

WATT or VAR TRANSDUCERS

PRECISION AC WATT OR VAR TRANSDUCER MODEL GW5 & GV5

ACCURATE TO 0.2% OF READING

FEATURES

- Accurate regardless of variations in voltage, current, power factor, or load.
- Available with 1, 2, 2 1/2 or 3 element configurations. Provides bi-directional operation. (Except for 4-20mA output models)
- Accuracy maintained over wide temperature range, calibration traceable to NIST.

APPLICATIONS

- Equipment monitoring for process control.
- Integration into energy management systems, or a variety of sub-metering applications.
- Measurement using direct-connection, current transformers, and/or potential transformers.



SINGLE PHASE MODELS-INTEGRAL SENSOR (ONE ELEMENT)

INPUTS		F.S. WATTS or VARS	STANDARD OUTPUTS MODEL GW5- OR GV5-									
AC VOLTS	AC AMPS		±0-1mAdc*	±0-1mAdc	± 0-10Vdc*	± 0-10Vdc	4-20mA	4-12-20mA	4-20mA*	± 0-5Vdc*	± 0-5Vdc	
0-150	0 - 1	100	103A	103B	103C	103D	103E	103EM	103EG	103CX5	103X5	
	0 - 5	500	001A	001B	001C	001D	001E	001EM	001EG	001CX5	001X5	
	0 - 10	1K	010A	010B	010C	010D	010E	010EM	010EG	010CX5	010X5	
	0 - 20	2K	019A	019B	019C	019D	019E	019EM	019EG	019CX5	019X5	
0-300	0 - 1	200	104A	104B	104C	104D	104E	104EM	104EG	104CX5	104X5	
	0 - 5	1K	002A	002B	002C	002D	002E	002EM	002EG	002CX5	002X5	
	0 - 10	2K	011A	011B	011C	011D	011E	011EM	011EG	011CX5	011X5	
	0 - 20	4K	020A	020B	020C	020D	020E	020EM	020EG	020CX5	020X5	
0-600	0 - 1	500	105A	105B	105C	105D	105E	105EM	105EG	105CX5	105X5	
	0 - 5	2K	003A	003B	003C	003D	003E	003EM	003EG	003CX5	003X5	
	0 - 10	4K	012A	012B	012C	012D	012E	012EM	012EG	012CX5	012X5	
	0 - 20	8K	021A	021B	021C	021D	021E	021EM	021EG	021CX5	021X5	

Highlighted models, (5A), can be used with current transformers.

*Denotes self-powered unit, limiting input voltage ranges to:

85-135 for 150V models

200-280 for 300V models

380-550 for 600V models

All others require 85-135VAC instrument power, (60 Hz.).

Add suffix -22 for 220VAC Instrument Power (60Hz)

ORDERING INFORMATION

Example: Self-Powered, Single-Phase,
120V, 5A Input with ±5Vdc Output
Proportional to ±500 Vars.

GV5-001CX5

50 HERTZ MODELS

Self-powered units-Add suffix "-50" to part number.

Units requiring external instrument power:

120V, 50Hz.-Add suffix "-51" to part number.

220V, 50Hz.-Add suffix "-52" to part number.

THREE PHASE THREE WIRE MODELS-INTEGRAL SENSOR (TWO ELEMENT)

INPUTS		F.S. WATTS or VARS	STANDARD OUTPUTS MODEL GW5- OR GV5-									
AC VOLTS	AC AMPS		±0-1mAdc*	±0-1mAdc	± 0-10Vdc*	± 0-10Vdc	4-20mA	4-12-20mA	4-20mA*	± 0-5Vdc*	± 0-5Vdc	
0-150	0 - 1	200	120A	120B	120C	120D	120E	120EM	120EG	120CX5	120X5	
	0 - 5	1K	004A	004B	004C	004D	004E	004EM	004EG	004CX5	004X5	
	0 - 10	2K	013A	013B	013C	013D	013E	013EM	013EG	013CX5	013X5	
	0 - 20	4K	022A	022B	022C	022D	022E	022EM	022EG	022CX5	022X5	
0-300	0 - 1	400	121A	121B	121C	121D	121E	121EM	121EG	121CX5	121X5	
	0 - 5	2K	005A	005B	005C	005D	005E	005EM	005EG	005CX5	005X5	
	0 - 10	4K	014A	014B	014C	014D	014E	014EM	014EG	014CX5	014X5	
	0 - 20	8K	023A	023B	023C	023D	023E	023EM	023EG	023CX5	023X5	
0-600	0 - 1	800	122A	122B	122C	122D	122E	122EM	122EG	122CX5	122X5	
	0 - 5	4K	006A	006B	006C	006D	006E	006EM	006EG	006CX5	006X5	
	0 - 10	8K	015A	015B	015C	015D	015E	015EM	015EG	015CX5	015X5	
	0 - 20	16K	024A	024B	024C	024D	024E	024EM	024EG	024CX5	024X5	

