MULTIFUNCTION POWER TEST PANEL *MODEL* PTB-

VOLTS, AMPS, WATTS, WATTHOURS, POWER FACTOR & VA

DESCRIPTION

The PTB board-level system monitor is designed to measure and provide analog output signals for all parameters of voltage, current, and total power in an electrical system. Optional outputs are available for power factor, apparent power, and watthours as plug-in "daughter" boards.

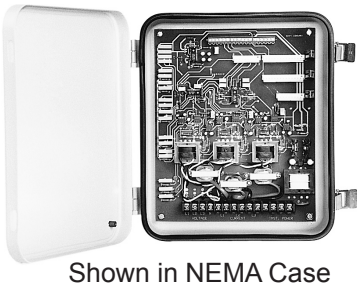
The PTB comes standard with seven 0-10Vdc analog outputs for voltage, current, and power. As options, 0-1mA and 4-20mA outputs are also available.

The 10.75" x 8.9" x 2.5" circuit board is provided with mounting holes to fit a 10" x 12" NEMA case or the circuit board can be mounted in the user's cabinet with the stand-offs provided. Input and output terminals are located directly on the circuit board.

The electronic circuitry uses solid-state multipliers, RMS converters, and amplifiers. The unit requires 115Vac instrument power.

FEATURES

- Small Package
- Less Wiring
- High Accuracy
- Up to 9 Analog Outputs
- Circuit Board Design
- Direct Input to 600Vac
- Low Cost
- Calibrated with CTs



Shown in NEMA Case

ORDERING INFORMATION

Example: 3-Phase, 3-W, 2-Element, 0-150Vac, 0-100Aac, 0-10Vdc & Watthour Outputs, 115Vac Instrument Power.
PTB-212D1W

SYSTEM		VOLTS		AMPS		OUTPUTS		INST. PWR.		OPTION P	OPTION W	OPTION C
1	1-PH, 2-W	1	0 - 150 Vac	1	0 - 5 Aac	D	0 - 10Vdc	1	115Vac	Apparent Power & Power Factor	Watthours	NEMA Case
2	3-PH, 3-W	2	0 - 300 Vac	2	0 - 100 Aac	B	0 - 1mAdc					
3	*3-PH, 4-W	3	0 - 600 Vac	3	0 - 200 Aac	E	4 - 20mAdc	2	230Vac			
4	*1-PH, 3-W			4	0 - 400 Aac							

*Specify L-N Voltage

SPECIFICATIONS

INPUT

VOLTAGE

F.S. Linear Range ..... See Table
Over-voltage ..... 150Vac models 175Vac
300Vac models 350Vac
600Vac models 610Vac
Burden 0.25VA/Phase

CURRENT

All models are linear through full-scale current range.
Continuous over-current
0-5A models 10Aac
All other models ..... 125% of F.S.
Burden ..... <0.25VA/Phase
Frequency Range ..... (Linear) 48-70Hz
Power Factor ..... Any

DIELECTRIC TEST ..... (Input To Outputs) 1500Vac

OPTIONS

Apparent Power (VA) ..... *Same as watts
Power Factor ..... 0-10Vdc ..... 0-1 Lead or Lag.
Watthours
0-5A Models ..... 1 Wh/Cnt
0-100A Models ..... 20 Wh/Cnt
0-200A Models ..... 40 Wh/Cnt
0-400A Models ..... 80 Wh/Cnt
Relay Rating 120V, 0.5A
Relay Closure Duration 200ms

OUTPUT

Voltage (RMS) (3) ..... 0-F.S. Volts Input = 0-10Vdc Output
Current (RMS) (3) ..... 0-F.S. Amps Input = 0-10Vdc Output
Watts (True Power) ..... 0-F.S. Watts Input = 0-10Vdc Output
*Based on F.S. Volts x F.S. Amps x No. of Elements x 0.8
Output Burden ..... 10V ..... >2kΩ
1mA 0-10kΩ
20mA 0-500Ω
Ripple ..... <±1% F.S
Response Time 250ms

ACCURACY

(Includes linearity, setpoint and power factor at 25°C)

5A Models	Voltage	±0.3% F.S.
	Current	±0.3% F.S.
	Power	±0.3% F.S.
100A - 400A Models	Voltage	±0.5% F.S.
	Current	±0.5% F.S.
	Power	±0.5% F.S.
Watthours	(Option)	±0.5% F.S.
Power Factor..(10-100% Input)	(Option)	±0.01 PF

TEMPERATURE

Temperature Effects ..... (10° to 35°C) ..... ±0.5%

INSTRUMENT POWER

Standard ..... 115Vac, ±10%, 50-400Hz, 8.5VA
Option (See Table) ..... 230Vac, 50/60Hz, ±10%

