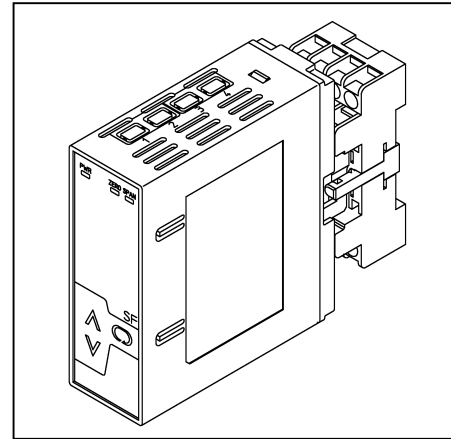
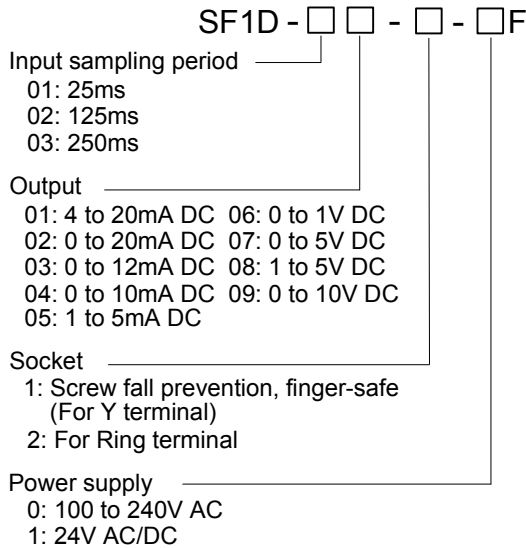


# 1ch Current Loop Supply

Model : **SF1D-F**

Can be used with a Field Communicator (2-wire transmitter power output impedance: 240Ω)

### Model



### How to Order

Specify a model.  
(e.g.) SF1D-0101-1-0F  
Default value

Input	4 to 20mA DC
Output	4 to 20mA DC
Input sampling period	25ms

### Input Specifications

#### DC current

Input range	Shunt resistor
4 to 20mA DC	50Ω built-in

### Output Specifications

When the output range lower limit is zero, (even if zero adjustment results in a negative value), the output value will not be negative.

#### 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%

### Power for 2-wire Transmitter

Output voltage: 24 to 28V DC (When load current is 20mA)  
Ripple voltage: Within 200mV DC (When load current is 20mA)  
Max load current: 25mA DC  
Output impedance: 240Ω (Usable with a field communicator)

### 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

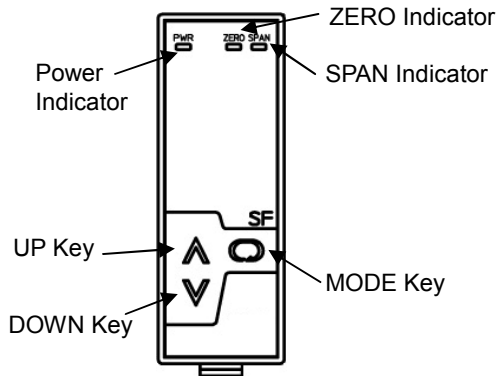
Case: Flame-resistant resin Color: Light gray  
Front panel: Membrane sheet

**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.

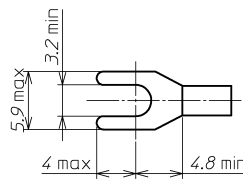
### Indication:

- 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.

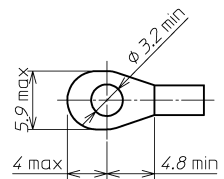


### Solderless Terminals

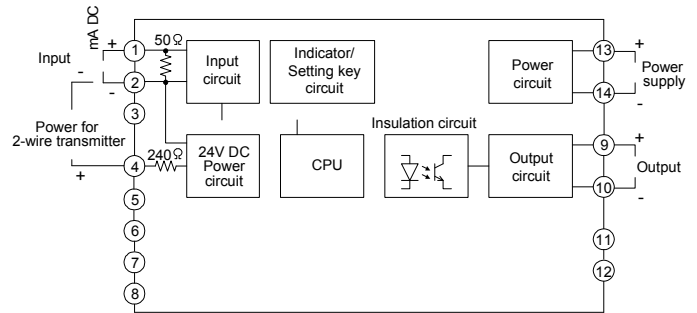
#### Y Terminal



#### 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. 8VA
- Ambient temperature: -5 to 55°C
- Ambient humidity: 35 to 85%RH (non-condensing)
- Weight: Approx. 180g (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

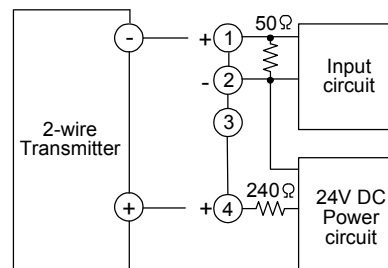
RoHS directive compliance

### Settings

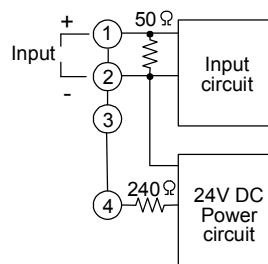
#### Function keys

- (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.

### When used as a Current Loop Supply



### When used as an Isolator



### External Dimensions (Scale: mm)