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PRECISION AC WATT OR VAR TRANSDUCER MODEL GW5 & GV5

ACCURATE TO 0.2% OF READING



THREE PHASE FOUR WIRE MODELS-INTEGRAL SENSOR (THREE ELEMENT)

INPUTS		F.S. WATTS or VARS	STANDARD OUTPUTS MODEL GW5- OR GV5-									
AC VOLTS	AC AMPS		±0-1mAdc*	±0-1mAdc	±0-10Vdc*	±0-10Vdc	4-20mA	4-12-20mA	4-20mA*	±0-5Vdc*	±0-5Vdc	
0-150 L-N	0 - 1	300	125A	125B	125C	125D	125E	125EM	125EG	125CX5	125X5	
	0 - 5	1.5K	007A	007B	007C	007D	007E	007EM	007EG	007CX5	007X5	
	0 - 5	1.5K	7.5A	7.5B	7.5C	7.5D	7.5E	7.5EM	7.5EG	7.5CX5	7.5X5	
	0 - 10	3K	016A	016B	016C	016D	016E	016EM	016EG	016CX5	016X5	
0-300 L-N	0 - 1	600	126A	126B	126C	126D	126E	126EM	126EG	126CX5	126X5	
	0 - 5	3K	008A	008B	008C	008D	008E	008EM	008EG	008CX5	008X5	
	0 - 5	3K	8.5A	8.5B	8.5C	8.5D	8.5E	8.5EM	8.5EG	8.5CX5	8.5X5	
	0 - 10	6K	017A	017B	017C	017D	017E	017EM	017EG	017CX5	017X5	
0-300 L-N	0 - 20	6K	025A	025B	025C	025D	025E	025EM	025EG	025CX5	025X5	
	0 - 20	12K	026A	026B	026C	026D	026E	026EM	026EG	026CX5	026X5	

NOTE: PART NUMBER 7.5 and 8.5 DENOTE 2 1/2 ELEMENT UNIT.

Highlighted models, (5A), can be used with current transformers.

Voltage specifications are **line-to-neutral voltage**.

*Denotes self-powered unit, limiting input voltage ranges to:

85-135 for 150V models

200-280 for 300V models

380-550 for 600V models

All others require 85-135VAC instrument power, (60 Hz.)

Add suffix -22 for 230VAC Instrument Power (60Hz)

50 HERTZ MODELS

Self-powered units-Add suffix "-50" to part number.

Units requiring external instrument power:

120V, 50Hz.-Add suffix "-51" to part number.

220V, 50Hz.-Add suffix "-52" to part number.

ORDERING INFORMATION

Example: Self-Powered, Three-Phase, Four-Wire, 120V, 5A Input with ±5Vdc Output, Proportional to ±1500 Watts.

GW5-007CX5

ORDERING INFORMATION

Example: Self-Powered, Three-Phase, Four Wire, 120V, 5A Input with ±1mAdc Output, Proportional to ±1500 VAR.

GV5-007A

SPECIFICATIONS

INPUT

Voltage See Tables

Current See Tables

Frequency Range Watts 58 to 62 Hz

VAR'S 60Hz

Optional 50Hz. Watts 48-52Hz

VAR'S 50Hz

Power Factor Any

Burden

Voltage <0.1VA/phase

Current <0.28VA/phase

Overload

Voltage...(cont.) 150Vac Range 175Vac

300Vac Range 350Vac

600Vac Range 600Vac

Current...(cont.) 5Aac Range 2 X F.S.

10Aac Range 2 X F.S.