OHIO SEMITRONICS, INC.
4242 REYNOLDS DRIVE * HILLIARD, OHIO * 43026-1264
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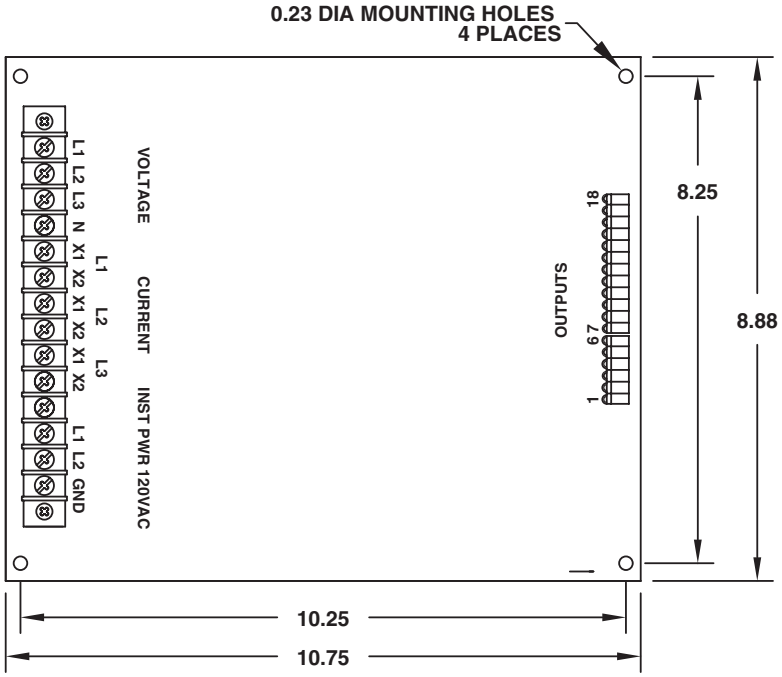
CASE DIMENSIONS/OUTPUT CONNECTIONS *MODEL* PTB-



HEIGHT 2.5"

Optional NEMA Case.....12" X 10" X 4"
Mounting.....12.5" X 8.12", .22 Dia. Holes
Weight ..... 3.0 lbs.
All dimensions in inches

OUTPUT CONNECTIONS											
1Φ 2W System		3Φ 3W System			3Φ 4W System			1Φ 3W System			
1	Watthour Relay	1	Watthour Relay		1	Watthour Relay		1	Watthour Relay		
2		2			2			2			
3	NA	3	NA		3	NA		3	NA		
4	NA	4	NA		4	NA		4	NA		
5	Common	5	Common		5	Common		5	Common		
6	Common	6	Common		6	Common		6	Common		
7	Common	7	Common		7	Common		7	Common		
8	Power Factor	8	Power Factor		8	Power Factor		8	Power Factor		
9	Volt-Amperes	9	Volt-Amperes		9	Volt-Amperes		9	Volt-Amperes		
10	Watts	10	Watts		10	Watts		10	Watts		
11	Common	11	Common		11	Common		11	Common		
12	NA	12	L3	Current	12	L3	Current	12	NA	Current	
13	NA	13	L2		13	L2		13	L2		
14	Current	14	L1		14	L1		14	L1		
15	Common	15	Common		15	Common		15	Common		
16	NA	16	L1-L2	Voltage	16	L3-N	Voltage	16	NA	Voltage	
17	NA	17	L2-L3		17	L2-N		17	L2-N		
18	Voltage	18	L3-L1		18	L1-N		18	L1-N		

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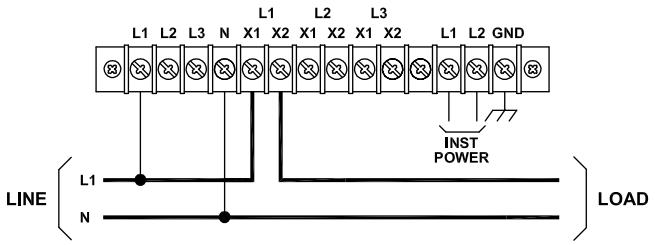
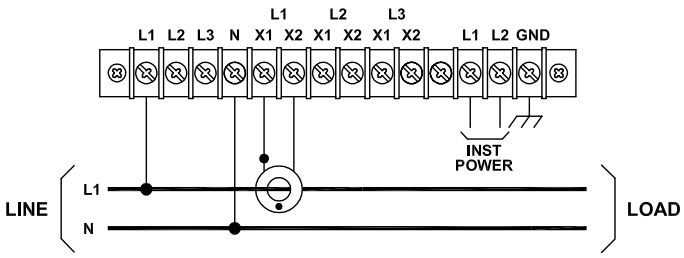
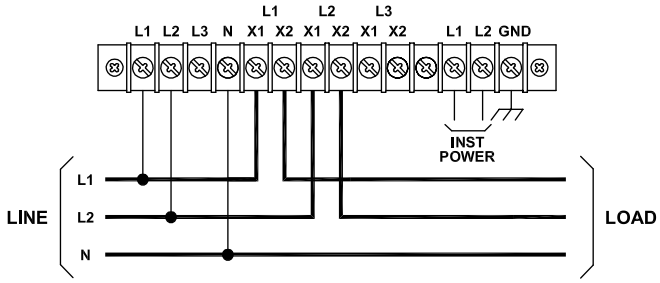


