

OSI VARIABLE-FREQUENCY AC WATT TRANSDUCER MODEL P-

VARIABLE FREQUENCY (5-500 HERTZ)

FEATURES

- Accurate from 5 to 500Hz, factory-calibrated.
- Available in both single-phase and three-phase configurations. Bidirectional output.
- Available with split-core current sensors.

APPLICATIONS

- Accurate monitoring of power that contains dc and non-sinusoidal ac components.
- Variable-frequency drives.
- Ideal for use in phase-angle-firing circuits or frequency synthesizers.

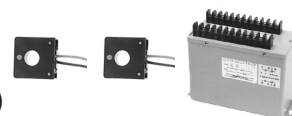


SINGLE-PHASE (ONE-ELEMENT)

INPUTS		F.S. (WATTS)	SENSOR SIZE	STANDARD OUTPUTS MODEL P-					
AC VOLTS	AC AMPS			0-±1mAdc	0-±10Vdc	4-20mAdc	4-12-20mAdc	0-20mAdc	0-±5Vdc
0 - 150	0 - 100	10k	C	121B	121D	121E	121EM	121EA	121X5
	0 - 200	20k	D	124B	124D	124E	124EM	124EA	124X5
	0 - 400	40k	D	127B	127D	127E	127EM	127EA	127X5
	0 - 600	60k	E	130B	130D	130E	130EM	130EA	130X5
	0 - 1000	100k	E	133B	133D	133E	133EM	133EA	133X5
	0 - 2000	200k	E	136B	136D	136E	136EM	136EA	136X5
0 - 300	0 - 100	20k	C	122B	122D	122E	122EM	122EA	122X5
	0 - 200	40k	D	125B	125D	125E	125EM	125EA	125X5
	0 - 400	80k	D	128B	128D	128E	128EM	128EA	128X5
	0 - 600	120k	E	131B	131D	131E	131EM	131EA	131X5
	0 - 1000	200k	E	134B	134D	134E	134EM	134EA	134X5
	0 - 2000	400k	E	137B	137D	137E	137EM	137EA	137X5
0 - 600	0 - 100	40k	C	123B	123D	123E	123EM	123EA	123X5
	0 - 200	80k	D	126B	126D	126E	126EM	126EA	126X5
	0 - 400	160k	D	129B	129D	129E	129EM	129EA	129X5
	0 - 600	240k	E	132B	132D	132E	132EM	132EA	132X5
	0 - 1000	400k	E	135B	135D	135E	135EM	135EA	135X5
	0 - 2000	800k	E	138B	138D	138E	138EM	138EA	138X5

5 YEAR WARRANTY

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



INPUTS		F.S. (WATTS)	SENSOR SIZE	STANDARD OUTPUTS MODEL P-					
AC VOLTS	AC AMPS			0-±1mAdc	0-±10Vdc	4-20mAdc	4-12-20mAdc	0-20mAdc	0-±5Vdc
0 - 150	0 - 100	20k	C	142B	142D	142E	142EM	142EA	142X5
	0 - 200	40k	D	145B	145D	145E	145EM	145EA	145X5
	0 - 400	80k	D	148B	148D	148E	148EM	148EA	148X5
	0 - 600	120k	E	151B	151D	151E	151EM	151EA	151X5
	0 - 1000	200k	E	154B	154D	154E	154EM	154EA	154X5
	0 - 2000	400k	E	157B	157D	157E	157EM	157EA	157X5
0 - 300	0 - 100	40k	C	143B	143D	143E	143EM	143EA	143X5
	0 - 200	80k	D	146B	146D	146E	146EM	146EA	146X5
	0 - 400	160k	D	149B	149D	149E	149EM	149EA	149X5
	0 - 600	240k	E	152B	152D	152E	152EM	152EA	152X5
	0 - 1000	400k	E	155B	155D	155E	155EM	155EA	155X5
	0 - 2000	800k	E	158B	158D	158E	158EM	158EA	158X5
0 - 600	0 - 100	80k	C	144B	144D	144E	144EM	144EA	144X5
	0 - 200	160k	D	147B	147D	147E	147EM	147EA	147X5
	0 - 400	320k	D	150B	150D	150E	150EM	150EA	150X5
	0 - 600	480k	E	153B	153D	153E	153EM	153EA	153X5
	0 - 1000	800k	E	156B	156D	156E	156EM	156EA	156X5
	0 - 2000	1600k	E	159B	159D	159E	159EM	159EA	159X5

All units require 85-135Vac instrument power, 50-400Hz.

Optional 230Vac instrument power - add suffix "-22"

**FOR OPTIONAL SPLIT-CORE CURRENT SENSOR,
ADD SUFFIX "S" TO PART NUMBER.**

**ADDITIONAL CURRENT RANGES AVAILABLE.
CONSULT FACTORY.**

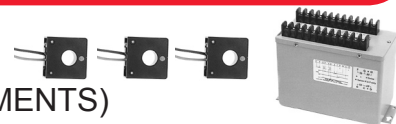
SENSOR SIZES SHOWN ON FOLLOWING PAGE.

