

WATT TRANSDUCERS

VARIABLE FREQUENCY WATT TRANSDUCER

MODEL P

WATT TRANSDUCERS

VARIABLE FREQUENCY (5 TO 500 HERTZ)

FEATURES

- Accurate from 5 to 500 Hz., **Factory calibrated.**
- Available in single phase and any three phase configuration.
- Available with split-core current sensors.

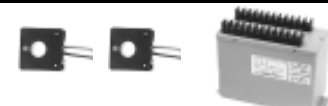
APPLICATIONS

- Accurate monitoring of power that contains dc and non-sinusoidal AC components.
- Ideal for use in phase angle firing circuits or frequency synthesizers.
- Bi-directional output.



SINGLE PHASE (ONE ELEMENT)

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



THREE PHASE - THREE WIRE (TWO ELEMENT)

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

All units require 85-135VAC instrument power, (50-400 Hz.).

OPTIONAL SPLIT-CORE CURRENT SENSOR AVAILABLE-ADD SUFFIX "S" TO PART NUMBER. ADDITIONAL CURRENT RANGES AVAILABLE CONSULT FACTORY

ORDERING INFORMATION

Example Three phase, 120V, 100A Input, split-core sensor, with 0-5Vdc output, proportional to 0-20kW
P-142X5S

FLEX-CORE®

Div. Morlan & Associates, Inc.

6625 McVey Blvd. Columbus, Ohio 43235

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flexcore@msn.com

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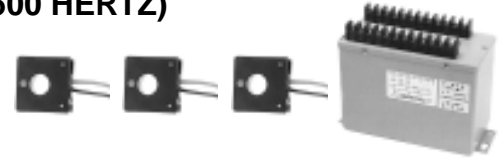
FAX # (614) 876-8538

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MODEL P

VARIABLE FREQUENCY (5 TO 500 HERTZ)



THREE PHASE - FOUR WIRE (THREE ELEMENT)

INPUTS		F.S. IN (WATTS)	SENSOR SIZE	STANDARD OUTPUTS MODEL NUMBER P-					
VOLTAGE	CURRENT			+/- 1mA	+/- 10Vdc	4-20mA	4-12-20mA	0-20mA	+/- 5Vdc
0 to 150 Phase to Neutral	0 to 100	30K	C	160B	160D	160E	160EM	160EA	160X5
	0 to 200	60K	D	162B	162D	162E	162EM	162EA	162X5
	0 to 400	120K	D	164B	164D	164E	164EM	164EA	164X5
	0 to 600	180K	E	166B	166D	166E	166EM	166EA	166X5
	0 to 1000 0 to 2000	300K 600K	E E	168B 170B	168D 170D	168E 170E	168EM 170EM	168EA 170EA	168X5 170X5
0 to 300 Phase to Neutral	0 to 100	60K	C	161B	161D	161E	161EM	161EA	161X5
	0 to 200	120K	D	163B	163D	163E	163EM	163EA	163X5
	0 to 400	240K	D	165B	165D	165E	165EM	165EA	165X5
	0 to 600	360K	E	167B	167D	167E	167EM	167EA	167X5
	0 to 1000 0 to 2000	600K 1200K	E E	169B 171B	169D 171D	169E 171E	169EM 171EM	169EA 171EA	169X5 171X5

MODEL P SPECIFICATIONS

INPUT

Voltage See tables
 Current See tables
 Frequency Range 5 to 500 Hz.
 Response.....(Trans. 90%) 50 microSeconds
 Power Factor Any Burden
 Voltage Less than 0.1VA.
 Current Less than 0.1VA.
 dc insertion loss None
 Overload
 Voltage 600VAC maximum.
 Current 50 times full scale.
 Dielectric Test....(Input/Output/Case) 1500VAC
 Surge Withstands IEEE SWC test.

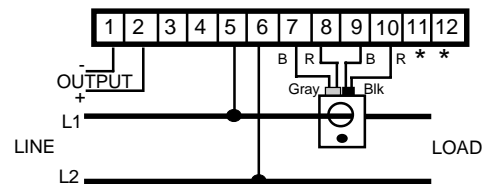
OUTPUT

Output Ripple Less than 1.0% F.S. at 60 Hz.
 Output Loading (OHMS)
 ± 1mA 0-10K
 ± 10Vdc 2K min.
 4-20mA, 4-12-20mA, 0-20mA 0-500
 ± 5Vdc 2K min.
 Response Time....(90%) 500 milliSeconds
 Field Adjustable Cal. ± 10%
ACCURACY ± 1.0% F.S.
 Includes combined effects of linearity, repeatability, and frequency.
 Temperature Effect (0°C to 40°C)
 ±1.0% of reading, ±0.1% F.S. output
 Instrument Power 85-135VAC, 50-400 Hz., 15VA
OPTION 22 220VAC INSTRUMENT POWER

