

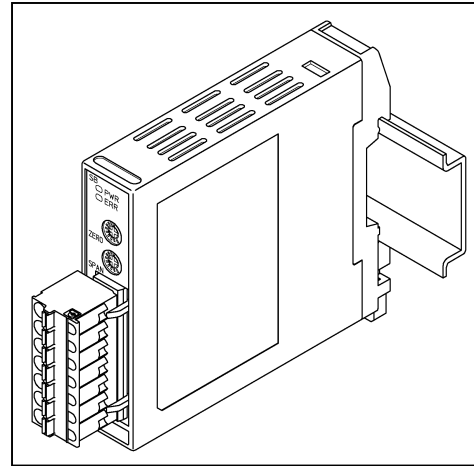
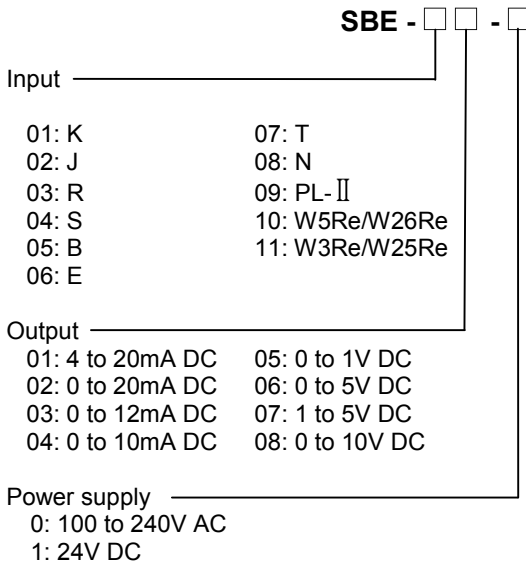
Thermocouple Transmitter

Model: **SBE**

■ Features

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

■ Model



■ 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% |

■ How to order

Specify a model.
(e.g.) SBE-0101-0
0 to 400°C

■ Input specifications

Input resistance : 1MΩ or more
External resistance : 100Ω or less,
However, B: 40Ω or less

Burnout: Upscale, Downscale (Selectable by the DIP switch)

Input:

| Thermocouple | Input range | |
|--------------|----------------|----------------|
| K | -200 to 1370°C | -328 to 2498°F |
| J | -200 to 1000°C | -328 to 1832°F |
| R | -50 to 1760°C | -58 to 3200°F |
| S | -50 to 1760°C | -58 to 3200°F |
| B | 0 to 1820°C | 32 to 3308°F |
| E | -200 to 800°C | -328 to 1472°F |
| T | -200 to 400°C | -328 to 752°F |
| N | -200 to 1300°C | -328 to 2372°F |
| PL- II | 0 to 1390°C | 32 to 2534°F |
| W5Re/W26Re | 0 to 2315°C | 32 to 4199°F |
| W3Re/W25Re | 0 to 2315°C | 32 to 4199°F |

Minimum span: 50°C (100°F)

■ Performance

Accuracy

- Input: Within ±0.2% of each input span, or ±2°C (4°F) whichever is greater
- R, S inputs, Less than 200°C (400°F):
Within ±6°C (12°F)
- B input, Less than 300°C (600°F):
Accuracy is not guaranteed.
- K, J, E, T, N inputs, Less than 0°C (32°F):
Within 4°C (8°F)

Cold junction compensation accuracy:

Within ±1.0°C at -5 to 55°C

Response time : 1 sec. (0 → 90%)
(Average 0.5 sec)

Temperature coefficient: ±0.015%/°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

Burnout: Selects Upscale or Downscale with the DIP switch.

No.2 OFF: Upscale, ON: Downscale

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.

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

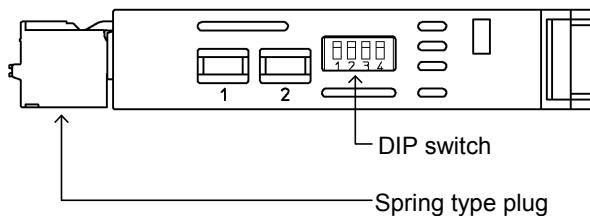
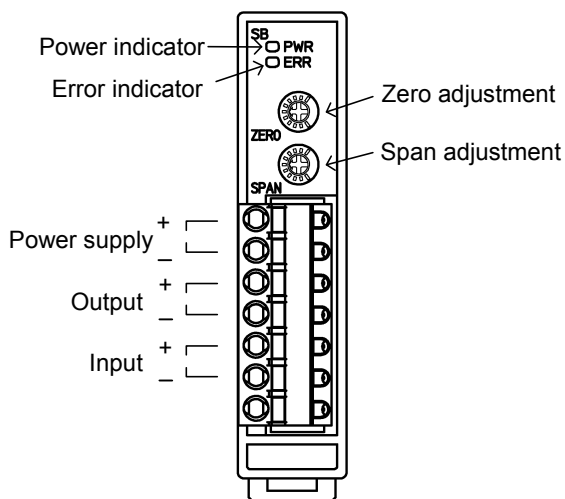
Made by Phoenix Contact GMBH & CO.

Insulation sleeve attached

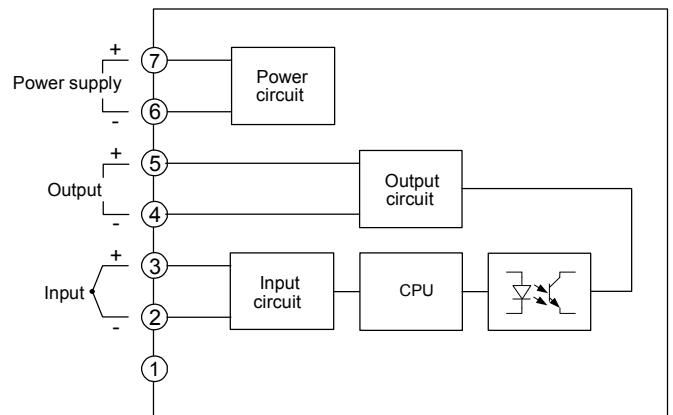
| Model | Conductor cross section |
|------------|----------------------------|
| AI0.25-6BU | 0.2 – 0.25mm ² |
| AI0.34-8TQ | 0.25 – 0.34mm ² |
| AI0.5-8WH | 0.34 – 0.5mm ² |
| AI0.75-8GY | 0.5 – 0.75mm ² |
| AI1-8RD | 0.75 – 1.0mm ² |
| AI1.5-8BK | 1.0 – 1.5mm ² |
| AI2.5-8BU | 1.5 – 2.5mm ² |

Crimping pliers

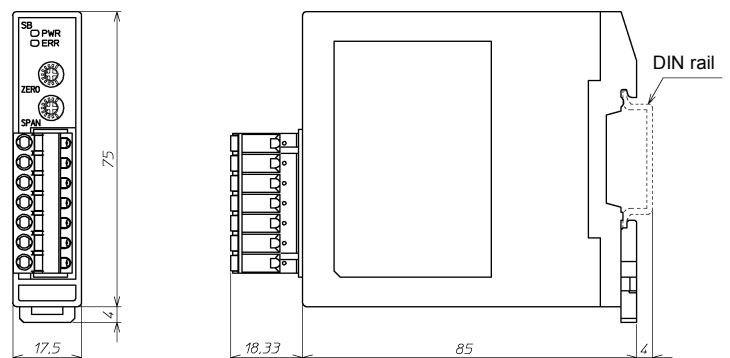
CRIMPFOX ZA3
 CRIMPFOX UD6



Circuit configuration, terminal arrangement



External dimensions (Scale: mm)



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