

1ch RTD Transmitter

Model: **SF1R**

■ **Model**

SF1R - □ □ □ - □ - □

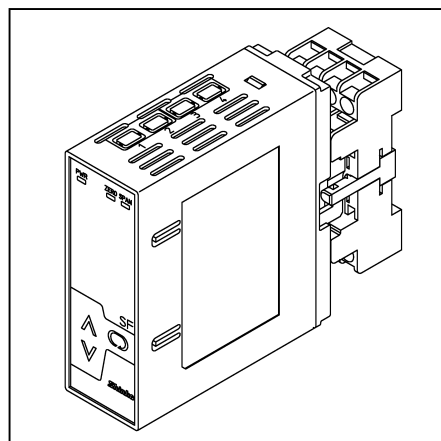
Input (Burnout: Upscale)
01: Pt100
02: JPt100
(Burnout: Downscale)
11: Pt100
12: JPt100

Input sampling period
01: 25ms
02: 125ms
03: 250ms

Output
01: 4 to 20mA DC 06: 0 to 1V DC
02: 0 to 20mA DC 07: 0 to 5V DC
03: 0 to 12mA DC 08: 1 to 5V DC
04: 0 to 10mA DC 09: 0 to 10V DC
05: 1 to 5mA DC

Socket
1: Screw fall prevention, finger-safe (For Y terminal)
2: For Ring terminal

Power supply
0: 100 to 240V AC
1: 24V AC/DC



■ **How to Order**

Specify a model.
(e.g.) SF1R-010101-1-0
Default value

Input	Pt100: -200 to 850°C
Output	4 to 20mA DC
Input sampling period	25ms

■ **Input Specifications**
RTD (3-wire type)

Input detection current: Approx. 0.2mA
Allowable lead wire resistance: 10Ω or less per wire
Burnout: Upscale/Downscale
Input:

RTD	Input range	
Pt100	-200 to 850°C	-328 to 1562°F
JPt100	-200 to 500°C	-328 to 932°F

Minimum span: 50°C (100°F)

■ **Output Specifications**

DC Current

Output range	Allowable load resistance	Zero adjustment range	Span adjustment range
4 to 20mA DC	700Ω or less	-5 to 5%	95 to 105%
0 to 20mA DC	700Ω or less	0 to 5%	95 to 105%
0 to 12mA DC	1.2kΩ or less	0 to 5%	95 to 105%
0 to 10mA DC	1.2kΩ or less	0 to 5%	95 to 105%
1 to 5mA DC	2.4kΩ or less	-5 to 5%	95 to 105%

DC Voltage

Output range	Allowable load resistance	Zero adjustment range	Span adjustment range
0 to 1V DC	100Ω or more	0 to 5%	95 to 105%
0 to 5V DC	500Ω or more	0 to 5%	95 to 105%
1 to 5V DC	500Ω or more	-5 to 5%	95 to 105%
0 to 10V DC	1kΩ or more	0 to 5%	95 to 105%

■ **Performance**

Accuracy: Within ±0.2% of input span (at 23°C of ambient temperature)

Input sampling period : 25ms, 125ms, 250ms
(Must be specified.)

Response time:

65ms (typ.)(0→90%)(Input sampling period: 25ms)
225ms (typ.)(0→90%)(Input sampling period: 125ms)
425ms (typ.)(0→90%)(Input sampling period: 250ms)

Temperature coefficient : ±0.015%/°C or less

Insulation resistance: 10MΩ or more, at 500V DC
(Input - Output - Power)

Dielectric strength: 2.0kV AC for 1 minute
(Input - Output - Power)

■ **General Structure**

Case: Flame-resistant resin Color: Light gray

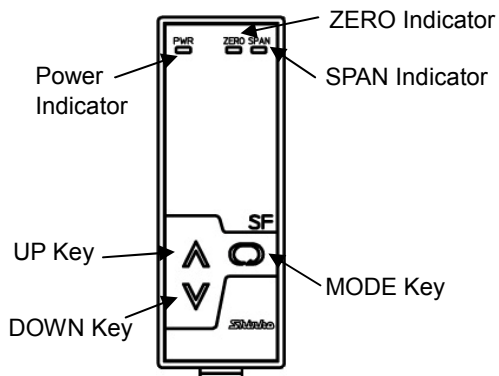
Front panel: Membrane sheet

Adjustment: Using the front keypad

- (1) Press the MODE Key. The ZERO indicator becomes lit. The unit moves to the Output ZERO adjustment mode.
- (2) Press the MODE Key in the Output ZERO adjustment mode. The SPAN indicator becomes lit. The unit moves to the Output SPAN adjustment mode.
- (3) Pressing the MODE Key returns to Step (1).
If the MODE Key is pressed for approx 3 sec, or if no operation occurs for approx. 30 sec, the unit will revert to the RUN mode.

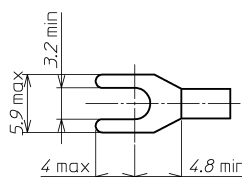
Indication:

- PWR indicator (Green):
Lit when power is turned ON.
Flashes in 0.5 second cycles if non-volatile memory errors occur.
Flashes in 0.25 second cycles if input errors occur.
- ZERO indicator (Yellow):
Lit in the Output ZERO adjustment mode.
- SPAN indicator (Yellow):
Lit in the Output SPAN adjustment mode.

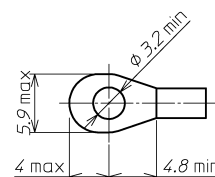


■ Solderless Terminals

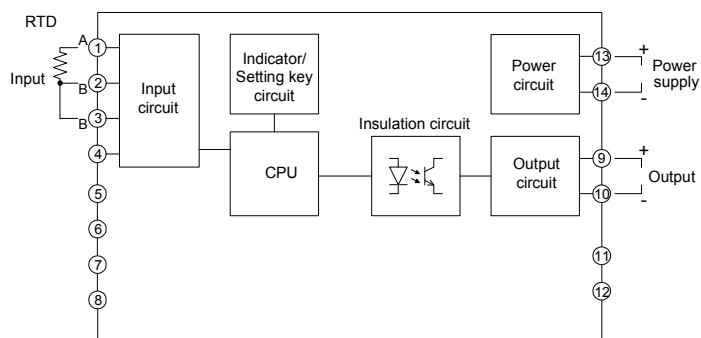
Y Terminal



Ring Terminal



■ Circuit Configuration, Terminal Arrangement



■ Installation Specifications

- Power supply: 100 to 240V AC 50/60Hz
24V AC/DC 50/60Hz
- Allowable voltage range: 85 to 264V AC
20 to 28V AC/DC
- Power consumption: Approx. 6VA
- Ambient temperature: -5 to 55°C
- Ambient humidity: 35 to 85%RH (non-condensing)
- Weight: Approx. 190g (including socket)
- Mounting: DIN rail
- Dimensions: W30 x H88 x D108mm (including socket)

■ Attached Functions

- Power failure countermeasure:
The data is backed up in non-volatile IC memory.
- Self diagnosis:
The CPU is monitored by a watchdog timer, and when an abnormal status is found on the CPU, the unit is switched to warm-up status turning all outputs OFF.

■ Environmental Specifications

RoHS directive compliance

■ Settings

Function keys

- (1) UP Key: Increases a numerical value.
- (2) DOWN Key: Decreases a numerical value.
- (3) MODE Key: Switches from RUN mode to the Adjustment mode, and registers the adjustment value.

■ External Dimensions (Scale: mm)

