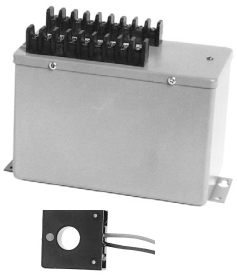
DC & VARIABLE-FREQUENCY AC WATT TRANSDUCER *MODEL* PC8-

DC WATTS

DESCRIPTION

The PC8 units are designed to provide accurate power measurements on sinusoidal or highly-distorted waveforms. Basic four-quadrant multiplier response of dc to 20 kilohertz provides operation up to at least the fifth harmonic for dc to 400-hertz applications.



Full-scale accuracy of 1% results for dc, sinusoidal ac, chopped or pulsed waveforms. Time-varying waveforms with a dc component are accurately measured.

Most units provide bidirectional output so that power consumption or generation can be measured. All units have input/output/case isolation.

Standard units with input current ranges up to 2000 Amperes and voltage ranges to 600 Volts are available with outputs to interface with most data calibration or control equipment.

FEATURES

- Accurate from dc to 400 Hz.
- Factory calibration traceable to **NIST**.
- Input/output/case isolation.
- Real-time indication of power with transient response **less than 50 microseconds**.

APPLICATIONS

- Accurate monitoring of power that contains dc and/or harmonics.
- Ideal for use in SCR and other ac or dc switching circuitry.
- Bidirectional output.

MODEL SELECTION

MODEL PC8 — ☐ — ☐ ☐

INPUT VOLTAGE	INPUT CURRENT	OUTPUT OPTIONS
(001) = 0 - 25V	(08) = 0 - 5A	(B) = 0 - ±1mAdc
(002) = 0 - 50V	(01) = 0 - 100A	(D) = 0 - ±10Vdc
(003) = 0-150V	(02) = 0 - 200A	(E) = 4 - 20mAdc
(004) = 0-300V	(03) = 0 - 300A	(EM) = 4-12-20mAdc
(005) = 0-400V	(04) = 0 - 400A	(X5) = 0 - ±5Vdc
(006) = 0-500V	(05) = 0 - 600A	
(007) = 0-600V	(06) = 0-1000A	
	(07) = 0-2000A	

ORDERING INFORMATION

Example: 150V, 100A Input with Split-Core Sensor and 0-±5Vdc Output, Proportional to 0-15,000Watts

PC8-003-01X5S

All units require 85-135Vac instrument power, 50-400Hz. Optional 230Vac instrument power - add suffix **"-22"**
Full-scale power (Watts) can be determined by the product of full-scale input voltage and full-scale input current.

OPTIONAL SPLIT-CORE CURRENT SENSOR AVAILABLE WITH UNITS OF 100 AMPS OR GREATER - ADD SUFFIX "S".

ADDITIONAL CURRENT RANGES AVAILABLE. CONSULT FACTORY.

SPECIFICATIONS

INPUT

Voltage ..... See Tables
Current ..... See Tables
Frequency Range ..... dc to 400Hz
Power Factor ..... Any
Response (Transient 90%) 50µs
Burden
Voltage ..... Models under 50V ..... >100kΩ
Models over 50V ..... >1MΩ
Overload
Voltage ..... 2 X F.S. or 600Vac/850Vdc max.
Current ..... Using internal sensor ..... 2 X F.S.
Using sensors C, D, E ..... 50 X F.S.

DIELECTRIC TEST

Input/Output/Case 1000Vdc
Surge ..... Withstands IEEE SWC test

OUTPUT

Loading
"B" models ..... (0-±1mAdc output) 0-10kΩ
"E", "EM" models ... (4-20, 4-12-20mAdc output) ... 0-500Ω
"X5", "D" models .... (0-±5, 0-±10Vdc output) ..... ≥2kΩ
Response Time ..... (to 90%) ..... <500ms
Field Adjustable Cal. ..... ±10%

ACCURACY ..... ±1.0%F.S.

Includes combined effects of voltage, current, load and power factor
Output Ripple ..... <1.0% F.S.@60Hz

INSTRUMENT POWER

Standard 85-135Vac, 50-400Hz, 10VA
"**-22**" Option ..... 230Vac, 50/60Hz, ±15%

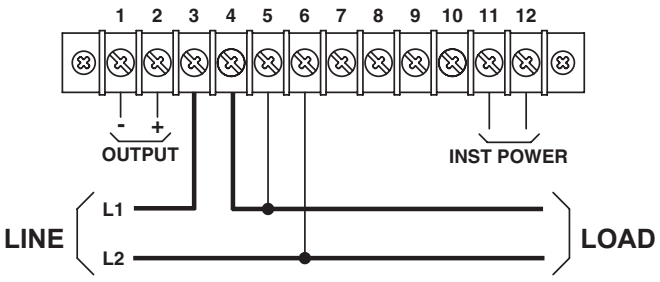
TEMPERATURE

Temperature Range ..... 0ºC to 40ºC
Temperature Effect ..... ±1.0% of Rdg, ±0.1% F.S. Output

