



252 LINE SWITCHBOARD EDGEWISE INSTRUMENTS FIVE INCH CLASSIFICATION

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1.0 Objective:

This leaflet provides the instructions for the installation, operation, and maintenance of the Edgewise 252 series instruments.

2.0 Scope:

This leaflet applies only to the VX-252, HX-252, VC-252, and HC-252 instruments.

3.0 Components and Equipment Required:

- 3.1 Soft flannel cloth or non abrasive tissue
- 3.2 Antistatic agent (P/N 606B534G01)

4.0 General

Type 252 instruments are designed and built to meet or exceed the requirements of American National Standards Institute (ANSI) C39.1-1984 for electrical indicating switchboard instruments. The rated accuracy class is 1.5%. Calibrated accuracy of $\pm 1.0\%$ is available as an option.

5.0 Type Designation

The first letter in the Type designation indicates the type of mounting:

V = Vertically mounted

H = Horizontally mounted

The second letter in the type designation indicates the principle of operation:

X = Permanent magnet moving coil

C = Rectifier + permanent magnet moving coil

6.0 Description of Taut Band Suspension Instruments

The X-252 is a pivotless, bearingless, DC instrument of the permanent magnet moving coil type. A suspension system is employed which replaces the conventional pivots, jewels, and control spring. At each end of one side of the moving coil is attached a thin metallic band. At the top and bottom bridges these bands are connected to tension springs. The tension springs exert axial forces which keep the metallic bands taut and the moving element from sagging. The taut bands carry current to the moving coil, which provides the necessary restoring torque to return the indication pointer to its rest position.

The C-252 ammeters and voltmeters employ the same permanent magnet moving coil mechanism with the addition of a full wave rectifier and circuitry to allow them to indicate approximate RMS quantities.

The taut band design eliminates pivot friction and allows the instrument to withstand severe conditions of shock and vibration. The suspension system assures longer life with reduced maintenance costs.

Caution: When the instrument mechanism is exposed, avoid contact with the tension springs. These springs are precisely made and positioned, and any pressures inadvertently applied to them may cause misalignment of the moving element.

Dial Notes:

Reference to type style number, use of external components if required, coil ratings, calibration data, etc., are made on the dial and/or on a data plate affixed to the side of the instrument.

7.0 Installation

- 7.1 Unpack instruments carefully. Terminal and mounting hardware, and any external components will be packaged separately within the shipping container.
- 7.2 Drill panels and mount instruments as shown in Figure 1.
- 7.3 Turn the mounting clamp screws in until looseness is just eliminated, then an additional 1 ½ to 2 ½ turns. Alternate tightening of each clamp at each ½ turn.
- 7.4 Before energizing the instrument, adjust the pointer to zero by means of the zero adjuster at the front of the instrument.

8.0 Care of Plastic Case

- 8.1 Cleaning:
 - 8.1.1 Wash surfaces to be treated with a wet chamois or non abrasive tissue using a mild detergent and water solution. Wipe or blot dry. Avoid use of a dry cloth since it may scratch or mar the surface and possibly produce a static charge.
 - 8.1.2 Do not use solvents, window sprays or cleaning solutions containing acetone, benzene, carbon tetrachloride, etc. These solvents may attack and ruin the cover surfaces.
 - 8.1.3 Apply antistatic solution after cleaning per section 8.2.

Note: All possible contingencies which may arise during installation, operation, or maintenance, and all details and variations of this equipment do not purport to be covered by these instructions. If further information is desired by a user regarding his or her particular installation, operation or maintenance of the equipment, Weschler Instruments should be contacted.

8.2 Antistatic Treatment:

- 8.2.1 Covers of instruments showing evidence of a static charge should be cleaned and dried as described in section 8.1. Then spray a wet coat of Westinghouse Antistatic agent S#606B534G01 on the surfaces to be treated and wipe off excess solution leaving an even film.
- 8.2.2 Remove window haze by gently polishing window area with a soft flannel cloth or a non-abrasive tissue.
- 8.2.3 For best results, when possible, treat both the internal and external cover surfaces.

9.0 Repairs and Renewal Parts

- 9.1 Repair work can be done most satisfactorily at the factory, or at any authorized Instrument Repair Facility. However, interchangeable parts can be furnished to the customers who are equipped for doing repair work. When ordering parts always give complete nameplate data.
- 9.2 Spare Lamps:
 - 9.2.1 Internally illuminated instruments use a high luminous output LED with a 6.3 VDC, 0.02 mA drive signal. The LEDs are rated for a life of greater than 50000 hours at 25°C.
- 9.3 For temperature indicators, wattmeters, frequency meters and speed indicators, see the applicable transducer leaflet.

10.0 Dimensions

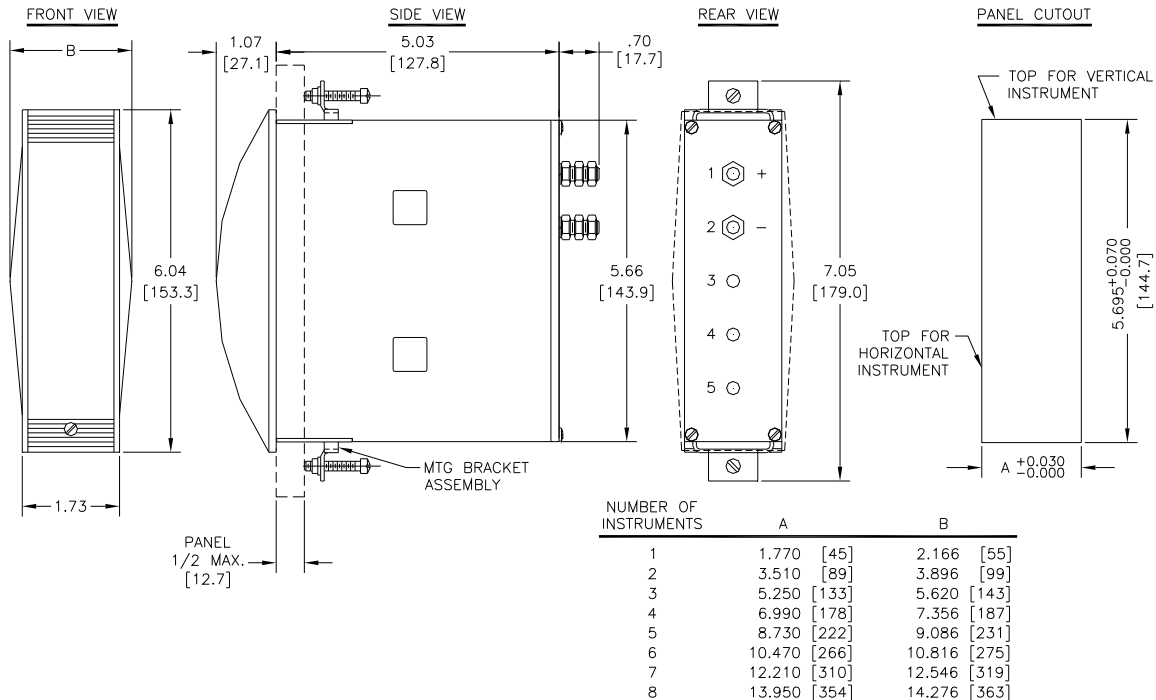


Figure 1: Dimensions for Type 252 Edgewise Instruments