

SA series

SPEC. SHEET

Limiters (DC voltage input) (with indication function)

Model: **SAVL**

Model

SAVL - □

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

How to order

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

Default value

Input	1 to 5V DC
Output	4 to 20mA DC

Accessories (sold separately)

Name	Model	Specification
Communication cable (Non-insulated)	CMS-001	Console software CD included

Input specifications

DC voltage

Input range	Input resistance	Allowable signal source resistance
-10 to 10mV DC	1M Ω	40 Ω or less
0 to 10mV DC		20 Ω or less
0 to 50mV DC		200 Ω or less
0 to 60mV DC		
0 to 100mV DC		
0 to 1V DC		
0 to 5V DC		2k Ω or less
1 to 5V DC		1k Ω or less
0 to 10V 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
0 to 10mA DC	1.2k Ω or less	0 to 5%	95 to 105%
0 to 12mA DC			
0 to 20mA DC	700 Ω or less	-5 to 5%	
4 to 20mA DC			
1 to 5mA DC	2.4k Ω or less		

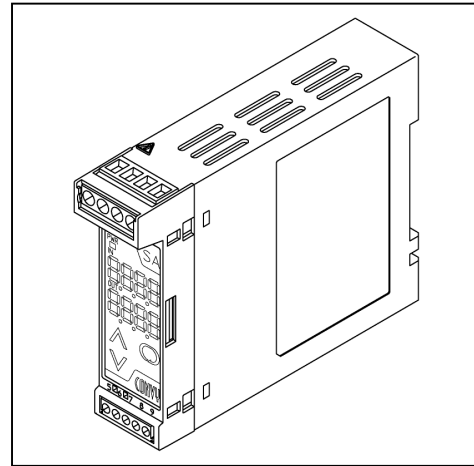
DC voltage

Output range	Allowable load resistance	Zero adjustment range	Span adjustment range
0 to 1V DC	100 Ω or more	0 to 5%	95 to 105%
0 to 10V DC	1k Ω or more		
0 to 5V DC	500 Ω or more	-5 to 5%	
1 to 5V DC			

Output limit function:

-5 to 105% (individual high limit, low limit setting)

Limits the minimum, maximum value of the converted output.



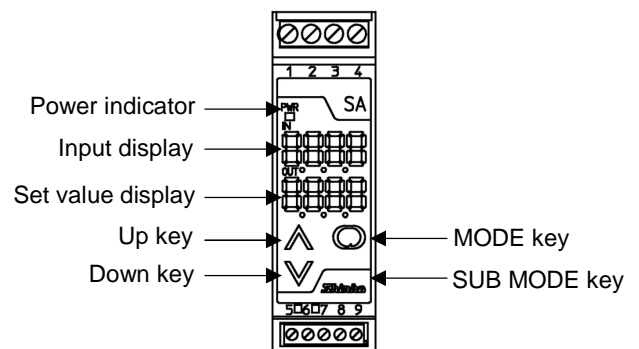
Performance

Accuracy: Input: Within $\pm 0.1\%$, Output: Within $\pm 0.1\%$
 Display accuracy : Within input accuracy ± 1 digit
 Response time : 0.5 sec. (typical) (0 \rightarrow 90%)
 Temperature coefficient: $\pm 0.015\%/^{\circ}\text{C}$
 Insulation resistance : 10M Ω 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:

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. 6VA
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 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
 - (12) Output Low limit
 - (13) Output High limit

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

■ Ferrules

Terminals from 1 to 4

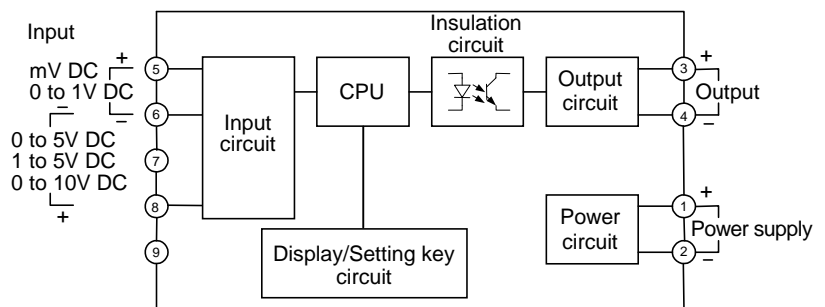
- Insulation sleeve attached (Phoenix Contact GMBH & CO.)
 - A10.25-8YE 0.2 – 0.25mm²
 - A10.34-8TQ 0.25 – 0.34mm²
 - A10.5-8WH 0.34 – 0.5mm²
 - A10.75-8GY 0.5 – 0.75mm²
 - A11.0-8RD 0.75 – 1.0mm²
 - A11.5-8BK 1.0 – 1.5mm²

- 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 – 0.25mm²
 - A10.34-8TQ 0.25 – 0.34mm²
 - A10.5-8WH 0.34 – 0.5mm²
- Crimping pliers (Phoenix Contact GMBH & CO.)
CRIMPFOX ZA3, CRIMPFOX UD6

■ Circuit configuration and terminal arrangement



■ External dimensions (Scale: mm)

