

FAIL-SAFE CONTROLLER

4-Wire Type Control Circuit (open circuit detector)

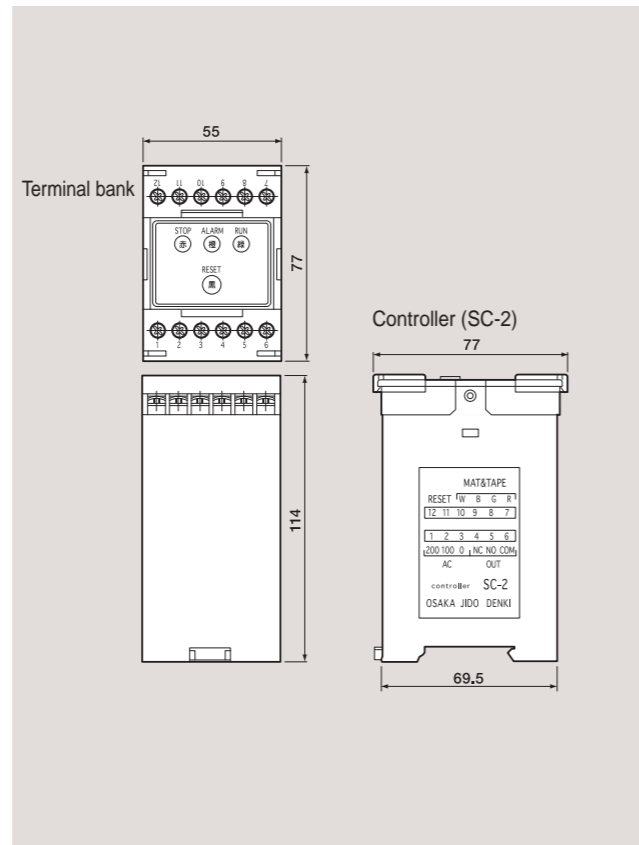
The fail-safe controller is an open circuit detection circuit that serves to create a safety zone as part of factory automation work. Used in combination with a 4-wire type mat switch, edge/tape switch, or the like, it ensures an output identical to that occurring in response to switch activation in the event of a problem on the power supply or a line disconnection/power outage in switching circuitry.

● SC-2 (for AC-specific application)



Specifications

Input voltage	AC100, 200V
Power consumption	5W
Output contract	1c AC250V-5A, DC30V-5A
Output contact life	50,000 activations (250 VAC, 5 A)
Mounting	DIN rail type, no mounting hole
Material	ABS resin
Weight	274 g (approx.)



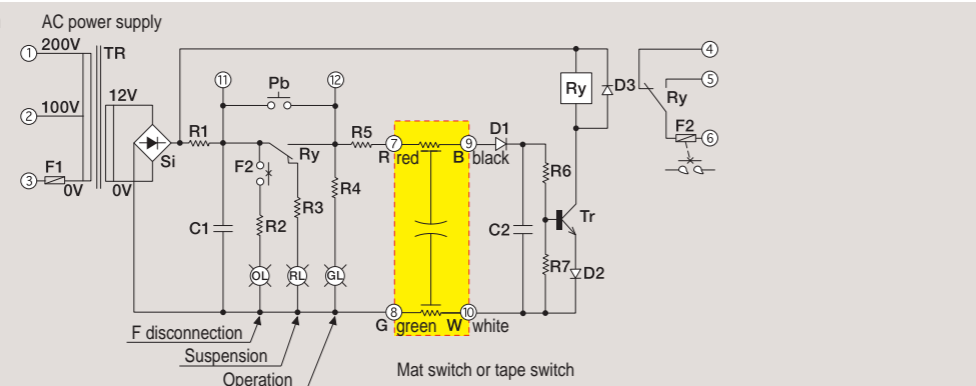
Guide to a 4-wire Type Control Circuit

The circuit is used in combination with a 4-wire type mat switch, edge/tape switch, or the like for detection of line disconnections.

- Connect the 4-wire mat switch for example; then, connect a 100/200 V power supply.
 - Keep a low-level current flowing at all times, thereby keeping the relay contact built in the SC-2 ON. (The light-emitting diode glows green.)
 - Under the weight of an individual, the voltage drops so that the relay contract goes OFF. (The light-emitting diode glows red instead of green.)
 - In the event of an open circuit or short circuit, the absence of voltage causes the relay contact to go OFF. (The light-emitting diode glows red instead of green.)
 - In the event of a power outage or blowout of a fuse, the relay contact goes OFF. (The light-emitting diode goes OFF.)
- ◆ The CS-2 circuit is designed based on self-maintaining circuitry, calling for resetting each time the mat/tape switch is activated.
 ◆ If a direct circuit configuration (without the need for resetting) is used, short-circuit reset terminals 11 and 12 with a lead wire. (See the diagram below.)



