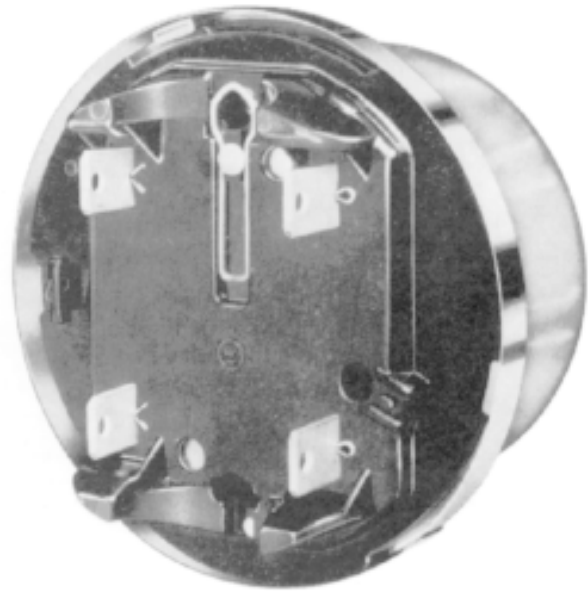
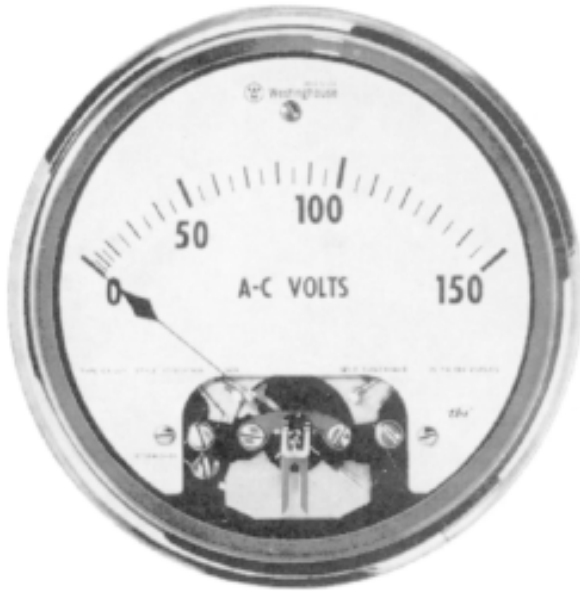


## 7-Inch Round, Types EA-251 and EX-251 Socketed Instruments



### Application

Type E-251 instruments provide a Convenient, economical means of monitoring electrical power at the point of use. The instruments plug into standard watt/hour meter sockets which may be sealed off when not in use. Thus, the instruments may be plugged in for periodic use or left in place continuously. Using a watt/hour meter sealing ring makes an installation weatherproof.

Socket instruments are generally used on motors driving conveyors, mills, machine tools or pumps - applications where the motor loading is dependent upon conditions which are under the control of an operator. Intelligence from a motor load instrument at the operator's station permits him to optimize conditions.

### Standards

Type E-251 instruments use the same mechanism and are made to the same manufacturing standards as the Switch-board Type K-251 which meets ANSI Standard 39.1, 1981. There is no specific ANSI standard for detachable instruments.

### Features

#### Taut-Band Suspension

All Type E-251 instruments use taut-band suspension. Instruments incorporating this feature are identified by the trademark **tbs**. The taut-band suspension instrument has certain unique advantages over the conventional pivot and jewel type:

1. It eliminates friction, giving better accuracy and almost perfect repeatability.
2. It gives top performance under adverse conditions of shock and vibration.
3. It permits mounting on apparatus without fear of damage in shipment.
4. It reduces maintenance, thereby saving money throughout the lifetime of the instrument.
5. It assures longer life, reducing annual depreciation and replacement costs.
6. It has greater sensitivity, reducing power burdens on circuits being measured.

### Mechanisms

Type EA-251 ac instruments use the repulsion iron-vane for true RMS response. Type EX-251 dc instruments have a permanent-magnet moving-coil element. Both are taut-band suspension types.

#### High Overload Capacity

While exact overload capacity varies with rating, the ac instruments generally will handle 35 times normal current and the dc instruments 150 times normal current on a momentary basis without sustaining damage. Therefore, it is possible to select instruments to read at a preferred three-quarters scale at normal current and yet permit "pegging" during high current transients - such as motor inrush currents,

#### Sockets

Any Type S 4-jaw socket may be used. Sockets may be installed in vertical or horizontal conduit runs, or on vertical or horizontal conduit stubs. They also are made in a ring type for installation in a box or panel. For use with current transformers the sockets must be of the circuit-closing type. This feature is convenient to provide circuit continuity where instruments are installed on a periodic basis.

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