# WATT HOUR TRANSDUCER

## LOW COST AC WATTHOUR TRANSDUCER *MODEL* WL45R

### DESCRIPTION

The model WL45R Watthour Transducer provides a dry contact relay closure output proportional to the energy (Watthours) consumed. The model WL45R can be used with any current transformer that provides a 5 amp secondary. The WL45R can be used on three-phase three-wire or three-phase four-wire applications. Full-scale voltage ranges of up to 480V can be directly connected to the WL45R eliminating the need for costly potential transformers. The ruggedized metal enclosure and small form factor make the model WL45R an excellent choice for applications such as chiller monitoring where current transformers are already provided. The WL45R can also be used with any of the OSI current transformers shown on pages 46-49.

### SPECIFICATIONS

**INPUTS**

Voltage: 120/208 & 277/480
Phase: 3 Phase 3 Wire Or 3 Phase 4 Wire
Range: ± 15%
* Current: 5 Amp
Burden: 2.5 VA
Power Factor: 0.5 Lead To 0.5 Lag
Instrument Power: 208/240/480 50/60Hz, 2.5 Watts

**OUTPUTS**

Standard
Relay: Dry Contact, 120 V, .3 A, 10 VA MAx
Closure Duration: 250 Milliseconds
Isolation: Input/Output/Case 1500Vac

**ACCURACY:** ± 0.5% FS

**TEMPERATURE EFFECTS:** (-20°C To +60°C) ± 0.03%/°C

### CALCULATING OUTPUT CLOSURE RATE

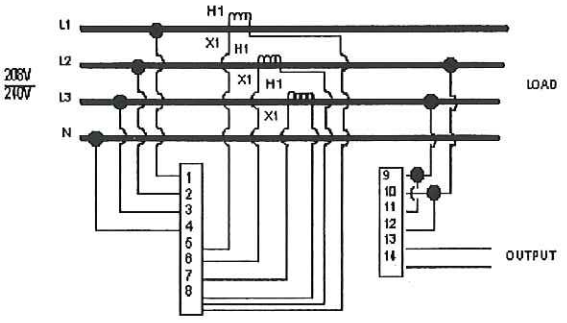
The standard WL45 Watt-Hour is calibrated to give 5 Watt-Hour per count. To calculate the count rate when using current transformers, take the ratio of the current transformer and multiply that by the 5 WH/C.

For instance, if you are using a current transformer with a ratio of 100:5 multiply 20 by 5 WH/C for a closure rate 100 WH/C. In the case of 200:5 ratio current transformer the closure rate would be 200 WH/C. Consult factory for other count rates.

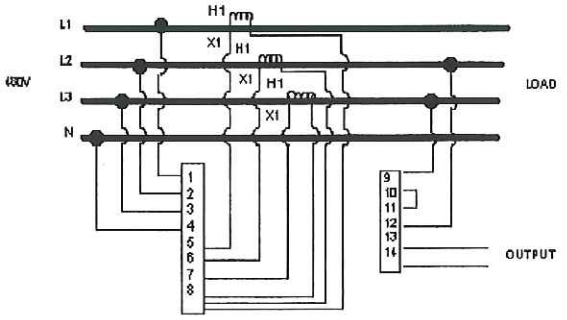
*** CAUTION**

To prevent damage to power lines and the Watt-Hour Transducer NEVER connect the current inputs directly, always use current transformers rated for 600 Vac at 5 ampere secondary to provide the required isolation.

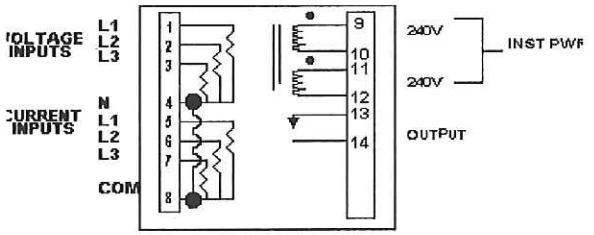
## CONNECTION DIAGRAMS & CASE DIMENSIONS

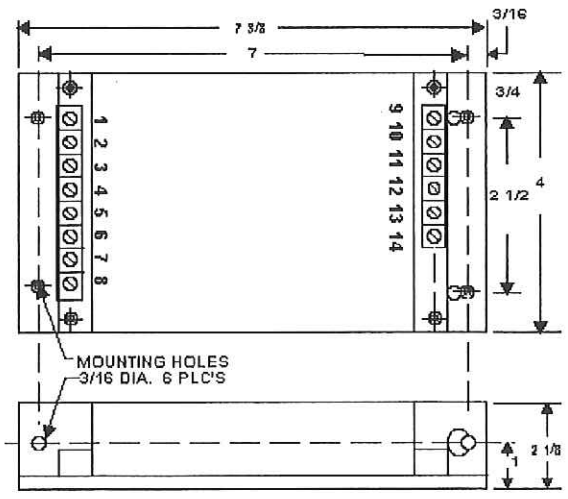



120/208V 3 PHASE 4 WIRE CONNECTIONS ARE SHOWN.
FOR 240V 3 PHASE 3 WIRE DROP CONNECTION GOING TO TERMINAL 4.




277/480V, 3 PHASE 4 WIRE CONNECTIONS ARE SHOWN.
FOR 480V, 3 PHASE 3 WIRE DROP CONNECTION TO TERMINAL 4.





**OHIO SEMITRONICS, INC.**

4242 REYNOLDS DRIVE HILLIARD, OHIO 43026-1264
Phone: (614) 777-1005 FAX: (614) 777-4511
**TO PLACE AN ORDER: 1-800-537-6732**