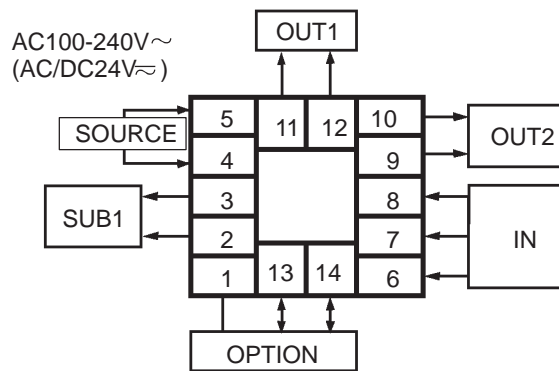


# Wiring Terminals

## Terminal arrangement



## Precautions when wiring

- Separate input leads and power lines in order to protect the controller and its lines from external noise.
- We recommend using solderless terminals when wiring the controller.
- Tighten the terminal screws using a torque no greater than 0.78 N·m (8kgf·cm).
- Use the following type of solderless terminals for M3.5 screws.



## Wiring

### Power supply

5	11	12	10
4			9
3			8
2			7
1	13	14	6

In the following wiring diagrams, the left side of the terminal Nos. indicates the inside of the controller.

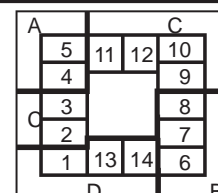
- Input power to terminals Nos. 4 and 5. Power specifications are as follows:  
 100 to 240 VAC, 50/60 Hz, 15 VA  
 or  
 24 VAC, 50/60 Hz, 6 VA  
 24 VDC, 3.5W



About the power blocks

The E5CK has independent power supplies for each of the terminal blocks shown on the right. However, note that the power supplies for blocks C (exclude relay output) and D are shared for the following option unit.

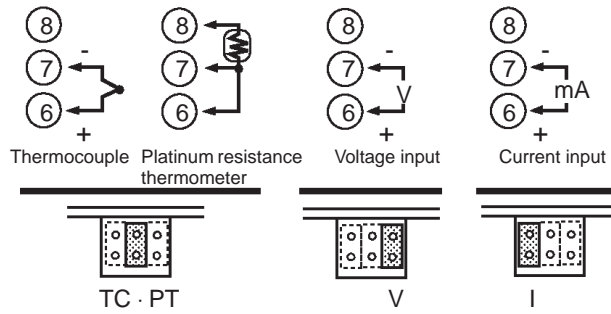
- Option unit : E53-CKB or E53-CKF



## Input

5	11	12	10
4			9
3			8
2			7
1	13	14	6

- Connect the sensor input to terminal Nos. 6 to 8 as follows according to the input type.

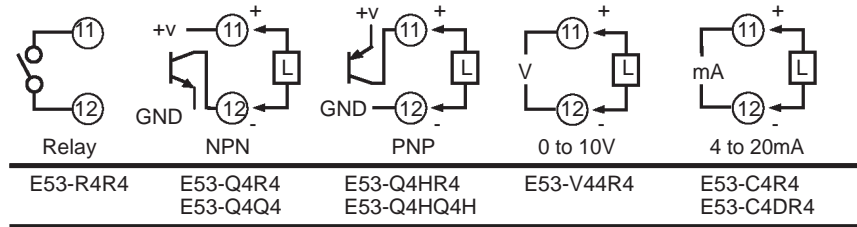


- Set the input type jumper inside the controller matched to the input type. Set thermocouples and platinum resistance thermometer as temperature input to the shared jumper setting (TC/PT). For details on the input type jumper, see Section 2–1 Setup.

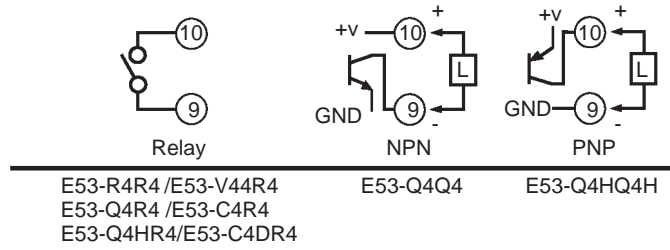
## Control output

5	11	12	10
4			9
3			8
2			7
1	13	14	6

- Terminal Nos. 11 and 12 are for control output 1 (OUT1). The following diagrams show the available outputs and their internal equalizing circuits.



- Terminal Nos. 9 and 10 are for control output 2 (OUT2). The following diagrams show the available outputs and their internal equalizing circuits.



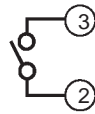
- The following table shows the specifications for each output type.

Output Type	Specifications
Relay	250VAC, 3 A
Voltage (NPN)	12VDC, 20 mA (with short-circuit protection)
Voltage (PNP)	12VDC, 20 mA (with short-circuit protection)
0 to 10V	0 to 10VDC, Permissible load impedance: 1 kΩ min., Resolution: Approx. 2600
4 to 20mA	4 to 20 mA, Permissible load impedance: 500 Ω max., Resolution: Approx. 2600

## Auxiliary output 1

5	11	12	10
4			9
3			8
2			7
1	13	14	6

- Terminal Nos.2 and 3 are for auxiliary output 1 (SUB1).
- The internal equalizing circuit for auxiliary output 1 is as follows:

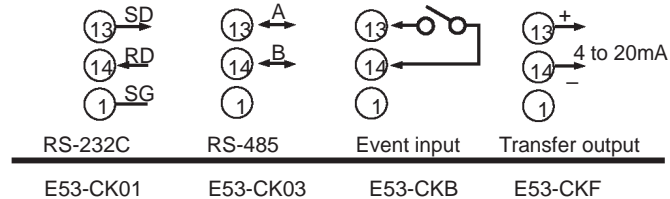


- Relay specifications are as follows:  
1a, 250 VAC, 1 A

## Option

5	11	12	10
4			9
3			8
2			7
1	13	14	6

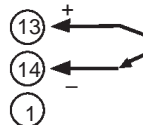
- Terminal Nos.1, 13 and 14 are available only for controllers that support optional functions.
- These terminals can be wired as follows depending on the controller type.



- For details on the RS-232C and RS-485 communications functions, see Chapter 6, Using the Communications Functions.
- Use event inputs under the following conditions:

Contact input	ON: 1kΩmax., OFF: 100 kΩ max.
No-contact input	ON: residual voltage 1.5 V max., OFF: leakage current 0.1 mA max.

Polarities during no-contact input are as follows:



- Transfer output specifications are as follows:  
4 to 20 mA DC, Permissible load impedance: 500Ω max., Resolution: Approx. 2600