



# INSTALLATION • OPERATION • MAINTENANCE INSTRUCTIONS

## C-371 MOTOR LOAD INDICATOR 4½ INCH CLASS - PANEL INSTRUMENT

### CASES

The motor load indicator is housed in a flush mounted, black molded phenolic case and may have either a 4 inch square or a 4½ inch round mounting flange.

### MECHANISM

The mechanism consists of an internally mounted transformer, a ring modulator, series resistors mounted externally on the rear of the base and a D'Arsonval mechanism.

### DESCRIPTION

The motor load indicator measures  $I \cos \theta$ , therefore with a constant voltage the deflection is proportional to power ( $EI \cos \theta$ ). Using the above mechanism and a fixed line voltage, power is measured by this instrument. At full load, induction motors have a power factor of approximately .86. The motor current must be transformed by an external current transformer (placed in phase B) of such ratio to produce 5 amperes secondary current (and .86 P.F.) at 150% load. The full scale indication is 160%.

Two 82,000 ohm resistors are wired in series in both the "A" and "C" phases — see schematic wiring diagram. These resistors are matched within 1000 ohms of each other thus permitting interchange of the "A" and "C" phase connections without effecting the indicated accuracy.

The meter is calibrated for voltage ranges of 240 and 480 volts. Two resistor shunting links are assembled on the resistor assembly and are accessible for range changing when the resistor cage cover is removed. The use of the resistor shunting links permits 240 volt operation. The removal of the links increases the voltage rating to 480 volts.

### MOUNTING

Drill panels according to appropriate diagram in

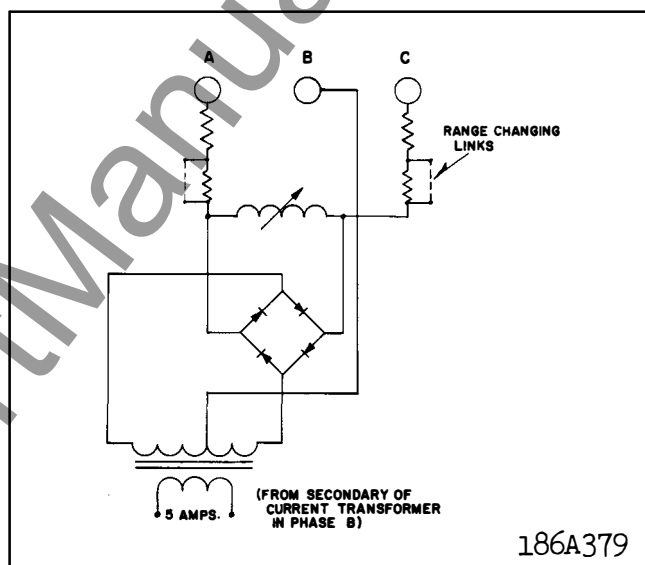


Fig. 1 - Schematic Wiring Diagram

this leaflet. Mount instrument with hardware supplied.

### WIRING

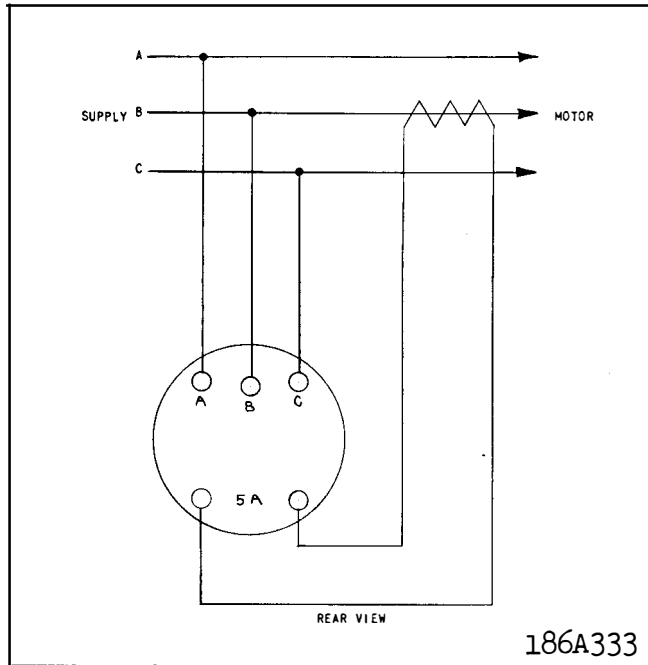
Wire apparatus per applicable wiring diagram, using wire which is insulated to withstand the voltage and other conditions which will be encountered in service.

