

Ratio Transmitter (with I/O bias, isolated)

Model: **SAVR**

(with indication function)

Model

SAVR - □

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

How to order

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

Default value

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

Input specifications

DC voltage

Input range	Input resistance	Allowable signal source resistance
0 to 10mV DC	1MΩ	20Ω or less
-10 to 10mV DC		40Ω or less
0 to 50mV DC		200Ω or less
0 to 60mV DC		
0 to 100mV DC		
0 to 1V DC		
0 to 5V DC		1kΩ or less
1 to 5V DC		
0 to 10V DC		

Output specifications

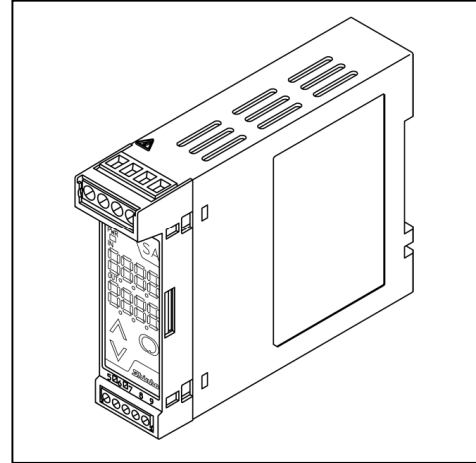
When the output range lower limit is zero, even if a negative value is indicated on the Output display, the output value will not be negative.

DC current

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

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 5V DC	500Ω or more	0 to 5%	95 to 105%
1 to 5V DC	500Ω or more	-5 to 5%	95 to 105%
0 to 10V DC	1kΩ or more	0 to 5%	95 to 105%



Performance

Accuracy:

- Input: Within $\pm 0.1\%$ (When Ratio=1.00, bias=0%)
- Output: Within $\pm 0.1\%$ (When Ratio=1.00, bias=0%)

Display accuracy: Within input accuracy ± 1 digit

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

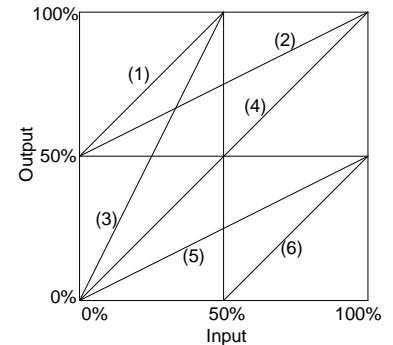
Ratio setting: 0.10 to 4.00 times

Bias setting: -100 to 100%

Equation: $O=R I+B$

where O=Output (%), R=Ratio, I=Input (%)
B=Bias

- (1) R=1.0 B=50
- (2) R=0.5 B=50
- (3) R=2.0 B=0
- (4) R=1.0 B=0
- (5) R=0.5 B=0
- (6) R=1.0 B=-50



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)

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

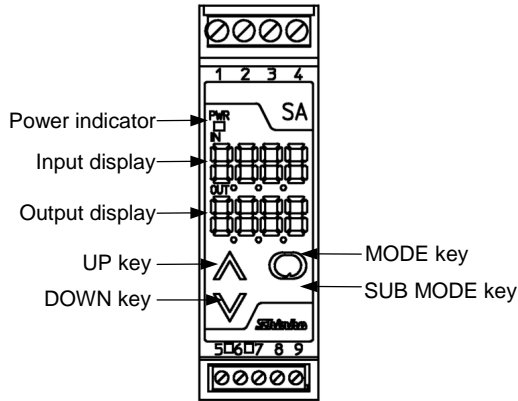
Indication : Input display:

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 method : 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 any 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) Ratio
 - (13) Bias

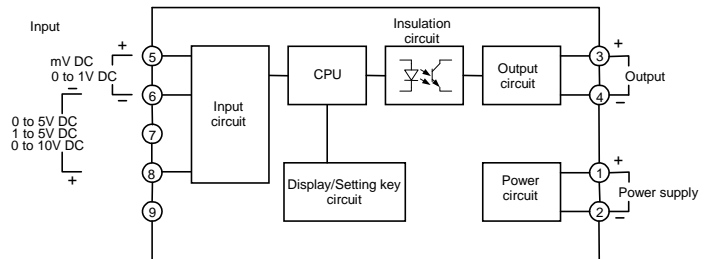
Displays and indicators

- 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 the power to the instrument is turned on, the input type is indicated on the Input display, and the 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 – 0.25mm²
 - 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)

