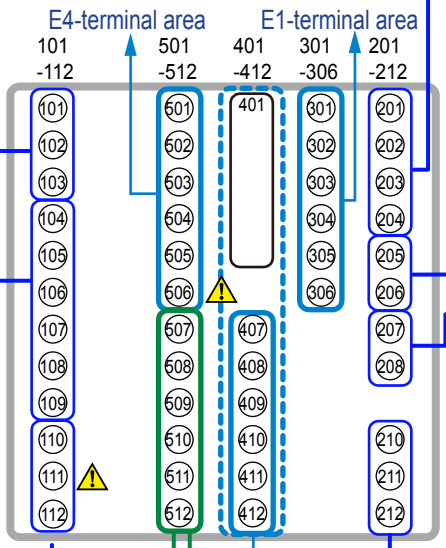
Resistance:
100 Ω to 2.5 kΩ

When feedback input is current

PV input PV (Equipped as standard)

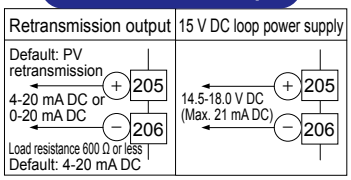


Factory default: PV input type is undefined.



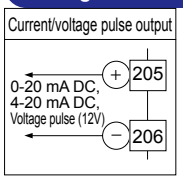
(Optional suffix code /RT)

Retransmission output RET



(Suffix code: Output 2; A or U)

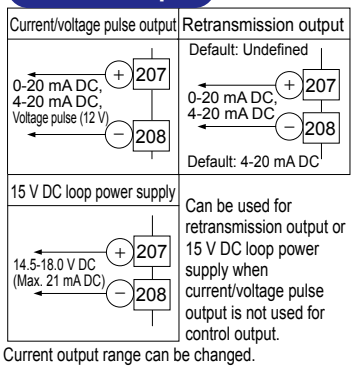
Cooling-side control output RET/OUT2



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.

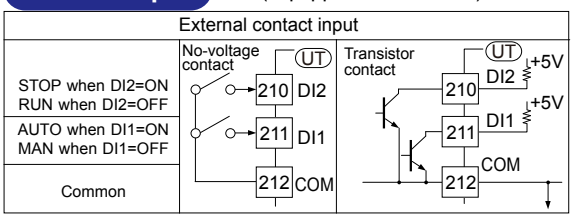
(Suffix code: Output 1; -A or -U)

Control output OUT



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.

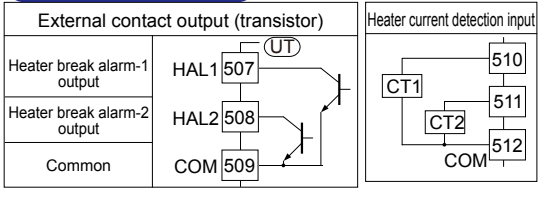
Contact input DI (Equipped as standard)



Contact rating: 12 V DC, 10 mA or more

Function can be assigned to the terminals with no function.

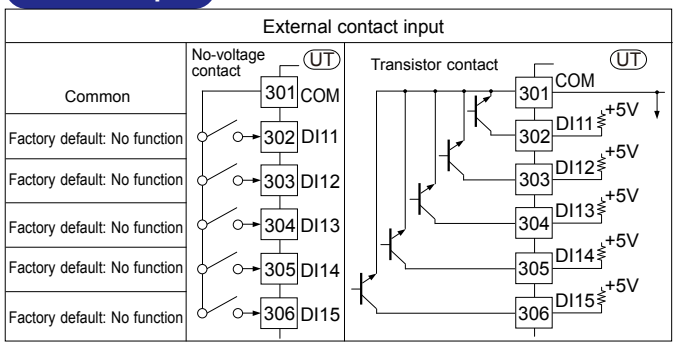
Heater break alarm HBA (Optional suffix code /HA)



Transistor contact rating: 24 V DC, 50 mA

Terminal Wiring Diagrams (E1-Terminal Area)

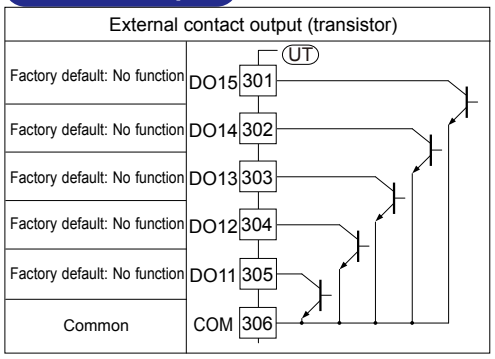
Contact input DI (Optional suffix code /X1)



Contact rating: 12 V DC, 10 mA or more

Function can be assigned to the terminals with no function.

