

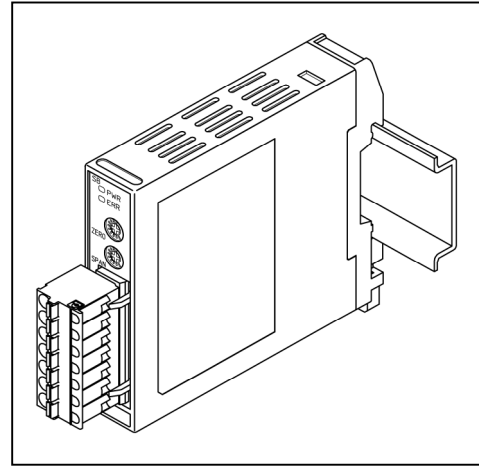
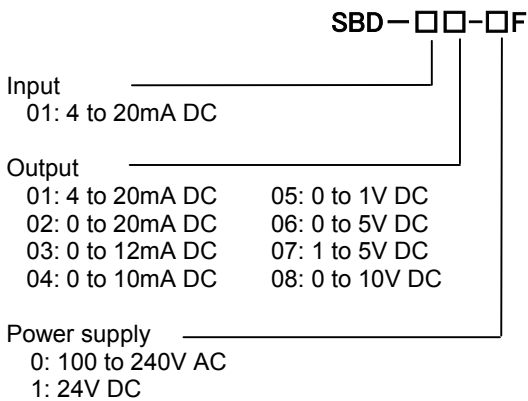
Current Loop Supply

Model: **SBD-F**

■ Features

- Usable with a Field communicator [Power for 2-wire transmitter built-in (output impedance: 240Ω)]
- Simple wiring by plug-in socket
- Compact size
- 3-port insulation (Input-Output-Power)

■ Model



■ How to order

Specify a model. (e.g.) SBD-0101-0F

■ Input specifications

DC current : 4 to 20mA DC
 Shunt resistor: 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	600Ω or less	-2.5 to 2.5%	97.5 to 102.5%
0 to 20mA DC	600Ω or less	0 to 2.5%	97.5 to 102.5%
0 to 12mA DC	$1k\Omega$ or less	0 to 2.5%	97.5 to 102.5%
0 to 10mA DC	$1k\Omega$ or less	0 to 2.5%	97.5 to 102.5%

DC voltage

Output range	Allowable load resistance	Zero adjustment range	Span adjustment range
0 to 1V DC	100Ω or more	0 to 2.5%	97.5 to 102.5%
0 to 5V DC	500Ω or more	0 to 2.5%	97.5 to 102.5%
1 to 5V DC	500Ω or more	-2.5 to 2.5%	97.5 to 102.5%
0 to 10V DC	$1k\Omega$ or more	0 to 2.5%	97.5 to 102.5%

■ Power for 2-wire transmitter

Output voltage : 24V DC $\pm 3V$
 (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 $\pm 0.2\%$
 Response time: 1sec (0 \rightarrow 90%) (Average 0.5sec)
 Temperature coefficient: $\pm 0.015\%/^{\circ}C$
 Insulation resistance : $10M\Omega$ or more, at 500V DC
 (Input - Output - Power)
 Dielectric strength : 2.0kV AC for 1 minute
 (Input - Output - Power)
 Isolation: 3-port isolation (between Input - Output - Power)

Note: Input includes power supply for 2-wire transmission (terminals 1, 2, 3).

■ General specifications

Case : Flame-resistant resin Color: Light gray
 Front panel : Polycarbonate
 Spring type plug: Polyamide Color: Green
 Adjustment: By front potentiometer
 Zero adjustment : $\pm 2.5\%$
 Span adjustment: $\pm 2.5\%$

Indication:

PWR Indicator (Green):

Lights when the power to the instrument is turned on.

Flashes every 0.5 seconds if an error has occurred in non-volatile IC memory.

