

# OSI PRECISION AC WATT/VAR TRANSDUCER MODEL GWV5-

## COMBINATION WATT & VAR MEASUREMENTS



### FEATURES

- Available in 1-, 2-, or 3-element configurations.
- Some models provide bidirectional outputs.
- 0.2% of reading accuracy
- Accuracy maintained over wide temperature range, calibration traceable to **NIST**.

### APPLICATIONS

- Integration into energy management systems and sub-metering applications.
- Measurement using direct connection, current transformers, and/or potential transformers.
- Sinusoidal waveforms.

**5 YEAR WARRANTY**

### SINGLE- AND THREE-PHASE MODELS WITH INTERNAL SENSOR

INPUTS		F.S. WATT/VAR	PHASE	NO. OF ELE.	STANDARD OUTPUTS MODEL GWV5-									
AC VOLTS	AC AMPS				0-±1mAdc*	0-±1mAdc	0-±10Vdc*	0-±10Vdc	4-20mA	4-20mA*	4-12-20mA	0-±5Vdc*	0-±5Vdc	
0-150	0-2.5	250	1P-2W	1	106A	106B	106C	106D	106E	106EG	106EM	106CX5	106X5	
0-150	0-5	500	1P-2W	1	001A	001B	001C	001D	001E	001EG	001EM	001CX5	001X5	
0-300	0-2.5	500	1P-2W	1	107A	107B	107C	107D	107E	107EG	107EM	107CX5	107X5	
0-300	0-5	1000	1P-2W	1	002A	002B	002C	002D	002E	002EG	002EM	002CX5	002X5	
0-600	0-2.5	1000	1P-2W	1	108A	108B	108C	108D	108E	108EG	108EM	108CX5	108X5	
0-600	0-5	2000	1P-2W	1	003A	003B	003C	003D	003E	003EG	003EM	003CX5	003X5	
0-150	0-2.5	500	3P-3W	2	129A	129B	129C	129D	129E	129EG	129EM	129CX5	129X5	
0-150	0-5	1000	3P-3W	2	004A	004B	004C	004D	004E	004EG	004EM	004CX5	004X5	
0-300	0-2.5	1000	3P-3W	2	130A	130B	130C	130D	130E	130EG	130EM	130CX5	130X5	
0-300	0-5	2000	3P-3W	2	005A	005B	005C	005D	005E	005EG	005EM	005CX5	005X5	
0-600	0-2.5	2000	3P-3W	2	131A	131B	131C	131D	131E	131EG	131EM	131CX5	131X5	
0-600	0-5	4000	3P-3W	2	006A	006B	006C	006D	006E	006EG	006EM	006CX5	006X5	
0-150 L-N	0-2.5	750	3P-4W	3	132A	132B	132C	132D	132E	132EG	132EM	132CX5	132X5	
0-150 L-N	0-5	1500	3P-4W	3	007A	007B	007C	007D	007E	007EG	007EM	007CX5	007X5	
0-300 L-N	0-2.5	1500	3P-4W	3	133A	133B	133C	133D	133E	133EG	133EM	133CX5	133X5	
0-300 L-N	0-5	3000	3P-4W	3	008A	008B	008C	008D	008E	008EG	008EM	008CX5	008X5	

\* Denotes self-powered unit, voltage range limited to:  
 85-135V For 150V Models  
 200-280V For 300V Models  
 380-550V For 600V Models

CTs & additional current ranges available - Consult Factory

All units other than self-powered require 85-135Vac inst. power.  
 Optional 230Vac Instrument Power - Add suffix **"-22"**

**50 HERTZ MODELS** - Add suffix **"-50"** to part number.

50ms output response to 90% - Add suffix **"W"**

### ORDERING INFORMATION

Example: Three-Phase, Three-Wire 120Vac,  
 5A Input with 0-±1mA Output  
 Equals 1000W & VARs.