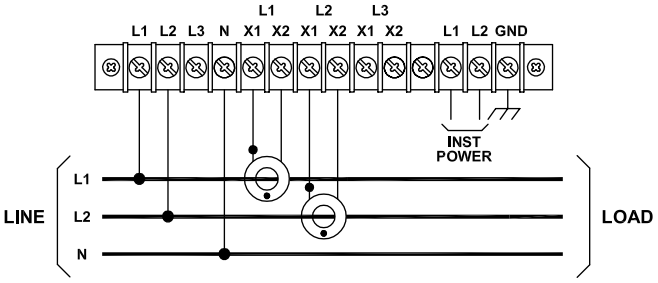
1Φ 2W DIRECT CONNECTION



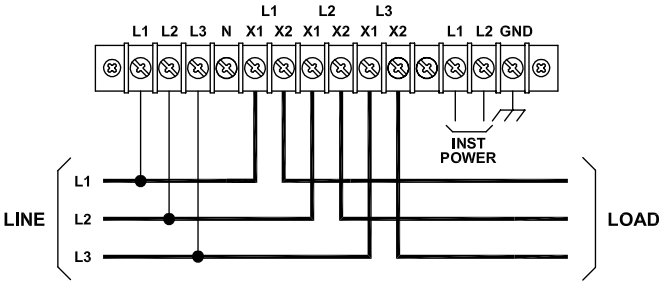
1Φ 2W WITH CURRENT TRANSFORMER



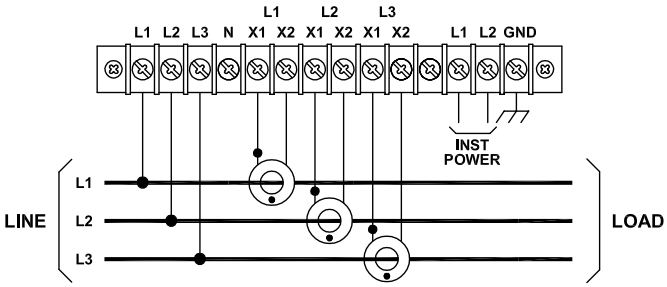
1Φ 3W DIRECT CONNECTION



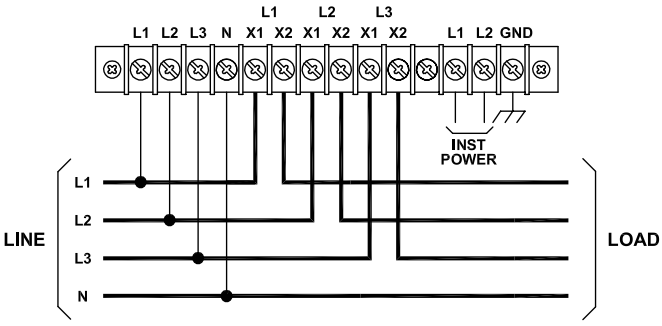
1Φ 3W WITH CURRENT TRANSFORMERS



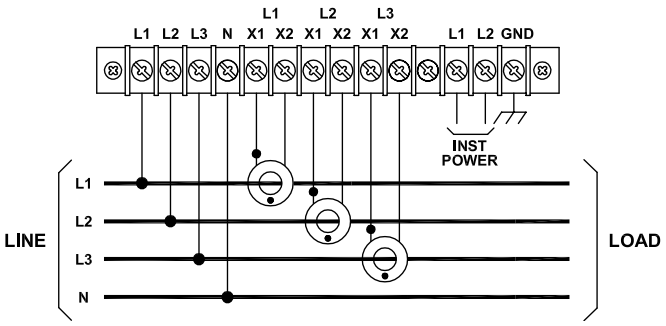
3Φ 3W DIRECT CONNECTION



3Φ 3W WITH CURRENT TRANSFORMERS



3Φ 4W DIRECT CONNECTION



3Φ 4W WITH CURRENT TRANSFORMERS

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