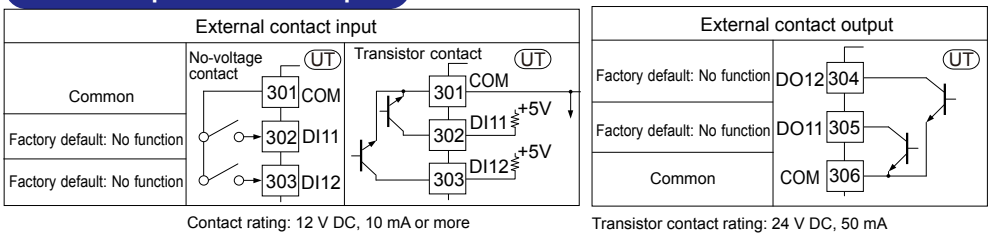
Contact output DO (Optional suffix code /Y1)



Transistor contact rating: 24 V DC, 50 mA

Function can be assigned to the terminal with no function.

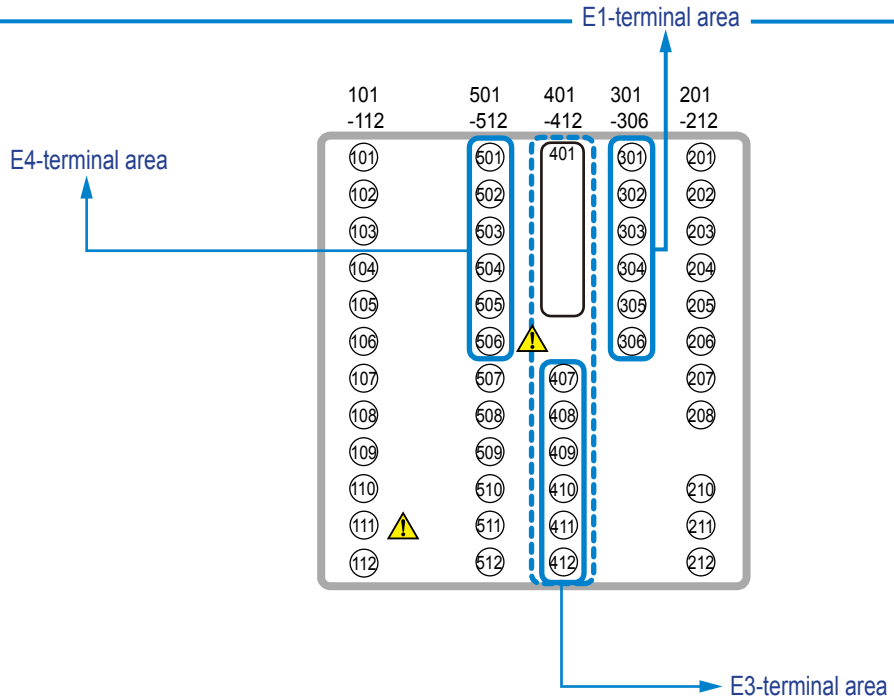
Contact input / Contact output DI/DO (Optional suffix code /W1)



Contact rating: 12 V DC, 10 mA or more

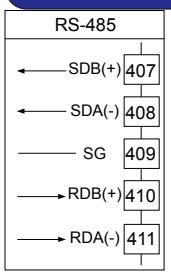
Transistor contact rating: 24 V DC, 50 mA

Function can be assigned to the terminals with no function.

