

# WATT TRANSDUCER

## POWER TRANSDUCER

### MODEL & SUFFIX CODE SELECTION

MODEL **SW-W**

PHASE & WIRE

1	1 P 2 W
2	1 P 3 W
3	3 P 3 W
4	3 P 4 W

VOLTAGE & AMPERE

P × W	P.T ratio	CT	CODE
1P2W	110V	5A	A
	220V	5A	B
1P3W	110V	5A	A
	220V	5A	B
3P3W	380V/110V	5A	C
	440V/110V	5A	A
	3300V/110V		
	6600V/110V		
	154kV/110V		
	22900V/110V	5A	D
3P4W	208/√3V	5A	A
	380/√3/190/√3V	5A	A
	380/√3V	5A	B
	22900/√3/190/√3V	5A	C

OUTPUT

A	DC 4-20mA	1	DC 0-10mV
B	DC 0-1mA	2	DC 0-100mV
C	DC 0-10mA	3	DC 0-1V
D	DC 0-20mA	4	DC 0-10V
E	DC 1-5mA	5	DC 0-5V
O	Others	6	DC 1-5V
		O	Others

### ORDERING INFORMATION

Specify code number and variables

\* Code number : SW-W-input/output/mode  
ex : SW-W-4AA

\* special output range :

A = -10~20mA

V = -10~12V

### GENERAL SPECIFICATIONS

Construction : DIN housings Terminal access on front face

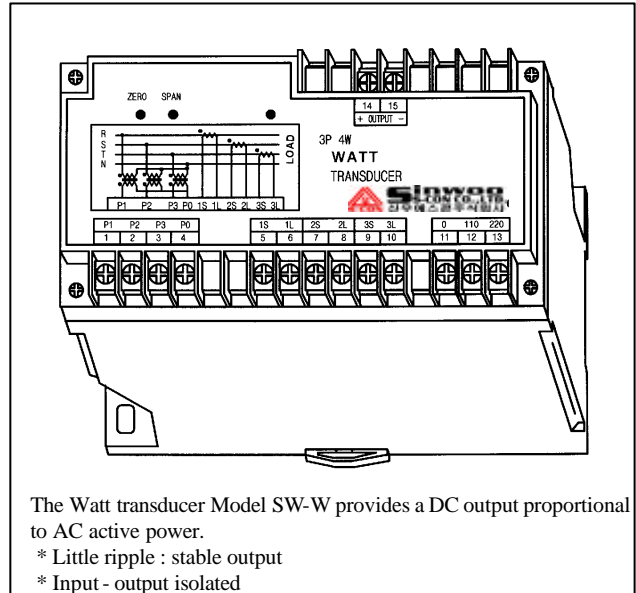
Housing material : plastic(black)

Wiring : 3.0M screw terminals

Isolation : AC input/DC output/power

Adjustments : zero and span ±5%

Over-range output = 0~120%



The Watt transducer Model SW-W provides a DC output proportional to AC active power.

\* Little ripple : stable output

\* Input - output isolated

### PERFORMANCE

Accuracy : 0.1% or 0.25%

Temp. coefficient : 0.03%/C

Insulation resistance : 100Mohm or more with 500V DC

Response time : 0.2seconds or less(0-90%)

Line Voltage effect : 0.1% with 10% change

Ripple : 0.25% p-p max. (100/120Hz)

Dielectric strength : 2000V AC 1minute

input/output/power

Surge withstand Voltage : 1.2/50μsec, ±5KV

(INPUT to OUTPUT to GROUND)

### INSTALLATION

Operating temperature : -5 to +55C

Operating humidity : 20~80%RH(non-condensing)

Mounting : Wall or DIN rail

Power supply : AC 110V or 220V (-15/+10%)

50/60Hz,2VA

Size : 75(w) \* 150(h) \* 113(d)

Weight :

### INPUT & OUTPUT

INPUT

\* Voltage Side ( PT side )

Operational range : 0~110%

Permissible over range : 150% for 10 seconds  
120% continuously

\* Current Side ( CT side )

Operational range : 0~120%

Permissible over range : 1000% for 5 seconds  
150% for 10 seconds  
120% continuously

Frequency : 60 or 50Hz

INPUT RANGE

1 - PHASE/2 - WIRE

MODEL CODE	INPUT		AVAILABLE RANGE	BURDEN (VA)	
	STANDARD RNAGE			VOLTAGE	CURRENT
A	110V 1A	100W	50 - 120W	0.22VA	0.5VA
	110V 5A	500W	250 - 600W		
B	220V 1A	200W	100 - 240W	0.44VA	0.5VA
	220V 5A	1000W	5000 - 1200W		

1 - PHASE/3 - WIRE

MODEL CODE	INPUT		AVAILABLE RANGE	BURDEN (VA)	
	STANDARD RNAGE			VOLTAGE	CURRENT
A	110V 1A	200W	100 - 240W	0.22VA	0.5VA
	220V 5A	1000W	500 - 1200W		