20Aac Range F.S.

Transient All Ranges 50Aac (10 sec./hr.)

250Aac (1 sec./hr.)

Dielectric Test...(Input/Output/Case) 1800Vac (RMS)

Surge Withstands IEEE SWC test

OUTPUT

GV5 + = Lagging/ - = Leading

ACCURACY ± 0.2% RDG. ± 0.04% F.S.

Includes combined effects of voltage, current, load and power factor.

Output Ripple < 0.5% F.S.

Output Loading (Ohms)

0-1mA 0-10K

0-10Vdc 2K min.

4-20mA 0-500

0-5Vdc 2K min.

Response Time...(99%) <400 milliseconds

50 ms Response to 90% Add suffix "W"

Field Adjustable Cal. ± 2%

Temperature Effect ... (-20°C to +65°C) ±0.005%/°C

Operating Humidity 0-95% non-condensing

Instrument Power...(Std.) 85-135Vac, 60 Hz, 7VA

"-22" Option 230Vac, 50/60Hz, ±15%

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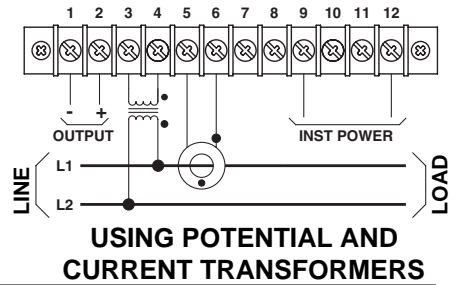
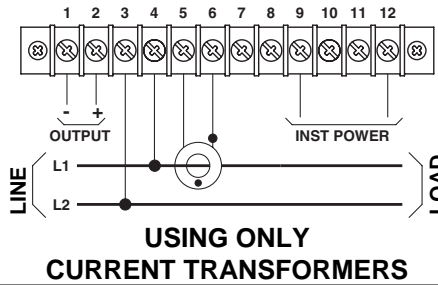
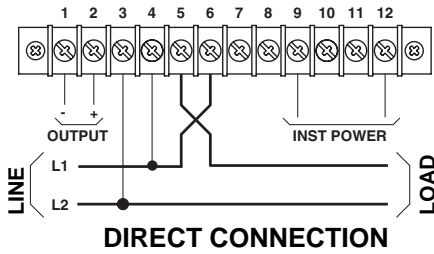
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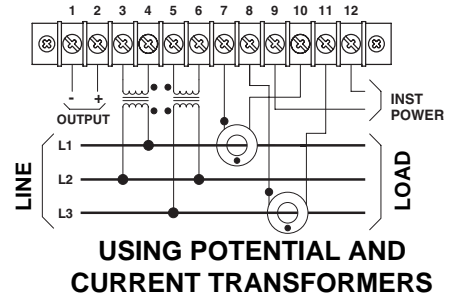
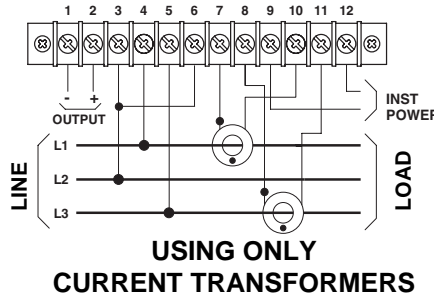
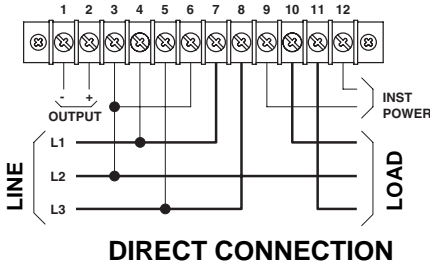
CONNECTION DIAGRAMS/DIMENSIONS