ORDERING INFORMATION

Example: Three-Phase, Three-Wire, 120V,
100A Input, Split-Core Sensor,
with 0-±5Vdc Output, Proportional to 0-±20kW.
P-142X5S

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

OSI VARIABLE-FREQUENCY AC WATT TRANSDUCER MODEL P-



THREE-PHASE, FOUR-WIRE (THREE ELEMENTS)

INPUTS		F.S. (WATTS)	SENSOR SIZE	STANDARD OUTPUTS MODEL P-					
AC VOLTS	AC AMPS			0-±1mAdc	0-±10Vdc	4-20mAdc	4-12-20mAdc	0-20mAdc	0-±5Vdc
0 - 150 L-N	0 - 100	30k	C	160B	160D	160E	160EM	160EA	160X5
	0 - 200	60k	D	162B	162D	162E	162EM	162EA	162X5
	0 - 400	120k	D	164B	164D	164E	164EM	164EA	164X5
	0 - 600	180k	E	166B	166D	166E	166EM	166EA	166X5
	0 - 1000	300k	E	168B	168D	168E	168EM	168EA	168X5
0 - 300 L-N	0 - 2000	600k	E	170B	170D	170E	170EM	170EA	170X5
	0 - 100	60k	C	161B	161D	161E	161EM	161EA	161X5
	0 - 200	120k	D	163B	163D	163E	163EM	163EA	163X5
	0 - 400	240k	D	165B	165D	165E	165EM	165EA	165X5
	0 - 600	360k	E	167B	167D	167E	167EM	167EA	167X5
0 - 1000	600k	E	169B	169D	169E	169EM	169EA	169X5	
	0 - 2000	1200k	E	171B	171D	171E	171EM	171EA	171X5

SPECIFICATIONS

INPUT

Voltage..... See Tables
 Current..... See Tables
 Frequency Range 5-500Hz
 Power Factor..... Any
 Response (Transient 90%) 50µs
 Burden
 Voltage..... <0.1VA/phase
 Current..... <0.1VA/phase
 Overload
 Voltage..... 600Vac max.
 Current..... 50 X F.S.

DIELECTRIC TEST

Input/Output/Case..... 1500Vac

INSTRUMENT POWER

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

OUTPUT

Loading
 "B" models (0-±1mA output)..... 0-10kΩ
 "D" models..... (0-±10Vdc output)..... 2kΩ min.
 "E", "EM", "EA" models 0-500Ω
 "X5" models (0-±5Vdc output)..... 2kΩ min.
 Response Time (to 90%) 500ms
 Field Adjustable Cal. ±10%

ACCURACY

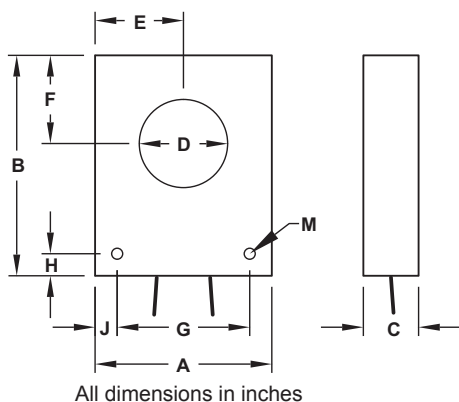
..... ±1.0% F.S.
 Includes combined effects of linearity, repeatability and frequency.
 Output Ripple Less than 1.0% F.S. @ 60Hz

TEMPERATURE

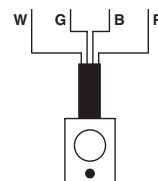
Temperature Range 0°C to +40°C
 Temperature Effect..... ±1.0% of Rdg., ±0.1% F.S. Output

Optional split-core current sensor available - Add suffix "S"

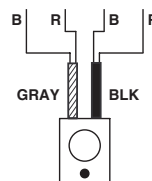
SENSOR DIMENSIONS & CONNECTION DIAGRAM



1-CABLE	2-CABLE
WHITE	= GRAY "B"
GREEN	= GRAY "R"
BLACK	= BLACK "B"
RED	= BLACK "R"



