

# SGUW

RoHS

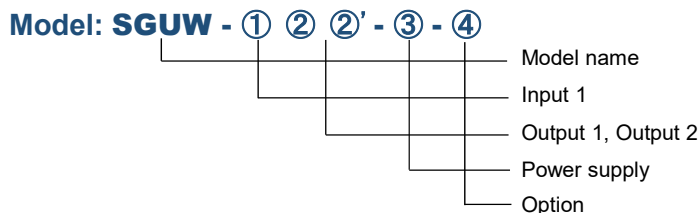
## Universal Transmitter (2-output)

### Features:

SGU (1-input 2-output) converts DC current, DC voltage, thermocouple or RTD signal into isolated DC voltage/current. Indication displays are equipped.

### Functions:

- Sensor correction (Input value correction)
- Normal/Reverse mode
- Filter time constant
- Manual mode
- Input and output types can be changed.
- Output high and low limits



### ① INPUT 1

DC current	A0	4 to 20 mA (Built-in 50 Ω shunt resistor)
	A1	4 to 20 mA (250 Ω shunt resistor)
	A2	4 to 20 mA (50 Ω shunt resistor)
	A3	0 to 20 mA (250 Ω shunt resistor)
	A4	0 to 16 mA (62.5 Ω shunt resistor)
	A5	2 to 10 mA (250 Ω shunt resistor)
	A6	0 to 10 mA (100 Ω shunt resistor)
	A7	1 to 5 mA (100 Ω shunt resistor)
	A8	0 to 1 mA (1000 Ω shunt resistor)
	A9	10 to 50 mA (10 Ω shunt resistor)
DC voltage	V0	0 to 10 mV (Input resistance 1 MΩ)
	V1	0 to 50 mV (Input resistance 1 MΩ)
	V2	0 to 60 mV (Input resistance 1 MΩ)
	V3	0 to 100 mV (Input resistance 1 MΩ)
	V4	0 to 1 V (Input resistance 1 MΩ)
	V5	0 to 5 V (Input resistance 1 MΩ)
	V6	1 to 5 V (Input resistance 1 MΩ)
	V7	-5 to 5 V (Input resistance 1 MΩ)
	V8	0 to 10 V (Input resistance 1 MΩ)
	V9	-10 to 10 V (Input resistance 1 MΩ)
Thermocouple	K0	K
	J0	
	J1	J
	J2	
	R	R
	S	S
	B	B
	E	E
	T0	T
	T1	
	N	N
	PL	PL-II
	W5	W5Re/W26Re
W3	W3Re/W25Re	
RTD	P0	Pt100
	P1	
	P2	JPt100
	P3	

### ② OUTPUT 1

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

※1: 0 mA or less: Out of base accuracy.  
 ※2: 0 V or less: Out of base accuracy.

### ②' OUTPUT 2

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

※1: 0 mA or less: Out of base accuracy.  
 ※2: 0 V or less: Out of base accuracy.

### ③ Power supply

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

### 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 °C)	±0.1 % of each input span Thermocouple input: When input is 0 °C or less: Base accuracy ± 0.1 % of each input span When input has a decimal point: Base accuracy ± 0.05 % of each input span R, S input, -50 to 200 °C (-58 to 392 °F): ±0.3 % of each input span, B input, 0 to 300 °C (32 to 572 °F): Accuracy is not guaranteed.
Display accuracy	Base accuracy ± 1 digit
Temperature coefficient	± 0.015 %/°C (0 to 10mV output: ±0.02 %/°C)
Cold junction compensation accuracy	±0.5 °C (1.0 °F) at 20±10 °C
Effect of allowable lead wire resistance	RTD input: Less than 20 Ω per wire: Base accuracy, 20 Ω or more per wire: Base accuracy + 0.005 %/Ω
Response time	0.5 sec. max. (0→90 %)
Insulation resistance	100 MΩ minimum, at 500 V DC
Dielectric strength	2.0 kV AC for 1 minute

