

## SGM

RoHS

## Current loop supply with ratio function (1-output)

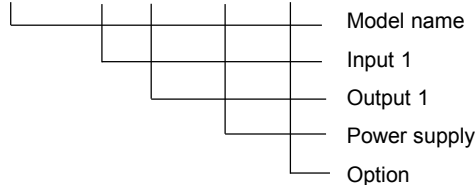
## Features:

SGM (1-input 1-output) converts DC current input into isolated DC voltage/current. This unit can be used as power source for a 2-wire transmitter (sensors, etc.). Indication displays are equipped. With the ratio function, this unit can be used in combination with throw-in type level sensors.

## Functions:

- Ratio and bias values setting by arithmetic expression
- Direct ratio and bias values setting
- Square root extraction function
- Supports the 'SMART' transmitter.  
(Shunt resistor 50Ω + Check resistance 250Ω)
- Sensor correction (Input value correction)
- Normal/Reverse mode
- Filter time constant
- Manual mode
- Output type can be changed.
- Output high and low limits

Model: **SGM** - **A0** ② - ③ - ④



## INPUT 1

DC Current	<b>A0</b>	4 to 20mA (Built-in 50Ω shunt resistor)
------------	-----------	---

## ② OUTPUT 1

DC Current	<b>1</b>	4 to 20mA (allowable load resistance 750Ω max.)
	<b>2</b>	0 to 20mA (allowable load resistance 750Ω max.)※1
	<b>3</b>	0 to 16mA (allowable load resistance 900Ω max.)※1
	<b>4</b>	2 to 10mA (allowable load resistance 1500Ω max.)
	<b>5</b>	0 to 10mA (allowable load resistance 1500Ω max.)※1
DC Voltage	<b>A</b>	0 to 10mV (allowable load resistance 10kΩ min.)※2
	<b>B</b>	0 to 100mV(allowable load resistance 100kΩ min.)※2
	<b>C</b>	0 to 1V (allowable load resistance 1000Ω min.)※2
	<b>D</b>	0 to 5V (allowable load resistance 5000Ω min.)※2
	<b>E</b>	1 to 5V (allowable load resistance 5000Ω min.)
	<b>F</b>	0 to 10V (allowable load resistance 10kΩ min.)※2
	<b>G</b>	-5 to 5V (allowable load resistance 10kΩ min.)

※1: 0mA or less: Out of base accuracy.

※2: 0V or less: Out of base accuracy.

## ③ Power supply

<b>0</b>	100 to 240V AC 50/60Hz
<b>1</b>	24V AC/DC 50/60Hz

For SGML (with serial communication function), only [0: 100 to 240V AC] is selectable.

## ④ Option

<b>0</b>	No option needed
<b>1</b>	Multi-rotation trimmer
<b>2</b>	Moisture-proof treatment
<b>3</b>	Multi-rotation trimmer + Moisture-proof treatment

**Performance**

Base accuracy (at 25°C)	±0.1% of each input span
Display accuracy	Base accuracy ± 1 digit
Temperature coefficient	±0.015%/°C (0 to 10mV output: ±0.02%/°C)
Response time	0.5 sec. max. (0→90%)
Insulation resistance	100MΩ minimum, at 500V DC
Dielectric strength	2.0kV AC for 1 minute

**General specifications**

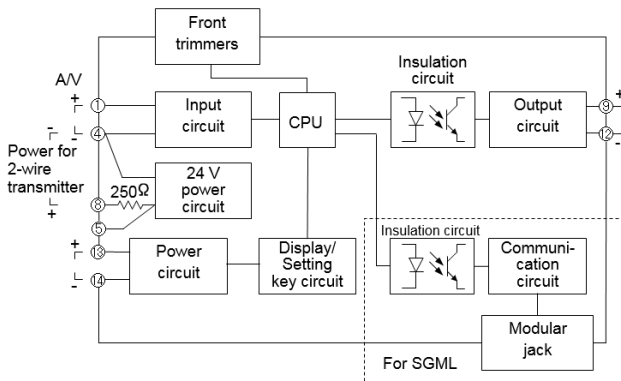
Input	Input resistance: Approx. 300Ω (Shunt resistor 50Ω + Check resistance 250Ω)		
Power supply for 2-wire transmitter	Output voltage: 24 to 28V DC (When load current is 20mA) Ripple voltage: Within 200mV (When load current is 20mA) Max. load current: 25mA		
Zero adjustment range	-5 to 5% (Adjustable from front panel.)	Span adjustment range	95 to 105% (Adjustable from front panel.)
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	100 to 240 V AC: Approx. 10 VA max. (SGML: Approx. 11 VA max.) 24 V AC: Approx. 7 VA max. 24 V DC: Approx. 4 W max.		
Operating temperature, humidity	-10 to 55°C (Non-condensing, No icing), 35 to 85%RH (Non-condensing)		
Storage temperature	-10 to 60°C		
Material	Case: Flame-resistant resin, Black color, Panel: Polycarbonate		
Mounting method	DIN rail mounting		
External dimensions	22.5(W) x 89(H) x 70(D)mm (without socket)		
Weight	Approx. 78g (without socket)		

**Measurement range**

Input code	Measurement range	Resolution
A0	-1999 to 9999 ※	1

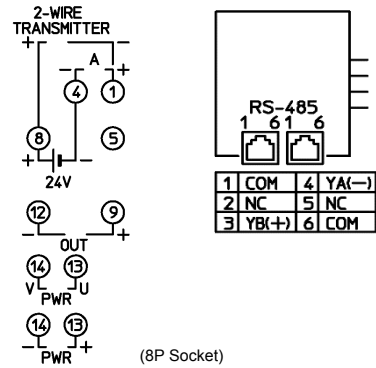
※ Decimal point position change and scaling are possible.

**Circuit configuration**

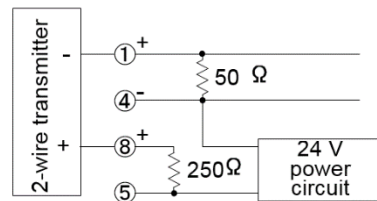


**Terminal arrangement**

PWR ⑬ - ⑭	Power supply voltage 100 to 240V AC, 24V AC/DC
OUT ⑨ - ⑫	Output
A ① - ④	DC current input
24V ④ - ⑧	Power supply for 2-wire transmitter
RS-485	Serial communication RS-485 (For SGML)



**When using as a current loop supply**



**When using as an isolator or square root extractor**