ONE CABLE
CURRENT SENSOR

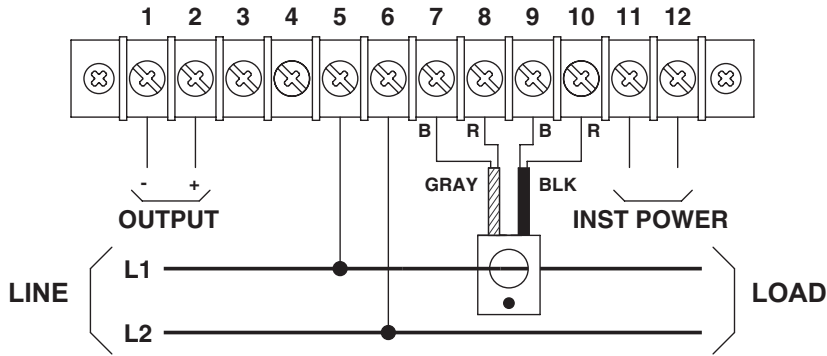


TWO CABLE
CURRENT SENSOR

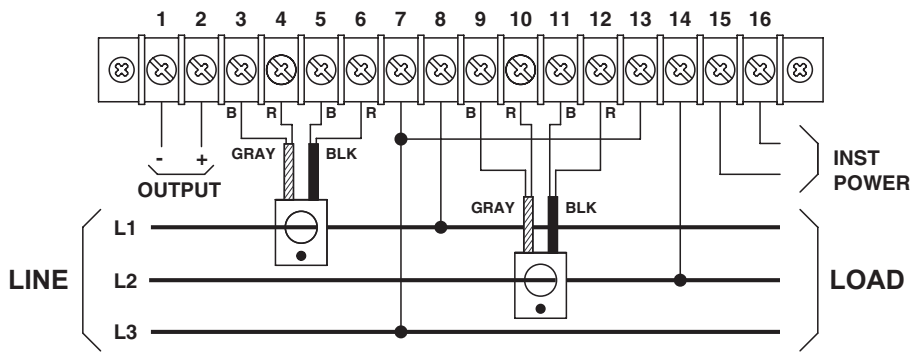
SENS SIZE	SENSOR DIMENSIONS										WT. LBS.
	A	B	C	D	E	F	G	H	J	M	
C	2	2	3/4	3/4	1	7/8	1 1/2	1/4	1/4	5/32	0.28
D	3 1/8	4	3/4	1 1/8	1 9/16	1 1/2	2 1/8	1/2	1/2	11/64	0.75
E	4 1/8	5	1 1/4	2	2 1/16	2	3 1/4	7/16	7/16	17/64	2.80

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.

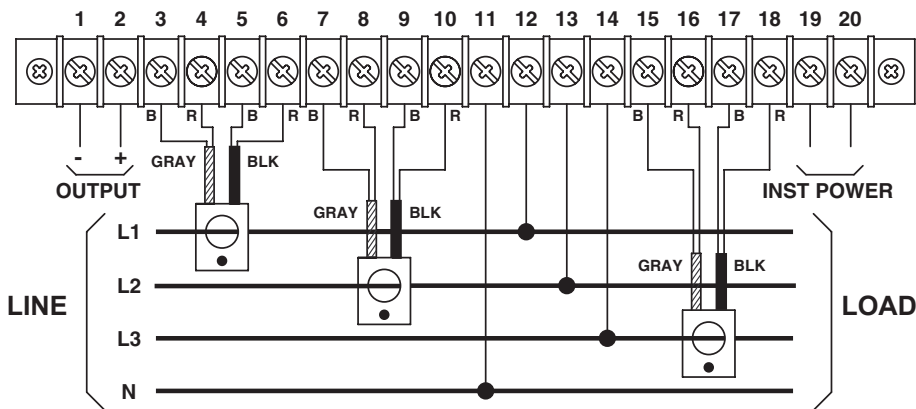
SINGLE-PHASE CONNECTIONS



THREE-PHASE, THREE-WIRE CONNECTIONS

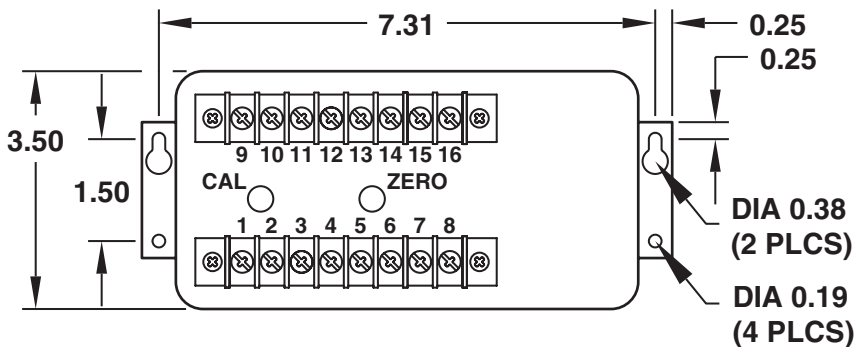


THREE-PHASE, FOUR-WIRE CONNECTIONS



WARNING! SHOCK HAZARD!
Current Sensor Terminals are at Line Potential.

CASE DIMENSIONS



CASE HEIGHT 5.88"
1PH 2W TYP 3.0 LBS
3PH 3W TYP 3.5 LBS
3PH 4W TYP 4.0 LBS

All dimensions in inches