MODEL GW5 & GV5

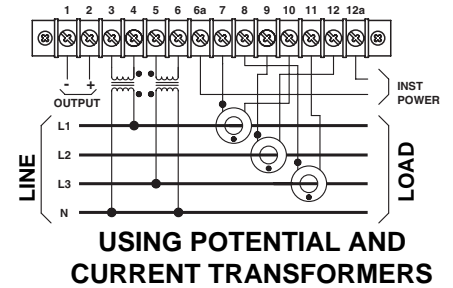
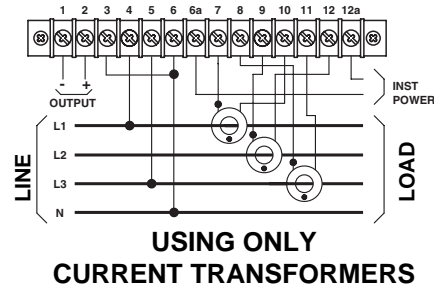
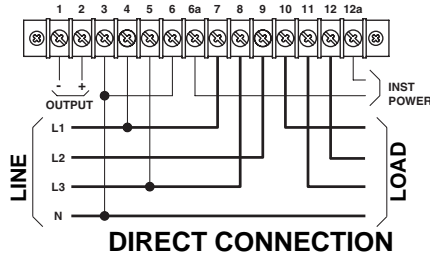
SINGLE-PHASE CONNECTIONS (ONE ELEMENT)



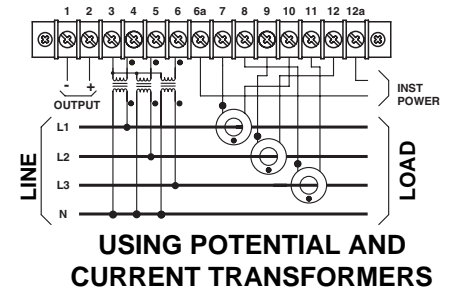
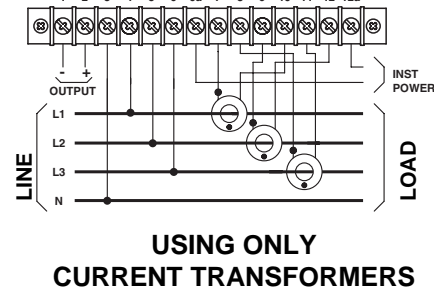
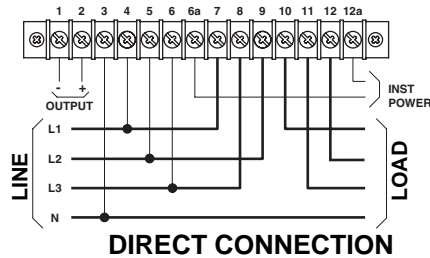
THREE-PHASE, THREE-WIRE CONNECTIONS (2 ELEMENT)



THREE-PHASE, FOUR-WIRE CONNECTIONS (2 1/2 ELEMENT)



THREE-PHASE, FOUR-WIRE CONNECTIONS (THREE ELEMENT)



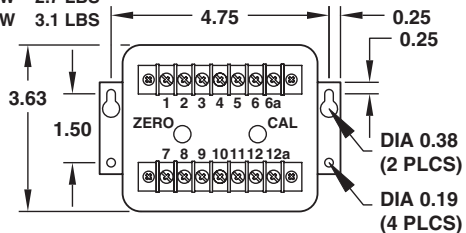
DIMENSIONS

CASE HEIGHT 5.38"

1PH 2W 2.3 LBS

3PH 3W 2.7 LBS

3PH 4W 3.1 LBS



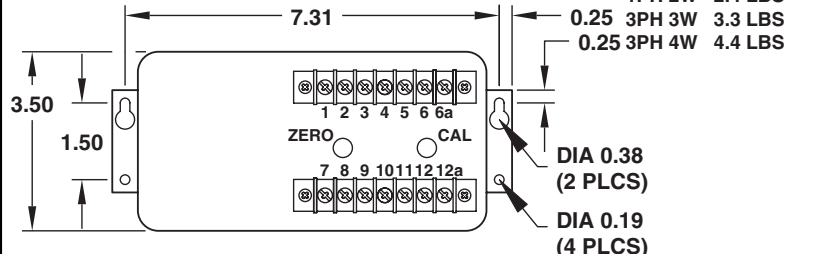
GW5 & GV5 Models with 1mA, 5V, or 10V Outputs

CASE HEIGHT 5.88"

1PH 2W 2.4 LBS

3PH 3W 3.3 LBS

0.25 3PH 4W 4.4 LBS



All GW5 & GV5 Models with 4-20mA Outputs

All Dimensions In Inches

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