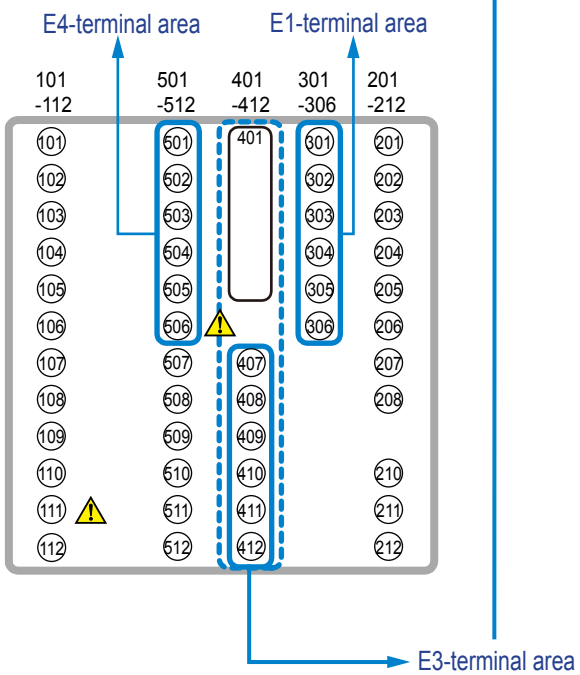


Terminal Wiring Diagrams (E3-Terminal Area)

RS-485 communication



RS485
(Optional suffix code /CH3)

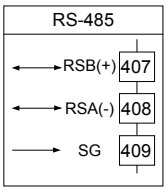


Ethernet communication (with gateway function)

10BASE-T/100BASE-TX
RJ45 connector

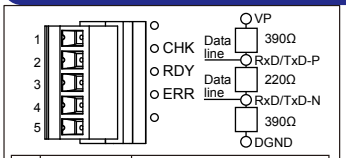
ETHR
(Optional suffix code /ET3)

Upper side LED (baud rate)	
Color	Amber
Lit	100M bps
Unlit	10M bps
Lower side LED (link activity)	
Color	Green
Lit	Linked
Blink	Active
Unlit	Link failure



PROF
(Optional suffix code /PD3)

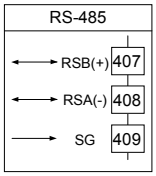
PROFIBUS-DP communication (with Modbus master)



Pin	Signal name	Description
1	VP	+5V bus power
2	RxD/TxD-P	Data signal (positive data receive/transmit)
3	RxD/TxD-N	Data signal (negative data recive/transmit)
4	DGND	Signal ground
5	SHIELD	Shield ground

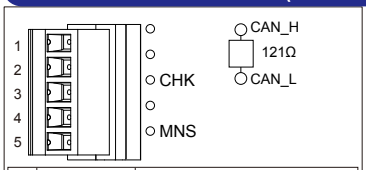
LED	Lit	Unlit
CHK (red)	User profile error	Normal
RDY (green)	Normal Communicating successfully	No power, or Communication failure
ERR (red)	Not connected, or communication failure (flashing)	Normal

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.)



DNET
(Optional suffix code /DN3)

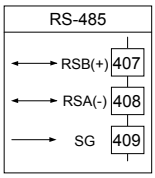
DeviceNet communication (with Modbus master)



Pin	Signal name	Description
1	V+	DeviceNet power supply 24V
2	CAN_H	RX/TX + signal
3	DRAIN	Shield/Drain wire
4	CAN_L	RX/TX - signal
5	V-	DeviceNet power supply common

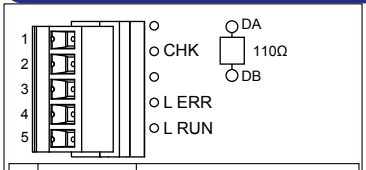
LED	Lit/flashing	Unlit
CHK (red)	User profile error	Normal
MNS (green/ red)	Normal. Communicating successfully (green, lit). Not connected (green, flashing).	No electricity
	Critical link failure (red, lit). Communication timeout (red, flashing)	
	At power-on/Communication faulted (green/red, flashing)	

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.)