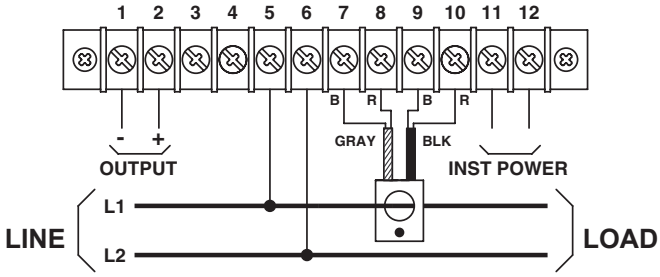
OHIO SEMITRONICS, INC.
4242 REYNOLDS DRIVE * HILLIARD, OHIO * 43026-1264
PHONE: (614) 777-1005 * FAX: (614) 777-4511
WWW.OHIOSEMITRONICS.COM * **1-800-537-6732**

CONNECTION DIAGRAMS & DIMENSIONS *MODEL* PC8-

SINGLE-PHASE, VARIABLE-FREQUENCY (ONE-ELEMENT)

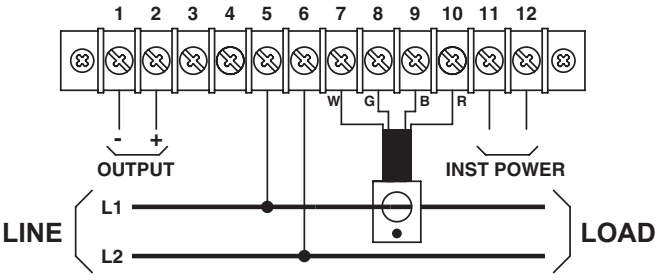


DIRECT-CONNECTION USING INTERNAL SENSOR



CONNECTION USING EXTERNAL SENSOR WITH TWO CABLES.

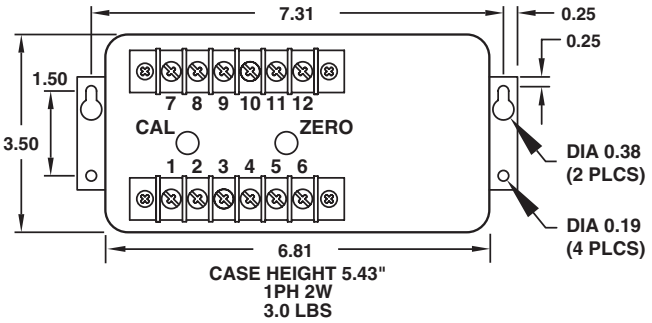
SENSOR CABLE SHIELD SHOULD BE CUT OFF.



CONNECTION USING EXTERNAL SENSOR WITH ONE CABLE.

Warning! Shock Hazard!
Current Sensor Terminals are at Line Potential.

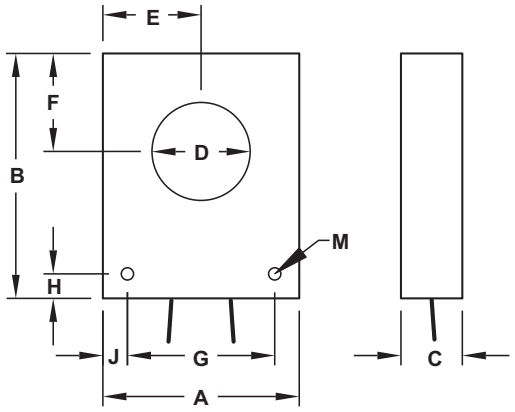
CASE DIMENSIONS



CASE HEIGHT 5.43"
1PH 2W
3.0 LBS

All dimensions in inches

SENSOR DIMENSIONS



SENS SIZE	SENSOR DIMENSIONS										WT. LBS.
	A	B	C	D	E	F	G	H	J	M	
C	2	2	3/4	3/4	1	7/8	1 1/2	1/4	1/4	5/32	0.28
D	3 1/8	4	3/4	1 1/8	1 9/16	1 1/2	2 1/8	1/2	1/2	11/64	0.75
E	4 1/8	5	1 1/4	2	2 1/16	2	3 1/4	7/16	7/16	17/64	2.80

All dimensions in inches

Solid-core models are supplied with 18-inch cables on sensor sizes C & D. All other solid-core models supplied with detachable 8-foot cable. Sensor size C split-core models are supplied with 8-foot attached cable. All other split-core models are supplied with detachable 8-foot cable. Longer cables are available.

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