

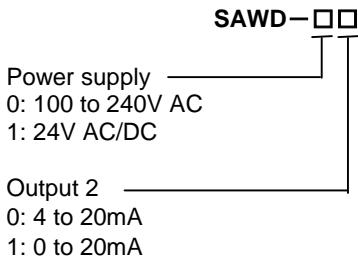
# SAW series

SPEC. SHEET

## Current Loop Supply (with indication function)

Model: **SAWD**  


### Model



### How to order

Specify a model. (e.g.) SAWD-00

Default value:

Input	4 to 20mA DC
Output 1	4 to 20mA DC
Output 2	Fixed range

### 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.

#### Output 1 (Universal)

##### DC current

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

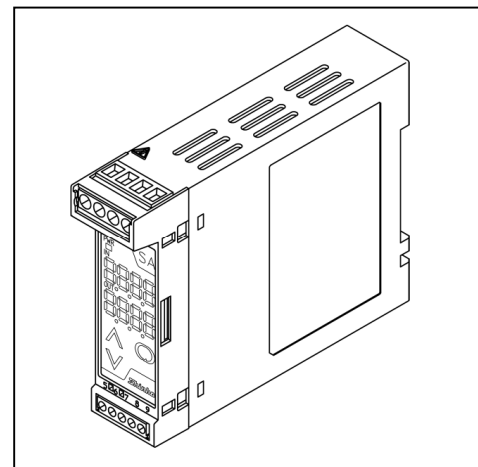
##### DC voltage

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 10V DC	1kΩ or more		
0 to 5V DC	500Ω or more	-5 to 5%	
1 to 5V DC			

#### Output 2 (Fixed range)

##### DC current

Output range	Allowable load resistance	Zero adjustment range	Span adjustment range
4 to 20mA DC	300Ω or less	-5 to 5%	95 to 105%
0 to 20mA DC	300Ω or less	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

### Performance

#### Accuracy:

- DC current Input: Within ±0.1%
- Output 1 : Within ±0.1%
- Output 2 : Within ±0.15%

Display accuracy: Within input accuracy ±1 digit

Response time: Output 1: 0.5 sec. (typical) (0 → 90%)  
 Output 2: 1.0 sec. (typical) (0 → 90%)

Temperature coefficient: Output 1: ±0.015%/°C  
 Output 2: ±0.015%/°C

Insulation resistance : 10MΩ or more, at 500V DC  
 (Input - Output 1 - Output 2 - Power)

Dielectric strength : 2.0kV AC for 1 minute  
 (Input - Output 1 - Power)  
 (Output 1 - Output 2 - Power)  
 1.35kV AC for 1 minute  
 (Input - Output 2)

Isolation: 3-port isolation (between Input - Output - Power)

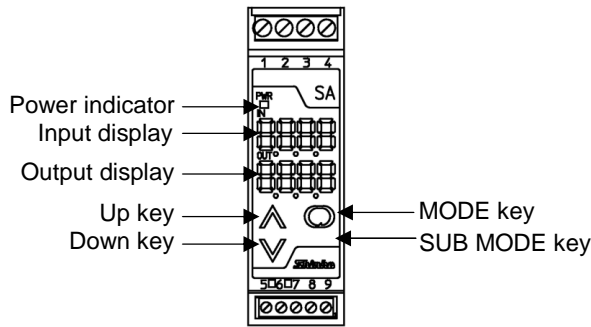
**Note: Input includes power supply for 2-wire transmission (terminals 5, 6, 7).**

### General structure

Case : Flame-resistant resin  
 Color : Light gray  
 Front panel : Membrane sheet  
 Setting : By the front keypad

#### Indication:

- Power indicator : Green LED
- Input display : 7-segment, Red LED display 4-digit, Character size, 7.4 x 4.0mm (H x W)
- Output display : 7-segment, Green LED display 4-digit, Character size, 7.4 x 4.0mm (H x W)



## ■ 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. 7VA
- Ambient temperature : -5 to 55°C
- Ambient humidity : 35 to 85%RH (non-condensing)
- Mounting : DIN rail mounting
- External dimensions : 22.5 (W) x 75 (H) x 100 (D)mm
- Weight : Approx. 120g

## ■ 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 after turning all outputs off.

## ■ Environmental specification

RoHS directive compliance

## ■ Settings

### Function keys

- (1) Up key : Increases the numeric value.
- (2) Down key : Decreases the numeric value.
- (3) MODE key : Selects the setting mode.
- (4) SUB MODE key: Press with the MODE key to select the setting mode.