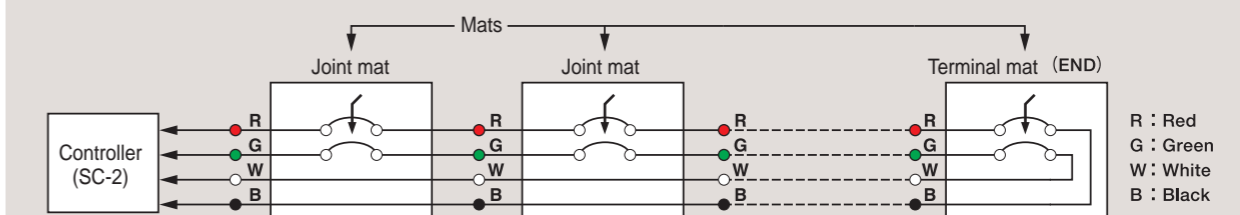
SC-2 Controller Circuit Diagram



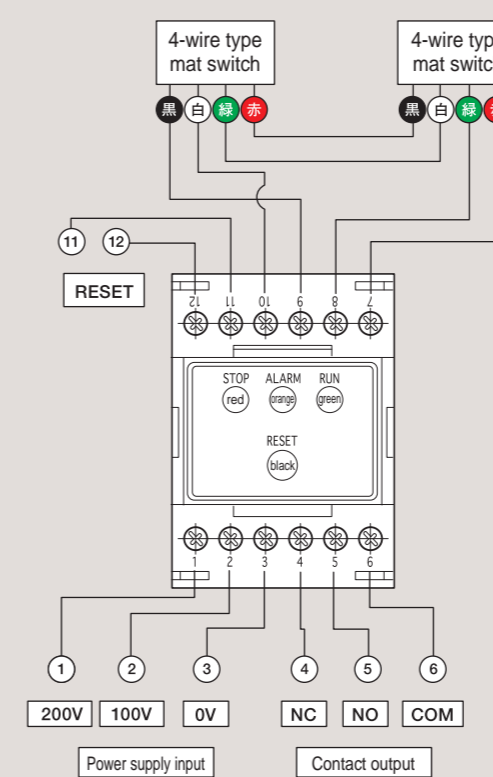
※ Avoid the outdoors and a site subject to water, oil, or excessive vibration for use.

4-Wire Type Control Circuit (Fail-safe Controller) Wiring Example

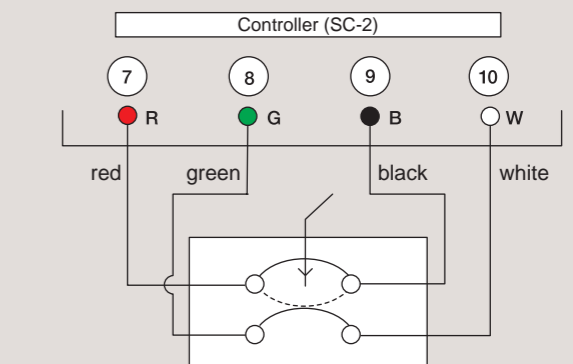
Wiring Example 1: 4-wire type mats in a coupled configuration



Wiring Example 2: 4-wire type terminal mat (2 pc.) SC-2 (fail-safe controller)

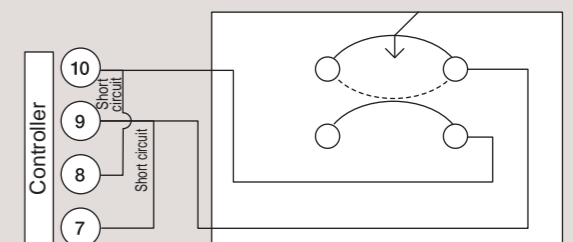


Wiring Example 3: 4-wire type edge/tape switch

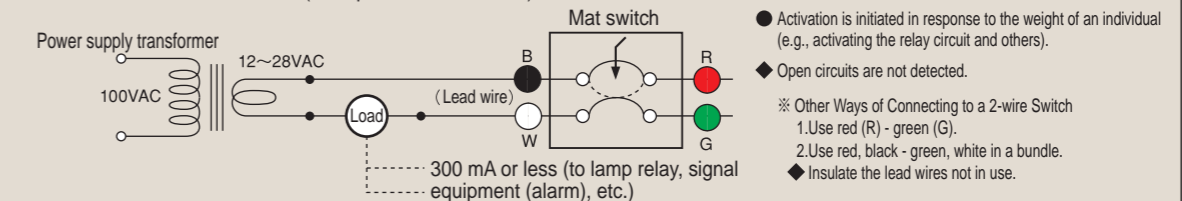


※ Be sure each terminal number matches the wire color indicated.