TWO CONNECTION CABLE TYPES 2 CABLE = 1 CABLE

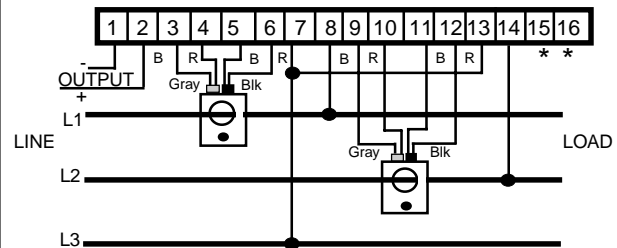
GRAY "B" = WHITE
 GRAY "R" = GREEN
 BLACK "B" = BLACK
 BLACK "R" = RED

CONNECTION DIAGRAMS



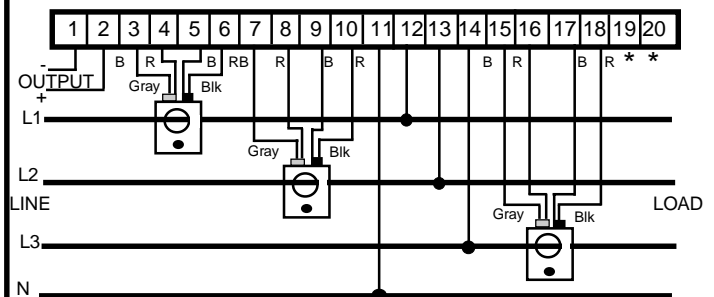
*AC instrument power-terminals 11, 12. All CT shields tied to terminal 7.

SINGLE PHASE CONNECTIONS



*AC instrument power-terminals 15, 16. All CT shields-terminal 3 or 9.

THREE PHASE THREE WIRE CONNECTIONS



*AC instrument power-terminals 19, 20. All CT shields-terminal 3, 7 and 15.

THREE PHASE FOUR WIRE CONNECTIONS

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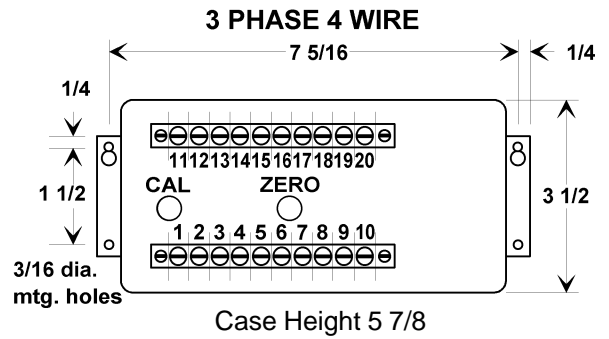
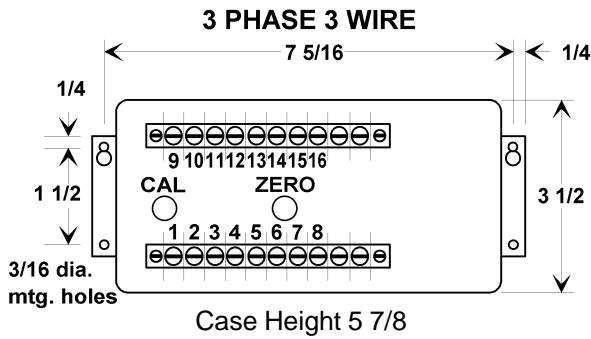
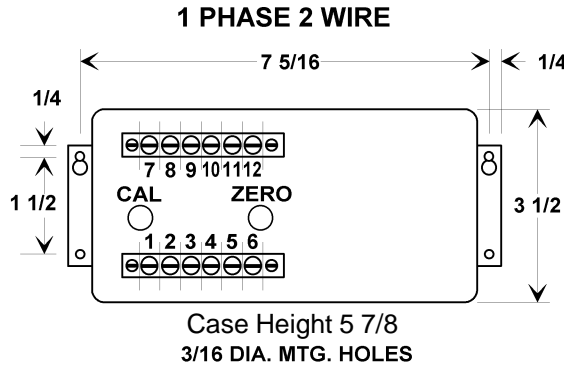
FAX # (614) 876-8538

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CASE DIMENSIONS

MODEL P

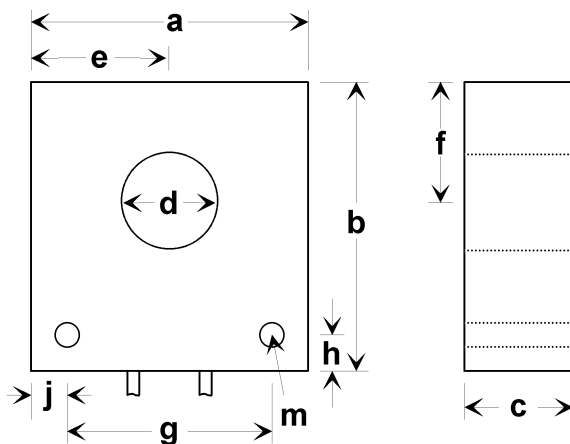
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Weight: 3.5 Lbs.

ALL DIMENSIONS IN INCHES

SENSOR DIMENSIONS



CURRENT TRANSDUCER

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

Standard sensor Lead length 18 in.
Split-Core sensor Lead length 8 ft.

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