

SA series

SPEC. SHEET

Linearizer (DC current input) (with indication function)

Model: **SAAP**

Model

SAAP -

Power supply
0: 100 to 240V AC
1: 24V AC/DC

How to order

Specify a model.
(e.g.) SAAP-0

Default value

Input	4 to 20mA DC
Output	4 to 20mA DC

Accessories (sold separately)

Name	Model	Specification
Shunt resistor	RES-S02-050	50Ω ±0.1%
	RES-S02-100	100Ω ±0.1%
	RES-S02-200	200Ω ±0.1%
	RES-S02-01K	1kΩ ±0.1%
Communication cable (Non-insulated)	CMS-001	Console software (CD included)

Input specifications

DC current

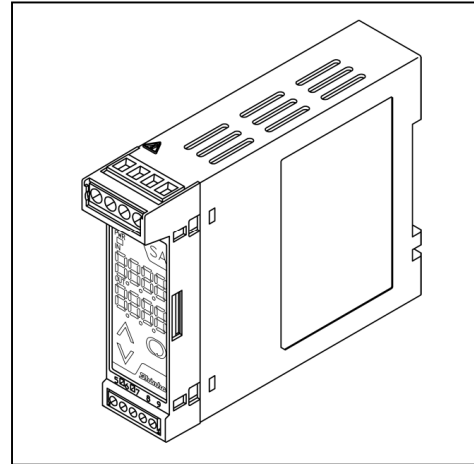
Input range	Shunt resistor
4 to 20mA DC	50Ω
0 to 20mA DC	
0 to 16mA DC	
2 to 10mA DC	100Ω
0 to 10mA DC	
1 to 5mA DC	200Ω
0 to 1mA DC	1kΩ

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
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		
1 to 5V DC		-5 to 5%	

Performance

Accuracy:

- Input: Within ±0.1%
- Output: Within ±0.1%

Display accuracy: Within input accuracy ±1 digit

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

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),

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

General structure

Case : Flame-resistant resin Color: Light gray

Front panel: Membrane sheet

Setting : By the front keypad

Indication : Input display:

7-segment, Red LED display 4-digit

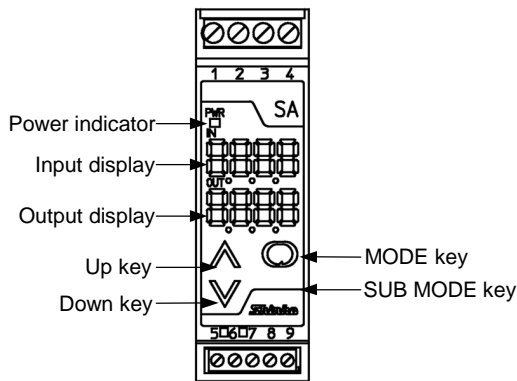
Character size, 7.4 x 4.0mm (H x W)

Output display:

7-segment, Green LED display 4-digit

Character size, 7.4 x 4.0mm (H x W)

Power indicator: Green LED



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. 6VA
- Ambient temperature : -5 to 55°C
- Ambient humidity : 35 to 85%RH (non-condensing)
- Weight : Approx. 120g
- Mounting : DIN rail mounting
- External dimensions : 22.5 (W) x 75 (H) x 100 (D)mm

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 with 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 zero adjustment
- (2) Output span adjustment

Setting by the MODE key and SUB MODE key

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

Setting by pressing the SUB MODE key for 5 seconds

- (1) Linearization Enabled/Disabled
- (2) Input 1 setting
- (3) Output 1 setting
- (4) Input 2 setting
- (5) Output 2 setting

- (50) Input 25 setting
- (51) Output 25 setting

Displays and indicators

- 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.
- Power indicator: The green LED lights when the power to the instrument is turned on.

Ferrules

- Terminals from 1 to 4
Insulation sleeve attached (Phoenix Contact GMBH & CO.)

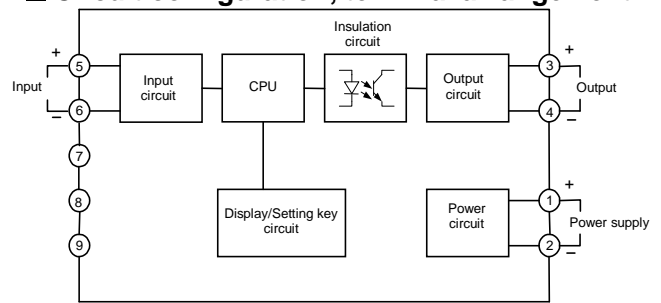
A10.25-8YE	0.2 – 0.25mm ²
A10.34-8TQ	0.25 – 0.34mm ²
A10.5-8WH	0.34 – 0.5mm ²
A10.75-8GY	0.5 – 0.75mm ²
A11.0-8RD	0.75 – 1.0mm ²
A11.5-8BK	1.0 – 1.5mm ²

- Crimping pliers (Phoenix Contact GMBH & CO.)
CRIMPFOX ZA3, CRIMPFOX UD6
- Terminals from 5 to 9
Insulation sleeve attached (Phoenix Contact GMBH & CO.)

A10.25-8YE	0.2 – 0.25mm ²
A10.34-8TQ	0.25 – 0.34mm ²
A10.5-8WH	0.34 – 0.5mm ²

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

Circuit configuration, terminal arrangement



External dimensions (Scale: mm)