### INSTALLATION and ADJUSTMENTS

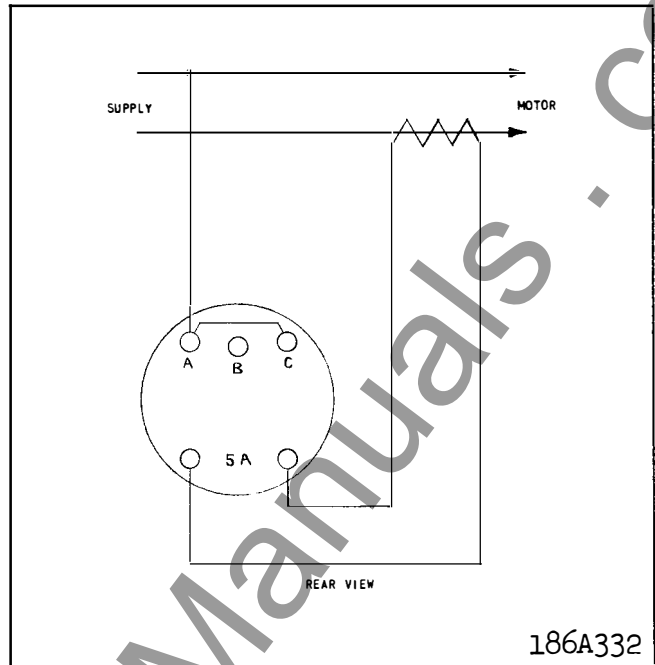
Before energizing, adjust the pointer to zero by means of the zero adjuster on the front of the case.

### REPAIRS and RENEWAL PARTS

Repair work can be done most satisfactorily at the factory. When returning an instrument for repairs, obtain a return material tag from your dealer or your nearest Westinghouse Sales Office, to assure proper identification at the factory. Orders for renewal parts should include the name of the part and the style number of the instrument.



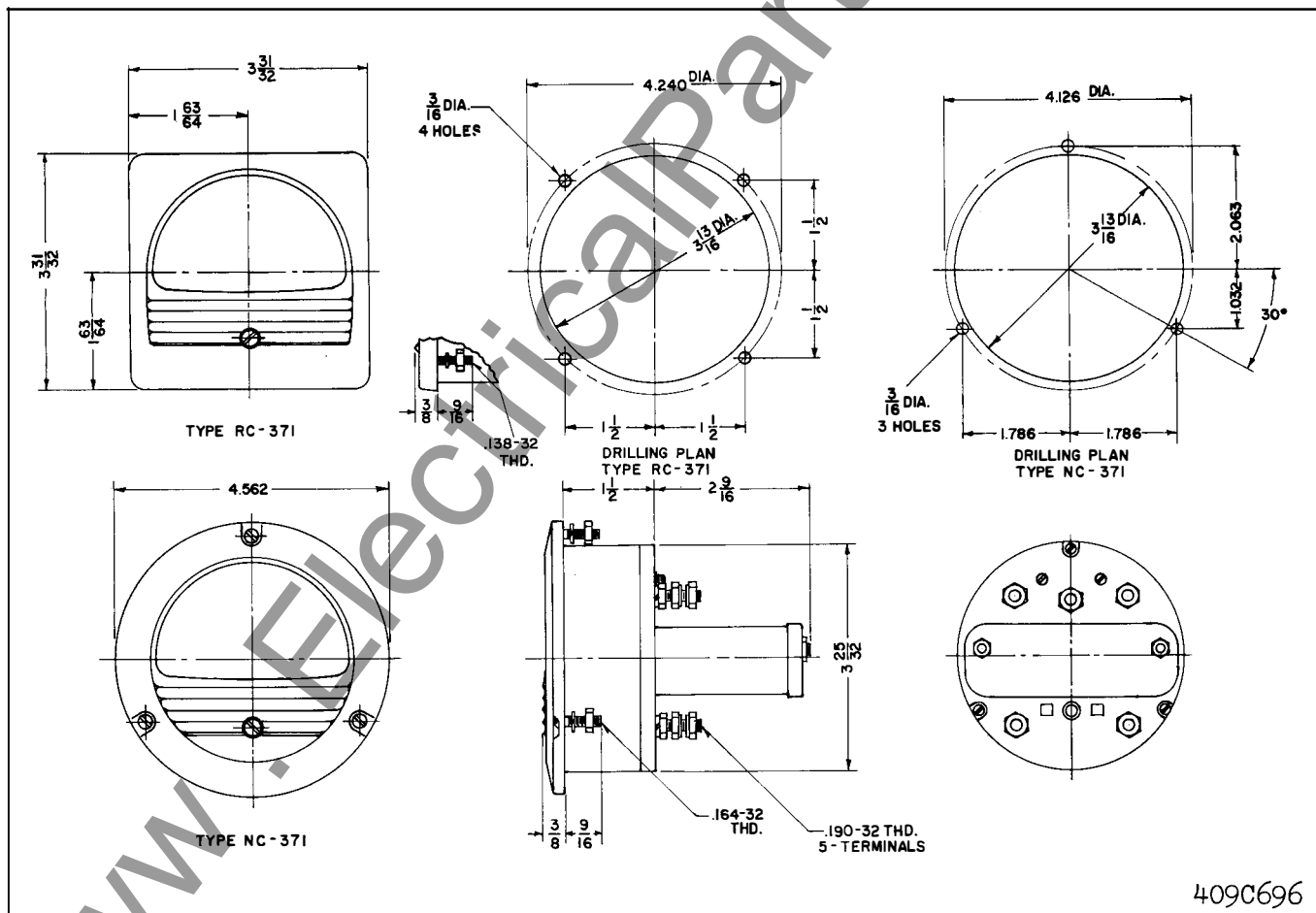
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Fig. 2 - External Wiring - Poly-Phase

Fig. 3 - External Wiring - Single Phase



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Fig. 4 - Outline and Drilling Plan