

DIN-RAIL-MOUNTED AC WATT TRANSDUCER

DESCRIPTION

The Model DW5 provides power measurement to within $\pm 0.5\%$ of reading accuracy in single- or polyphase systems. The electrically-isolated dc output is proportional to the instantaneous power averaged over several cycles. The DW5 is packaged in a DIN-Rail case for easy installation.

Currents up to 5 Amperes and voltages up to 600Vac can be directly connected to the DW5. The DW5 can be used with OSI metering class current transformers for measurements up to 10 kiloamperes.

Specific outputs can be selected to interface with any data acquisition system from a simple recorder to computer-, SCADA-, or PLC-based system.

The DW5 is widely used in a variety of applications, including hydroelectric generator output measurement, end-of-line appliance testing for energy consumption, building automation, energy management, and cogeneration systems. It comes with CE and CSA approvals and is manufactured and tested in accordance with ISO-9001.



FEATURES

- Accurate regardless of variations in voltage, current, power factor, or load.
- Available with 1-, 2-, or 3-element configurations.
- Some models provide bidirectional operation.
- Accuracy maintained over wide temperature range.

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.
- Best applied to sinusoidal waveforms.

SINGLE- AND THREE-PHASE MODELS WITH INTERNAL SENSOR

INPUTS		F.S. (WATTS)	PHASE	NO. OF ELEMENTS	STANDARD OUTPUTS MODEL DW5-			
AC VOLTS	AC AMPS				0- ± 1 mAdc	0- ± 10 Vdc	4-20mAdc	0- ± 5 Vdc
0 - 150	0 - 5	500	1P-2W	1	001B	001D	001E	001X5
0 - 300	0 - 5	1000	1P-2W	1	002B	002D	002E	002X5
0 - 600	0 - 5	2000	1P-2W	1	003B	003D	003E	003X5
0 - 150	0 - 5	1000	3P-3W	2	004B	004D	004E	004X5
0 - 300	0 - 5	2000	3P-3W	2	005B	005D	005E	005X5
0 - 600	0 - 5	4000	3P-3W	2	006B	006D	006E	006X5
0 - 150 L-N	0 - 5	1500	3P-4W	3	007B	007D	007E	007X5
0 - 300 L-N	0 - 5	3000	3P-4W	3	008B	008D	008E	008X5

SPECIFICATIONS

INPUT

Voltage See Tables
 Current See Tables
 Frequency Nominal 60Hz
 Option “-50” 50Hz
 Power Factor Any
 Burden
 Voltage 400k Ω /phase
 Current 0.01 Ω /phase
 Overload
 Voltage 120% continuous
 Current 120% continuous

DIELECTRIC TEST

Input to Instrument Power/Output/Case 5550Vac
 Input to Input 3250Vac
 Instrument Power to Output/Case 3700Vac
 Output to Case 490Vac

INSTRUMENT POWER

Standard 85-230Vac/dc, 50/60Hz, 4.5VA

OUTPUT

Loading
 “B” models (0-1mAdc output) 0-15k Ω
 “X5” & “D” models... (0-5, 0-10Vdc) 2.5k Ω min.
 “E” models (4-20mAdc) 0-750 Ω
 Response Time (to 99%) 300ms
 Field Adjustable Cal. $\pm 2\%$ min.
 Open Circuit Voltage <40Vdc

ACCURACY $\pm 0.5\%$ Rdg.
 Output Ripple <2% pk-pk

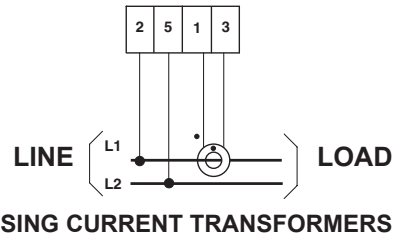
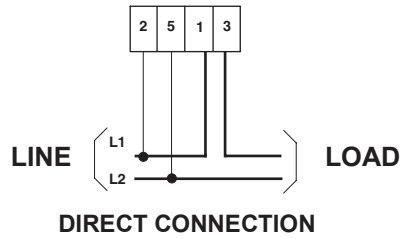
TEMPERATURE