CC-L
(Optional suffix code /CC3)

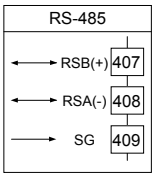
CC-Link communication (with Modbus master)



Pin	Signal name	Description
1	FG	Frame ground
2	SLD	Shield
3	DG	RX/TX signal ground
4	DB	RX/TX- signal
5	DA	RX/TX+ signal

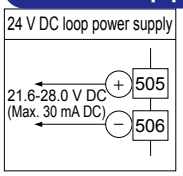
LED	Lit	Unlit
CHK (red)	User profile error/ Address error	Normal
L ERR (red)	Communication failure (CRC error)	Normal
L RUN (green)	Normal Communicating successfully	No carrier detected/ Connection timeout

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.)

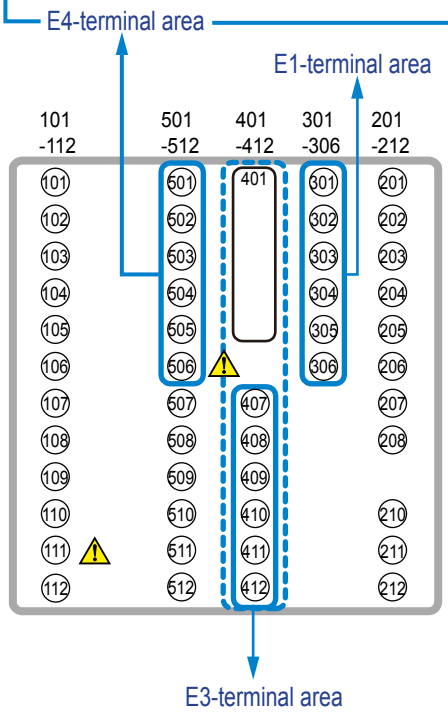


Terminal Wiring Diagrams (E4-Terminal Area)

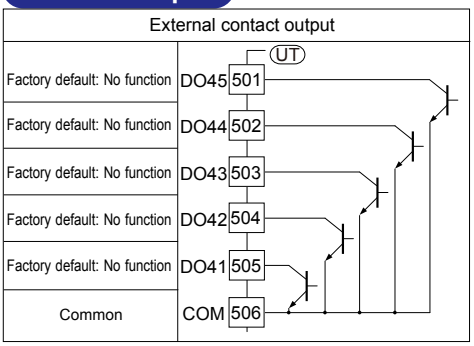
24 V DC loop power supply



LPS24
(Optional suffix code /L4)



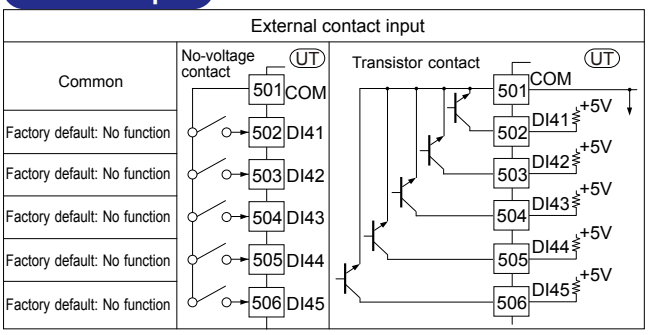
Contact output DO (Optional suffix code /Y4)



Transistor contact rating: 24 V DC, 50 mA

Function can be assigned to the terminals with no function.

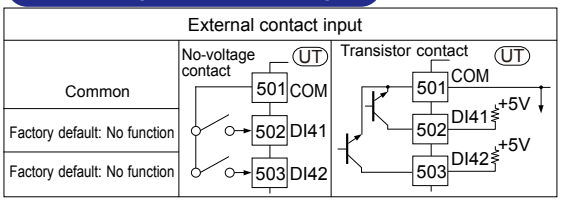
Contact input DI (Optional suffix code /X4)



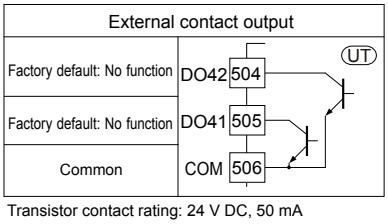
Contact rating: 12 V DC, 10 mA or more

Function can be assigned to the terminals with no function.

Contact input / Contact output DI/DO (Optional suffix code /W4)



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.