### Setting items

Setting by pressing the MODE key for 3 seconds

- (1) Output 1 zero adjustment
- (2) Output 1 span adjustment
- (3) Output 2 zero adjustment
- (4) Output 2 span adjustment

Setting by the MODE key and SUB MODE key

- (1) Set value lock
- (2) Decimal point place
- (3) Output 0% value
- (4) Output 100% value
- (5) Filter time constant
- (6) Sensor correction
- (7) Output 1 output range
- (8) Output Normal/Reverse
- (9) Display selection
- (10) Indication time

## ■ Displays and indicators

- Power indicator : The green LED lights when the power to the instrument is turned on.
- Input display : Indicates the input value. Indication of -2000 or less: The minus (-) sign and input value light alternately.  
 Indication of 10000 or more: The lower 4 digits flash.

- Under range : “- - - -” flashes on the Input display.  
 Over range : “- - - -” flashes on the Input display.  
 Warm-up indication: For approx. 3 seconds after power-on, the input type is indicated on the Input display, and Output type is indicated on the Output display.

Output display: Indicates the output volume in percentage (%) form.

## ■ Ferrules

### Terminals from 1 to 4

- Insulation sleeve attached (Phoenix Contact GMBH & CO.)
 

A10.25-8YE	0.2 – 0.25mm <sup>2</sup>
A10.34-8TQ	0.25 – 0.34mm <sup>2</sup>
A10.5-8WH	0.34 – 0.5mm <sup>2</sup>
A10.75-8GY	0.5 – 0.75mm <sup>2</sup>
A11.0-8RD	0.75 – 1.0mm <sup>2</sup>
A11.5-8BK	1.0 – 1.5mm <sup>2</sup>

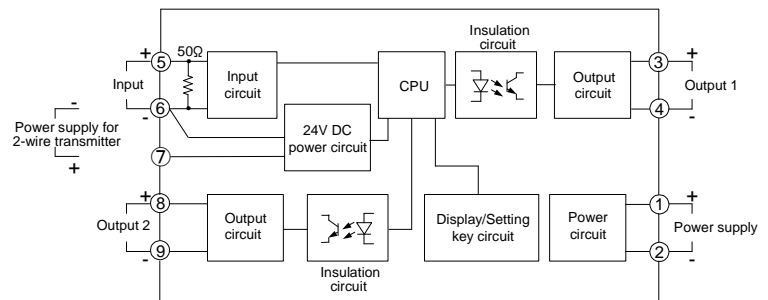
- Crimping pliers (Phoenix Contact GMBH & CO.)  
 CRIMPFOX ZA3, CRIMPFOX UD6

### Terminals from 5 to 9

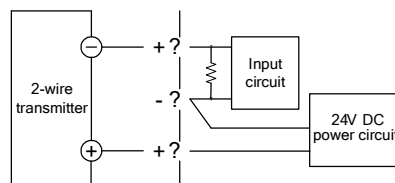
- Insulation sleeve attached (Phoenix Contact GMBH & CO.)
 

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- Crimping pliers (Phoenix Contact GMBH & CO.)  
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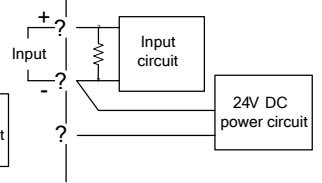
## ■ Circuit configuration and terminal arrangement



### When using as a Current loop supply



### When using as an Isolator



## ■ External dimensions (Scale: mm)