**GWV5-004B**

## SPECIFICATIONS

### INPUT

Voltage ..... See Table  
 Current ..... 0-5Aac  
 Frequency ..... 60Hz standard; 50Hz optional  
 Power Factor ..... Any  
 Burden  
 Voltage ..... <0.1VA/phase  
 Current ..... <0.28VA/phase  
 Overload  
 Voltage (continuous) ..... 175V, 350V, 600V  
 Current (continuous) ..... 10A

### DIELECTRIC TEST

Input/Output/Case ..... 1800Vac  
 Surge ..... Withstands IEEE SWC test

### INSTRUMENT POWER

Standard ..... 85-135Vac, 60Hz, 7.5VA  
 "-22" option ..... 230Vac, 50/60Hz, ±15%  
 "A", "C", "CX5" and "EG" models ..... not required

### OUTPUT

VARs ..... + = Lagging/ - = Leading  
 Output Watts, VARs ..... See Table  
 Loading  
 "A" models ..... (0-±1mAdc output) ... 0-10kΩ  
 "C", "D", "CX5", "X5" models (0-±10, 0-±5Vdc) ..... >2kΩ  
 "E", "EG", "EM" models ..... (4-20mAdc output) ... 0-500Ω  
 Response Time to 99% ..... <400ms  
 50ms Response to 90% ..... Add suffix **"W"**  
 Field Adjustable Cal. .... ±2% min.

### ACCURACY (Includes combined effects of voltage, current, load , PF)

Watts ..... ±0.2% Rdg./PF, ±0.05% F.S.  
 VARs ..... ±0.2% Rdg./sinθ, ±0.05% F.S.

### TEMPERATURE & PHYSICAL

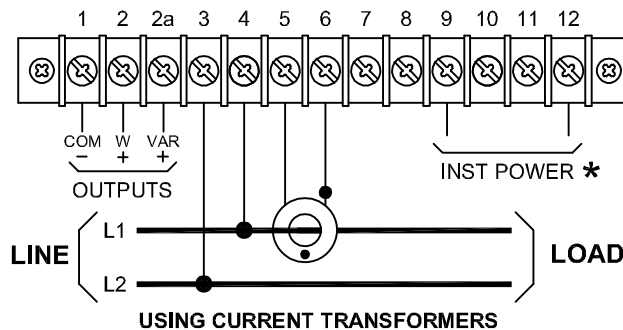
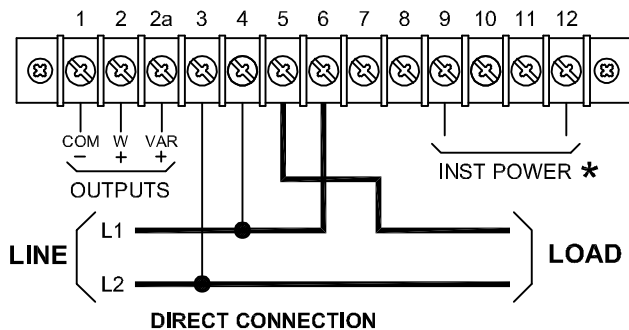
Temperature Effect (-20°C to 60°C)  
 Watts ..... ±0.005%/°C  
 VARs ..... ±0.009%/°C  
 Operating Humidity ..... 0-95% non-condensing