3 - PHASE/3 - WIRE

MODEL CODE	INPUT		AVAILABLE RANGE	BURDEN (VA)	
	STANDARD RNAGE			VOLTAGE	CURRENT
A	110V 1A	200W	100 - 240W	0.22VA	0.5VA
	110V 5A	1000W	500 - 1200W	/phase	/phase
B	220V 1A	400W	200 - 480W	0.44VA	0.5VA
	220V 5A	2000W	1000 - 2400W	/phase	/phase
C	110V 1A	232W	100 - 250W	0.22VA	0.5VA
	110V 5A	1158W	500 - 1200W	/phase	/phase
D	110V 1A	192W	80 - 200W	0.22VA	0.5VA
	110V 5A	961W	450 - 1000W	/phase	/phase

3 - PHASE/4 - WIRE

MODEL CODE	INPUT		AVAILABLE RANGE	BURDEN (VA)	
	STANDARD RNAGE			VOLTAGE	CURRENT
A	190/ 3V/ 1A	400W	200 - 480W	0.22VA	0.5VA
	190/ 3V/ 5A	2000W	1000 - 2400W	/phase	/phase
B	380/ 3V/ 1A	800W	400 - 960W	0.44VA	0.5VA
	380/ 3V/ 5A	4000W	2000 - 4800W	/phase	/phase
C	190/ 3V/ 1A	333W	150 - 400W	0.22VA	0.5VA
	190/ 3V/ 5A	1666W	830 - 2000W	/phase	/phase

HOW TO DETERMINE WATTAGE RANGE

Measuring Wattage(W) = PT ratio × CT ratio × STANDARD RANGE [W]

Check that the required calibration range is within the available range in the table, specify this range when ordering.

[example]

3-phase/3-wire , PT 3300/110V, CT 250/5A

Measuring wattage = 3300/110 × 250/5 × 1000w = 150KW

OUTPUT

DC Current : 0-20mA DC

Minimum span : 1mA

zero bias : max. 1.5 Times of span

LOAD resistance

OUTPUT	LOAD RESISTANCE	IMPEDANCE
4-20mA	0-600ohm	5Mohm or more
0-20mA	0-600ohm	
0-16mA	0-750ohm	
0-10mA	0-1200ohm	
0-1mA	0-12kohm	
0-5mA	0-2400ohm	

DC Voltage : 0-12V DC

Minimum span : 5mV

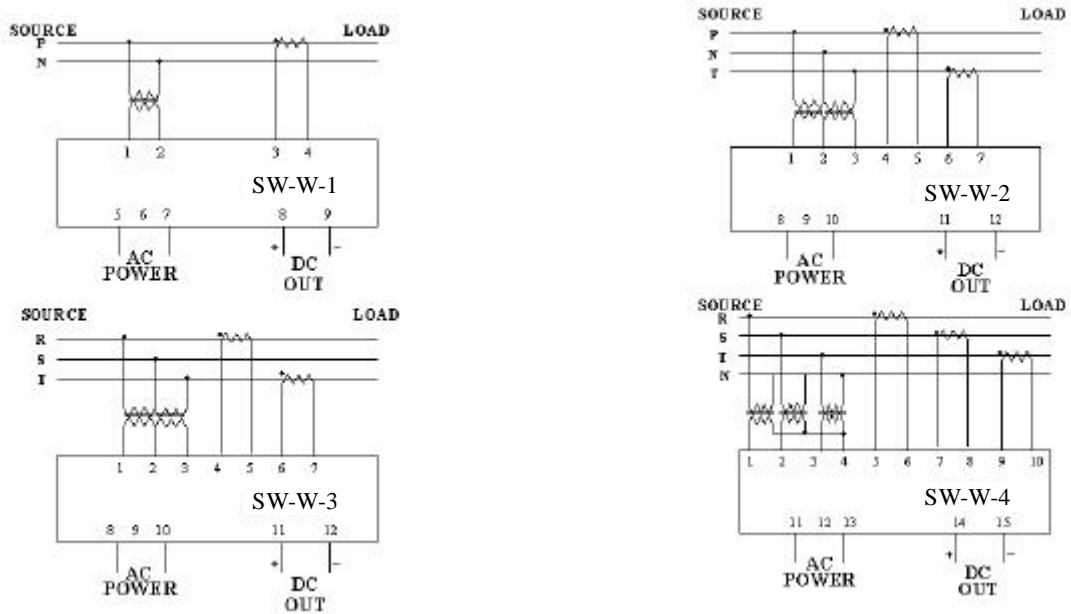
zero bias : max. 1.5 Times of span

OUTPUT	LOAD RESISTANCE	IMPEDANCE
0-10mV	10kohm or more	10ohm
0-100mV	100kohm or more	100ohm
0-1V	1kohm or more	1ohm or less
0-10V	10kohm or more	
0-5V	5kohm or more	
1-5V		

\* for other ranges within 0-12V, use equation  
 $R = E/I$  where : R = load resistance (ohm)  
 E = full-scale output (V)  
 I = 1 mA

# POWER TRANSDUCER SERIES

## CONNECTION DIAGRAM



## DEMENSION & INSTRUCTIONS