Temperature Range -10 $^{\circ}$ C to 55 $^{\circ}$ C

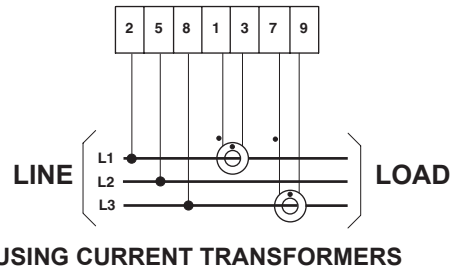
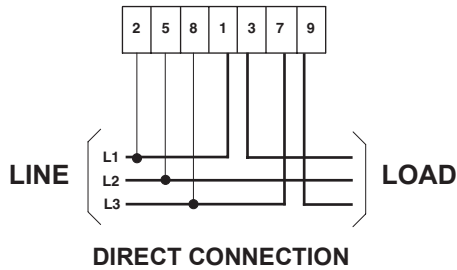
PHYSICAL

Mean Annual Humidity <75%
 Net Weight 0.9 lbs.
 Termination 10 AWG max.

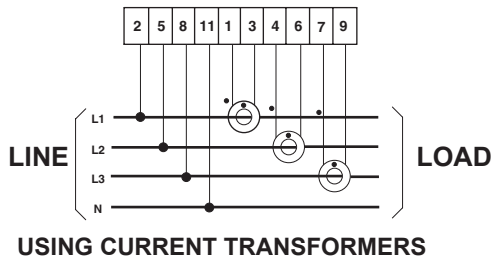
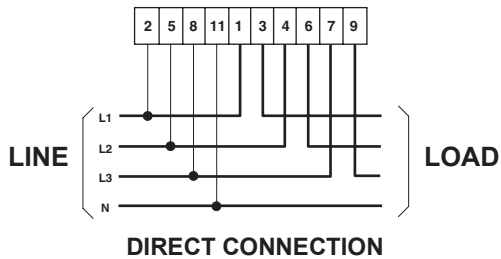
SINGLE-PHASE CONNECTIONS (ONE-ELEMENT)



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

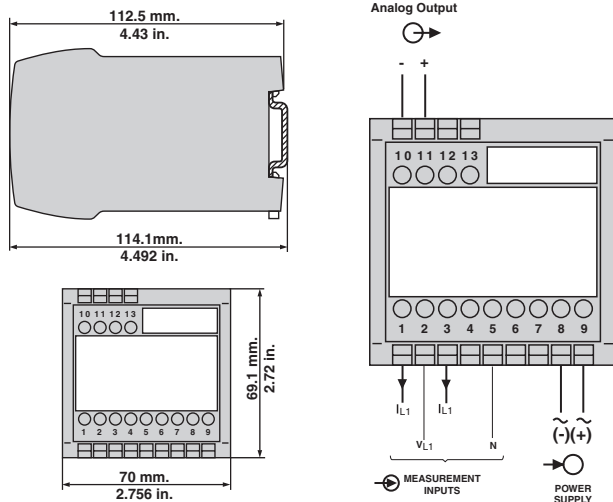


THREE-PHASE, FOUR-WIRE CONNECTIONS (THREE-ELEMENT)



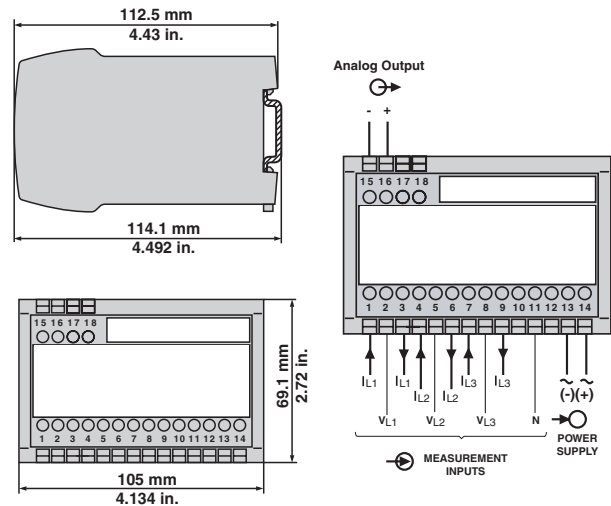
CASE DIMENSIONS

SINGLE-PHASE MODELS



Mounted on 35mm top-hat DIN-rail.

THREE-PHASE MODELS



Mounted on 35mm top-hat DIN-rail.