

HD POWER TRANSDUCER SERIES

WATT TRANSDUCER

MODEL

HDW -

MODEL & SUFFIX CODE SELECTION

MODEL **HDW** 

■ **PHASE & WIRE**

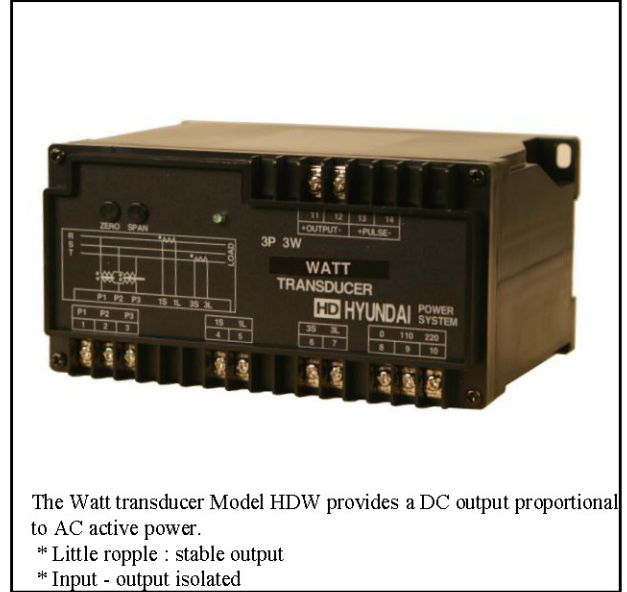
1	1 P 2 W
2	1 P 3 W
3	3 P 3 W
4	3 P 4 W

■ **VOLTAGE & AMPERE**

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

■ **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	Spec Order	6	DC 1-5V
		O	Spec Order



The Watt transducer Model HDW 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** : 0.4sec(400ms)
- 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** : W75 H150 D113mm
- 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

ORDERING INFORMATION

Specify code number and variables
* **Code number** : HDW-input/output/mode
ex : HDW-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%

1-PHASE/2-WIRE

MODEL CODE	INPUT		AVAILABLE RANGE	BURDEN (VA)	
		STANDARD RANGE		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 RANGE		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 RANGE		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 RANGE		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

DC Voltage : 0-12V DC

Minimum span : 5mV

zero bias : max. 1.5 Times of span

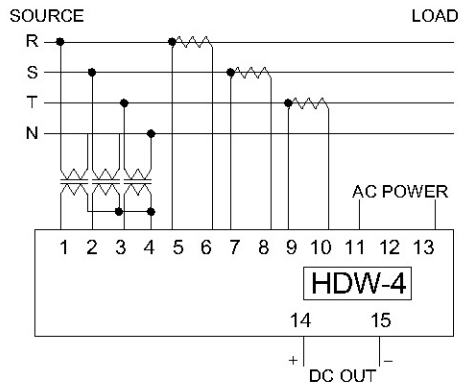
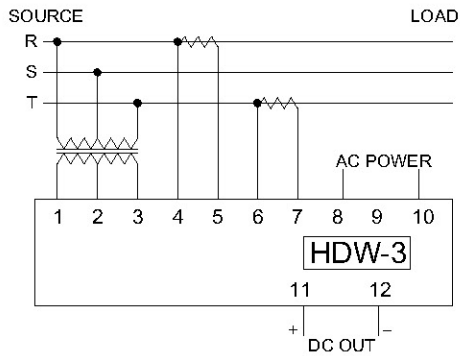
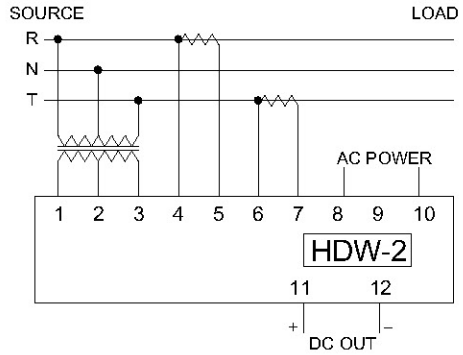
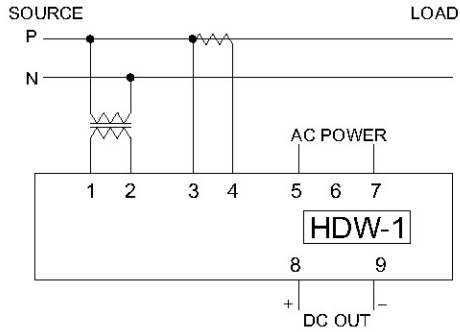
LOAD resistance

OUTPUT	LOAD RESISTANCE	IMPEDANCE
4-20mA	0-600 Ω	5M Ω or more
0-20mA	0-600 Ω	
0-16mA	0-750 Ω	
0-10mA	0-1200 Ω	
0-1mA	0-12k Ω	
0-5mA	0-2400 Ω	

OUTPUT	LOAD RESISTANCE	IMPEDANCE
0-10mV	10k Ω or more	10 Ω
0-100mV	100k Ω or more	100 Ω
0-1V	1k Ω or more	1 Ω or less
0-10V	10k Ω or more	
0-5V 1-5V	5k Ω or more	

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

CONNECTION DIAGRAM



DIMENSION & INSTRUCTIONS

