*Shinko*

SGL

RoHS

Linearizer (1-output)

Features:
SGL (1-input 1-output) converts DC voltage/current signal into isolated DC voltage/current signal by connecting up to 25 points of input and output linearly. Indication displays are equipped.

Functions:
- Linearization up to 25 points,
- Sensor correction (Input value correction)
- Normal/Reverse mode
- Filter time constant
- Manual mode
- Input and output types can be changed.

Model: **SGL -** ① ② **-** ③ **-** ④

- Model name
- Input 1
- Output 1
- Power supply
- Option
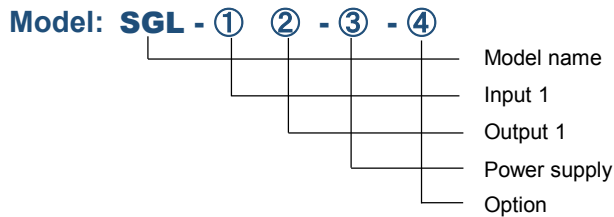
① INPUT 1

DC current	A0	4 to 20mA (Built-in 50Ω shunt resistor)
	A1	4 to 20mA (250Ω shunt resistor)
	A2	4 to 20mA (50Ω shunt resistor)
	A3	0 to 20mA (250Ω shunt resistor)
	A4	0 to 16mA (62.5Ω shunt resistor)
	A5	2 to 10mA (250Ω shunt resistor)
	A6	0 to 10mA (100Ω shunt resistor)
	A7	1 to 5mA (100Ω shunt resistor)
	A8	0 to 1mA (1000Ω shunt resistor)
	A9	10 to 50mA (10Ω shunt resistor)
DC voltage	V0	0 to 10mV (Input resistance 1MΩ)
	V1	0 to 50mV (Input resistance 1MΩ)
	V2	0 to 60mV (Input resistance 1MΩ)
	V3	0 to 100mV (Input resistance 1MΩ)
	V4	0 to 1V (Input resistance 1MΩ)
	V5	0 to 5V (Input resistance 1MΩ)
	V6	1 to 5V (Input resistance 1MΩ)
	V7	-5 to 5V (Input resistance 1MΩ)
	V8	0 to 10V (Input resistance 1MΩ)
	V9	-10 to 10V (Input resistance 1MΩ)

② OUTPUT 1

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

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

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

④ Option

0	No option needed
1	Multi-rotation trimmer
2	Moisture-proof treatment
3	Multi-rotation trimmer + Moisture-proof treatment

Performance

Base accuracy (at 25℃)	±0.1% of each input span
Display accuracy	Base accuracy ±1 digit
Temperature coefficient	±0.015%/℃ (0 to 10mV output:±0.02%/℃)
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	DC current	4 to 20mA, 0 to 20mA, 0 to 16mA, 2 to 10mA, 0 to 10mA, 1 to 5mA, 0 to 1mA, 10 to 50mA DC		
	DC voltage	0 to 10mV, 0 to 50mV, 0 to 60mV, 0 to 100mV, 0 to 1V, 0 to 5V, 1 to 5V, -5 to 5V, 0 to 10V, -10 to 10V DC		
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. 9 VA max. (SGLL: Approx. 10 VA max.) 24 V AC: Approx. 6 VA max. 24 V DC: Approx. 3 W max.			
Operating temperature, humidity	-10 to 55℃ (Non-condensing, No icing), 35 to 85%RH (Non-condensing)			
Storage temperature	-10 to 60℃			
Material	Case: Flame-resistant resin, Black color, Panel: Polycarbonate			
Mounting method	DIN rail			
External dimensions	22.5(W) x 89(H) x 70(D)mm (without socket)			
Weight	Approx. 77g (without socket)			

Measurement range

Input code	Measurement range	Resolution
A0		1
A1		1
A2		1
A3		1
A4		1
A5		1
A6		1
A7		1
A8		1
A9		1
V0		1
V1	-1999 to 9999 ※	1
V2		1
V3		1
V4		1
V5		1
V6		1
V7		1
V8		1
V9		1

※ Decimal point position change and scaling are possible.

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
V ① - ④	DC voltage input
RS-485	Serial communication RS-485 (For SGLL)

RS-485
1	COM	4	YA(—)
2	NC	5	NC
3	YB(+)	6	COM
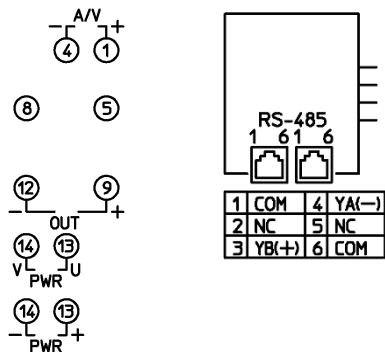
(8P Socket)

Circuit configuration