Wiring Example 4: 2-wire type mat/tape switch (w/o open circuit detection)



4-Wire Lead Connected to a 2-Wire Switch (w/o open circuit detection)



- Activation is initiated in response to the weight of an individual (e.g., activating the relay circuit and others).
- ◆ Open circuits are not detected.
- ※ Other Ways of Connecting to a 2-wire Switch
 - Use red (R) - green (G).
 - Use red, black - green, white in a bundle.
- ◆ Insulate the lead wires not in use.



FAIL-SAFE CONTROLLER

Fail-safe Controller (open circuit detector; CE-certified)

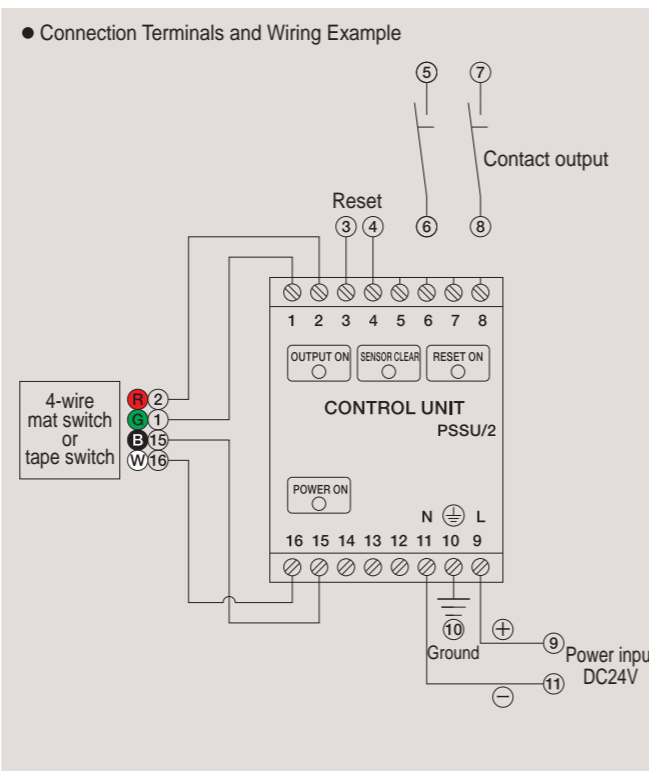
The controller is employed in 4-wire mat switches/sensing edges exported to the US and European countries.

- PSSU-2 (DC application-specific)



Specifications

Safety class	3 (EN954-1)
Input voltage	DC24V
Power consumption	6W
Safety output	2 circuits (2a-contact)
Output contact	DC24V-2A
Reset function	Only externally (remote)
Monitor output	Absent
Monitor lamp	Present
Mounting	DIN rail type, w/ mounting hole (2-φ 4-6)
Material	Polycarbonate
Weight	250 g (approx.)



※ NOTE: Not designed for use in a direct circuit.

Fail-safe Controller (open circuit detector; CE-certified)

The controller uses a high-accuracy safety double coil.

- PRSU-4

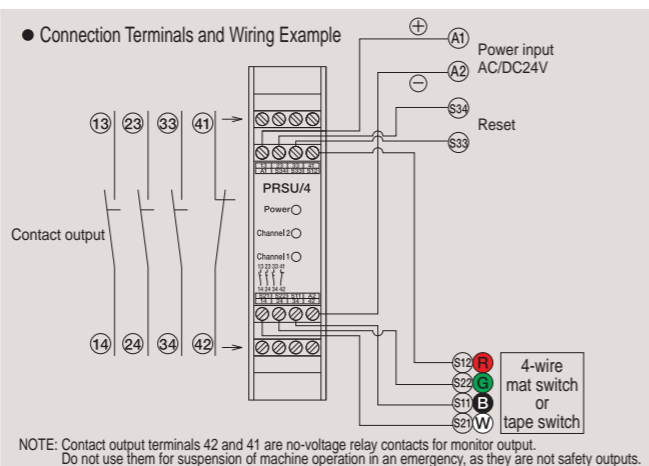


- ◆ The circuit of PRSU-4 is designed based on self-maintaining circuitry, calling for resetting each time the mat/tape switch is activated.

- ◆ If a direct circuit (without the need for resetting) is used, short-circuit reset terminals (S34) and (S33) with a lead wire. (See the diagram below.)

Specifications

Safety class	3 (EN954-1)
Input voltage	DC24V
Power consumption	5W
Safety output	3 circuits (3a-contact)
Output contact	AC230V-5A
Reset function	Directly or externally (remote)
Monitor output	Present (in normal state; 1b-contact)
Monitor lamp	Absent
Mounting	DIN rail type, no mounting hole
Material	Polycarbonate
Weight	170 g (approx.)



4-Wire Wiring Diagram

