

# SB series

SPEC. SHEET

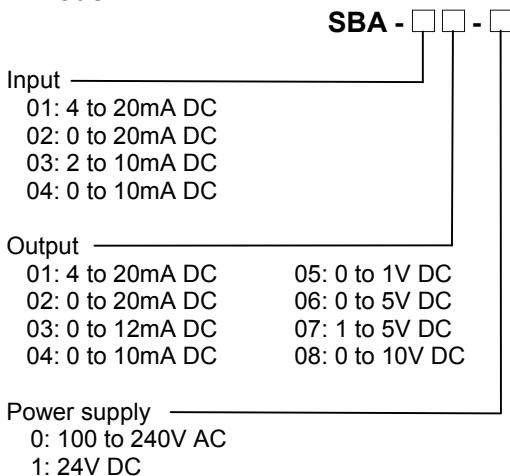
# ISOLATOR

Model: **SBA**

## ■ Features

- Simple wiring using a plug-in socket
- Compact
- 3-port insulation (Input-Output-Power)

## ■ Model



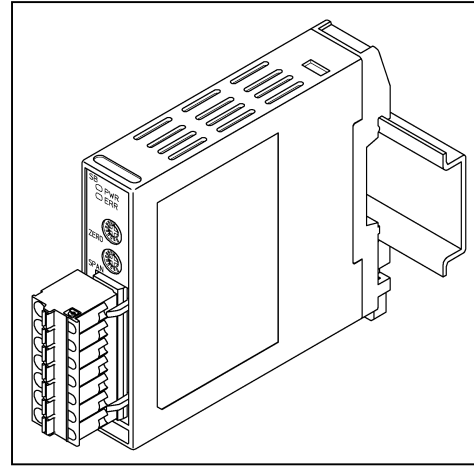
## ■ How to order

Specify a model.  
(e.g.) SBA-0101-0

## ■ Input specifications

### DC current

Input range	Shunt resistor (built-in)
4 to 20mA DC	50Ω
0 to 20mA DC	
2 to 10mA DC	100Ω
0 to 10mA DC	



## ■ 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	1kΩ or less	0 to 2.5%	97.5 to 102.5%
0 to 10mA DC	1kΩ 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	1kΩ or more	0 to 2.5%	97.5 to 102.5%

## ■ Performance

Accuracy : Within  $\pm 0.2\%$   
 Response time : 1 sec. (0  $\rightarrow$  90%)  
 (Average 0.5 sec)  
 Temperature coefficient:  $\pm 0.015\%/^{\circ}\text{C}$   
 Insulation resistance : 10MΩ or more, at 500V DC  
 (Input-Output-Power)  
 Dielectric strength : 2.0kV AC for 1 minute  
 (Input-Output-Power)

## ■ Instrument specifications

Case : Flame resistant resin Color: Light gray  
 Front panel : Polycarbonate  
 Spring type plug: Polyamide Color: Green  
 Adjustment: By the front potentiometer

Zero adjustment :  $\pm 2.5\%$   
 Span adjustment :  $\pm 2.5\%$

### Indication:

Power indicator (PWR): Green  
 Lights when the power is turned on.  
 Flashes in 500ms cycles when an error has occurred in non-volatile IC memory.  
 Error indicator (ERR): Red  
 Flashes in 250ms cycles when input is 110% or more.  
 Flashes in 500ms cycles when input is -10% or less.

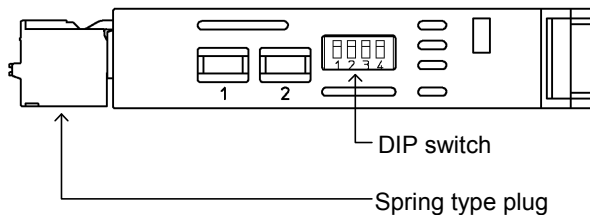
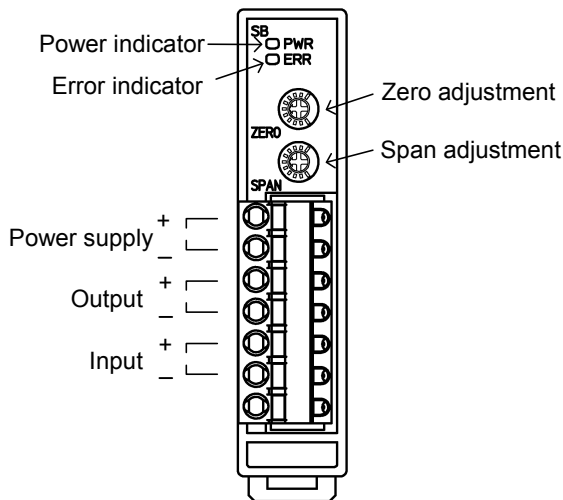
Output status selection: Selects Normal or Reverse with the DIP switch.

No.1 OFF: Normal, ON: Reverse

Momentary power failure: 30msec.

### Self diagnosis:

The CPU is monitored by a watchdog timer, and when an abnormal status is found on the CPU, the unit restarts with the reset action.



## ■ Installation specifications

Power supply  
 • 100 to 240V AC 50/60Hz  
 Allowable voltage range: 85 to 264V AC  
 Power consumption : Approx. 3.5VA  
 • 24V DC  
 Allowable voltage range: 20 to 28V DC  
 Power consumption : Approx. 3.5W  
 Ambient temperature: -5 to 55°C  
 Ambient humidity : 35 to 85%RH (non-condensing)  
 Weight : Approx. 80g

Mounting method : DIN rail mounting  
 Be sure to use fastening plates at both ends of the unit after the unit is mounted to the DIN rail.  
 External dimensions : 17.5 (W) x 75 (H) x 85 (D) mm

## ■ Environmental specification

RoHS directive compliance

## ■ Ferrules

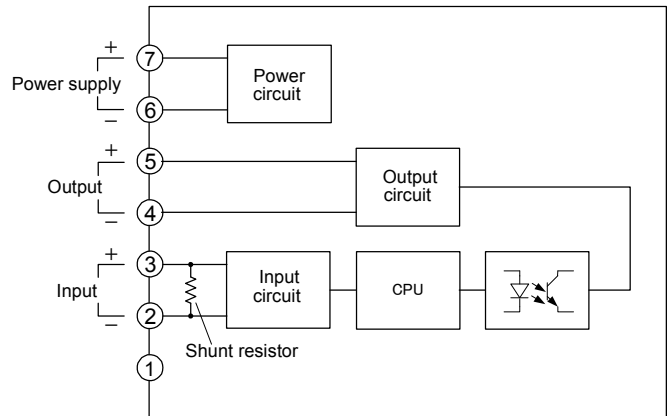
Made by Phoenix Contact GMBH & CO.

### Insulation sleeve attached

Model	Conductor cross section
AI0.25-6BU	0.2 – 0.25mm <sup>2</sup>
AI0.34-8TQ	0.25 – 0.34mm <sup>2</sup>
AI0.5-8WH	0.34 – 0.5mm <sup>2</sup>
AI0.75-8GY	0.5 – 0.75mm <sup>2</sup>
AI1-8RD	0.75 – 1.0mm <sup>2</sup>
AI1.5-8BK	1.0 – 1.5mm <sup>2</sup>
AI2.5-8BU	1.5 – 2.5mm <sup>2</sup>

Crimping pliers  
 CRIMPFOX ZA3  
 CRIMPFOX UD6

## ■ Circuit configuration, terminal arrangement



## ■ External dimensions (Scale: mm)