ERR Indicator (Red):

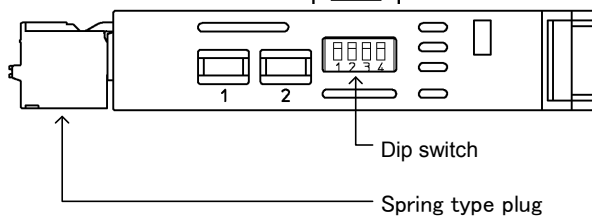
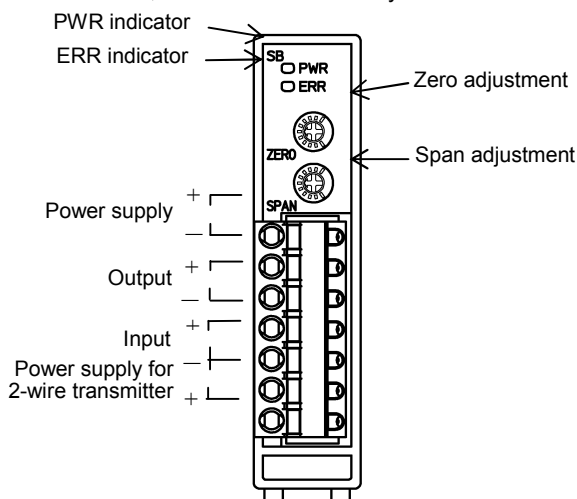
Flashes every 0.25 seconds if input is 110% or more and flashes every 0.5 seconds if input is -10% or less.

Output status selection:

Selects output status Normal/Reverse with DIP switch. (NO.1 OFF: Normal, ON: Reverse)

Power failure buffer: 30msec.

Self diagnosis: The CPU is monitored by watchdog timer, and when abnormal status is found on the CPU, the unit is restarted by reset.



■ Installation specifications

Power supply:

100 to 240V AC 50/60Hz

Allowable voltage range : 85 to 264V AC

Power consumption : Approx. .5VA

24V DC

Allowable voltage range : 20 to 28V AC

Power consumption : Approx. 3.5W

Ambient temperature: -5 to 55°C (23 to 131°F)

Ambient humidity : 35 to 85%RH (non-condensing)

Weight : Approx. 80g

Mounting: DIN rail mounting (Be sure to use End plates for fixing the unit when the unit is mounted on a DIN rail.)

External dimensions: W17.5×H75×D85mm

■ Ferrules

(Phoenix Contact GMBH & CO.)

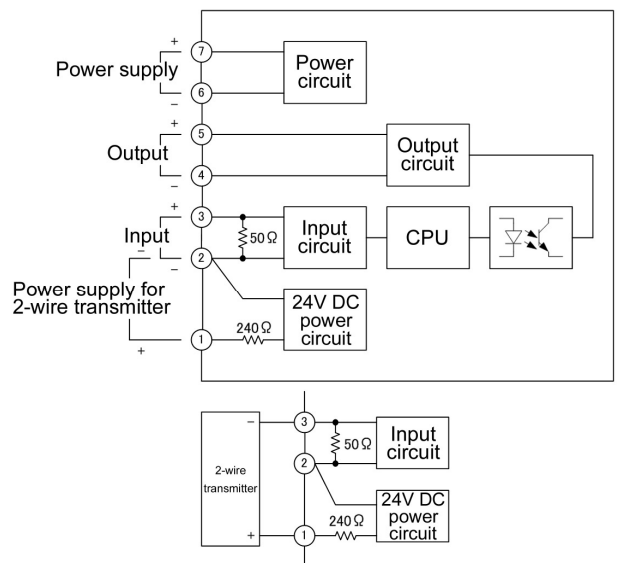
Insulation sleeve attached: Model	Cross sections
A10.25-6BU	0.2 – 0.25mm ²
A10.34-8TQ	0.25 – 0.34mm ²
A10.5-8WH	0.34 – 0.5mm ²
A10.75-8GY	0.5 – 0.75mm ²
A11-8RD	0.75 – 1.0mm ²
A11.5-8BK	1.0 – 1.5mm ²
A12.5-8BU	1.5 – 2.5mm ²

Crimping pliers: CRIMPFOX ZA3, CRIMPFOX UD6

■ Environmental specification

RoHS directive compliance

■ Circuit configuration and terminal arrangement



■ External dimensions (Scale: mm)