**OHIO SEMITRONICS, INC.**

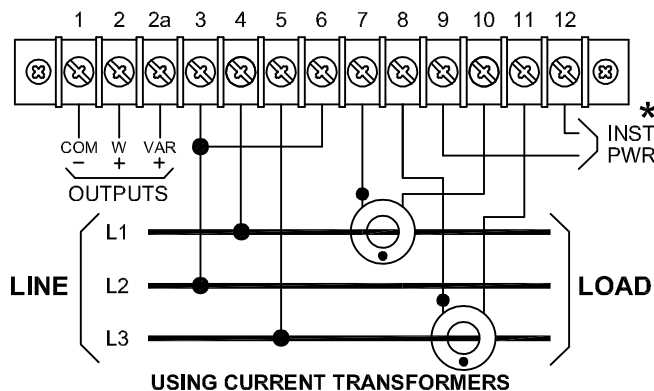
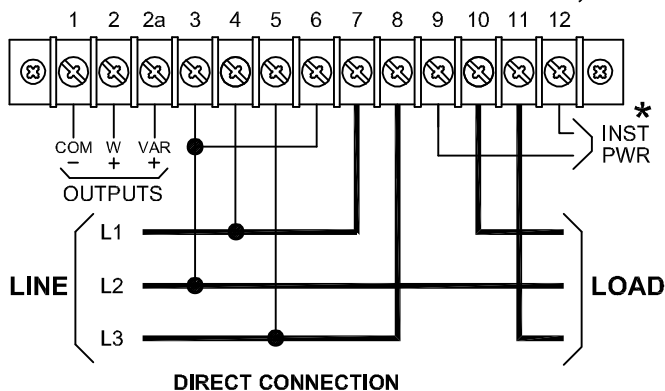
4242 REYNOLDS DRIVE \* HILLIARD, OHIO \* 43026-1264  
 PHONE: (614) 777-1005 \* FAX: (614) 777-4511  
 WWW.OHIOSEMITRONICS.COM \* 1-800-537-6732

## CONNECTION DIAGRAMS

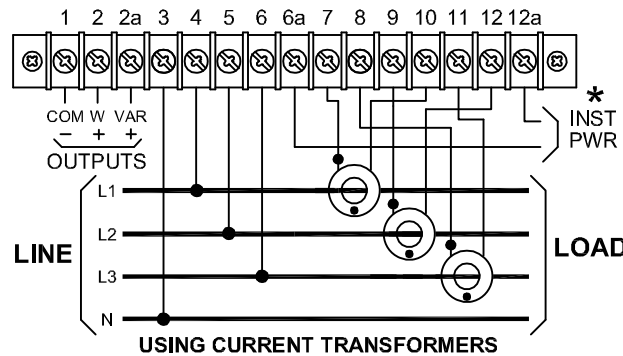
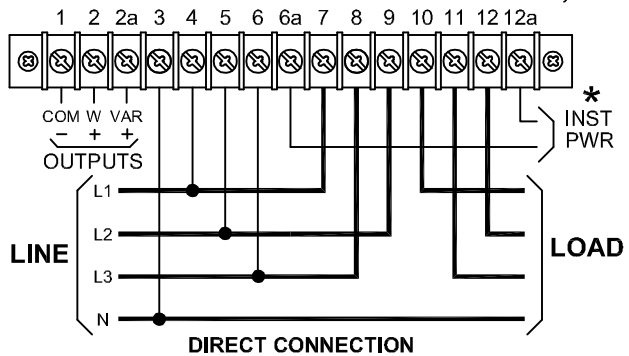
### SINGLE-PHASE, TWO-WIRE CONNECTIONS



### THREE-PHASE, THREE-WIRE CONNECTIONS

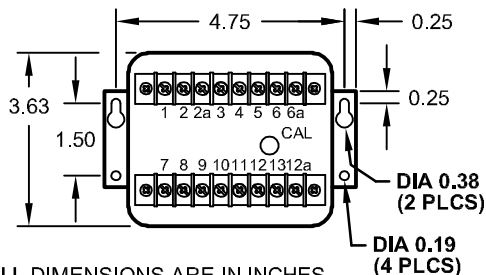


### THREE-PHASE, FOUR-WIRE CONNECTIONS



\* 115Vac ON MODELS WITH B, D, E, EM OR X5 SUFFIX  
 \* 230Vac ON MODELS WITH -22 SUFFIX  
 \* NOT REQUIRED ON MODELS WITH A, C, CX5 OR EG SUFFIX.

## CASE DIMENSIONS



**CASE HEIGHT 6.50"**  
 1PH 2W 2.6 LBS  
 3PH 3W 3.0 LBS  
 3PH 4W 3.5 LBS

ALL DIMENSIONS ARE IN INCHES.

Dwg# 0902-00874-B Rev --