### General specifications

Input	Thermocouple	K, J, R, S, B, E, T, N, PL-II, W5Re/W26Re, W3Re/W25Re External resistance: 100 Ω max. (However, B: 40 Ω max.)	
	RTD	Pt100, JPt100 Input detection current: Approx. 200 μA, Allowable lead wire resistance: 200 Ω or less per wire	
	DC current	4 to 20 mA, 0 to 20 mA, 0 to 16 mA, 2 to 10 mA, 0 to 10 mA, 1 to 5 mA, 0 to 1 mA 10 to 50 mA DC	
	DC voltage	0 to 10 mV, 0 to 50 mV, 0 to 60 mV, 0 to 100 mV, 0 to 1 V, 0 to 5 V, 1 to 5 V -5 to 5 V, 0 to 10 V, -10 to 10 V 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 240 V AC 50/60 Hz	Allowable voltage range	85 to 264 V AC
	24 V AC/DC 50/60 Hz		20 to 28 V AC/DC
Power consumption	100 to 240 V AC: Approx. 9 VA max. 24 V AC: Approx. 6 VA max. 24 V DC: Approx. 3 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		
External dimensions	22.5(W) x 89(H) x 70(D) mm (without socket)		
Weight	Approx. 78 g (without socket)		

### Measurement range

Input code	Measurement range		Resolution
A0 to A9	-1999 to 9999 ※4		1
V0 to V9			
K0	-200 to 1370 °C※2	-328 to 2498 °F※2	1 °C(°F)
K1	-200 to 200 °C ※1※2	-328 to 392 °F※1※2	1 °C(°F)※3
K2	0 to 400 °C※2	32 to 752 °F※2	1 °C(°F)※3
J0	-200 to 1000°C※2	-328 to 1832 °F※2	1 °C(°F)
J1	-200 to 200 °C※1※2	-328 to 392 °F※1※2	1 °C(°F)※3
J2	0 to 400 °C※2	32 to 752 °F※2	1 °C(°F)※3
R	-50 to 1760 °C※2	-58 to 3200 °F※2	1 °C(°F)
S	-50 to 1760 °C※2	-58 to 3200 °F※2	1 °C(°F)
B	0 to 1820 °C※2	32 to 3308 °F※2	1 °C(°F)
E	-200 to 800 °C※2	-328 to 1472 °F※2	1 °C(°F)
T0	-200 to 400 °C※2	-328 to 752 °F※2	1 °C(°F)
T1	-100 to 100 °C※2	-148 to 212 °F※2	1 °C(°F)※3
N	-200 to 1300°C※2	-328 to 2372 °F※2	1 °C(°F)
PL	0 to 1390 °C※2	32 to 2534 °F※2	1 °C(°F)
W5	0 to 2315 °C※2	32 to 4199 °F※2	1 °C(°F)
W3	0 to 2315 °C※2	32 to 4199 °F※2	1 °C(°F)
P0	-200 to 650 °C※2	-328 to 1202 °F※2	1 °C(°F)
P1	-100 to 100 °C※2	-148 to 212 °F※2	1 °C(°F)※3
P2	-200 to 500 °C※2	-328 to 932 °F※2	1 °C(°F)
P3	-100 to 100 °C※2	-148 to 212 °F※2	1 °C(°F)※3

※1: 'No decimal point' and '1 digit after decimal point' can be selected in [Decimal point place]. If '1 digit after decimal point' is selected, the input low limit value is -199.9.

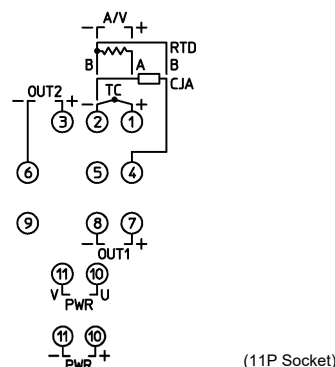
※2: In the case of thermocouple or RTD input, °C or °F can be selected in [Input unit]. Please specify the input span. Minimum span is 50 °C or 100 °F.

※3: If '1 digit after decimal point' is selected in [Decimal point place], it becomes 0.1.

※4: Decimal point position change and scaling are possible.

### Terminal arrangement

PWR ⑩ - ⑪	Power supply voltage 100 to 240 V AC, 24 V AC/DC
OUT1 ⑦ - ⑧	Output 1
OUT2 ③ - ⑥	Output 2
TC ① - ②	Thermocouple input
RTD ① - ② - ④	RTD input
A ① - ②	DC current input
V ① - ②	DC voltage input
CJA ② - ④	Cold junction compensator input



### Circuit configuration

