

WESTINGHOUSE INDUSTRIAL MOTORS AND CONTROLLERS

CLASSES 7010 AND 7210 D-C. STARTING AND SPEED REGULATING RHEOSTATS (Frame No. 5)

INSTRUCTIONS

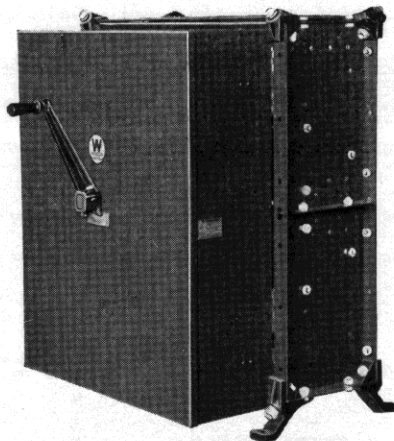


FIG. 1—FRAME 5-D ARRANGED FOR FLOOR MOUNTING. IT MAY BE READILY ALTERED FOR WALL MOUNTING. EXPANDED METAL REAR AND TOP PLATES OF THE RESISTOR ENCLOSURE, SHOWN AT THE REAR, AFFORD STURDY PROTECTION AND UNRESTRICTED VENTILATION.

Ratings

30 to 60 Hp. 115 Volts, 60 to 150 Hp. 230 Volts.

Construction

The starting resistors are 5" 3 pt. cast grid units mounted in multiple unit frames enclosed with perforated metal. On the side of this structure the faceplate is bolted. This face-plate is totally enclosed but accessible by means of a flat removable cover. It has a single double ended arm with contact shoes on each end controlling two sets of resistors in parallel. Mounted on the faceplate is a contactor so connected through an interlock circuit that movement of the arm causes the contactor to make and break the circuit at the first point thus avoiding arcing and burning of the contacts.

For Class 7210 the same design is used with the addition of a full field interlock and a plate type field rheostat for speed control. The relay insures that the motor starts with full field by short circuiting the field rheostat. To remove this short it is necessary to move the field rheostat handle to the "all out" position which is the proper setting to begin to increase speed by field control.

Installation

This rheostat is designed for floor mounting and air space should be left at the sides and the top for ventilation. Underwriter's and local building codes should be followed. Connections should be made as shown by the diagram.

Operation

To start the motor, close the line switch and move the operating handle toward the right. In the extreme right hand position the arm will be held by the low voltage release magnet and

the motor will be running at full field speed. In the case of Class 7210 rheostats increase in speed by field control can then be secured by bringing the field rheostat arm to the all out position and then turning the handle to insert resistance in the field circuit. On failure of voltage the magnet releases and the arm is returned by a spring to the off position. The resistors are designed for A.E.S. Class 135 which means that the motor should be brought up to speed in approximately ten seconds with a minimum of seventy seconds between starts. If the starting periods are farther apart, a longer starting time is allowable. To stop the motor open the line switch.

Maintenance

Some arcing and burning of the contact parts is unavoidable and periodic inspection and cleaning should be made. Smoothing the contacts with sandpaper will usually keep the rheostat in good operating condition but dressing with a file may occasionally be needed. After each cleaning the contacts should be very lightly greased.

Drip Proof

When drip proof construction is ordered, suitable covers or shields are added to prevent dripping water from entering the rheostat.

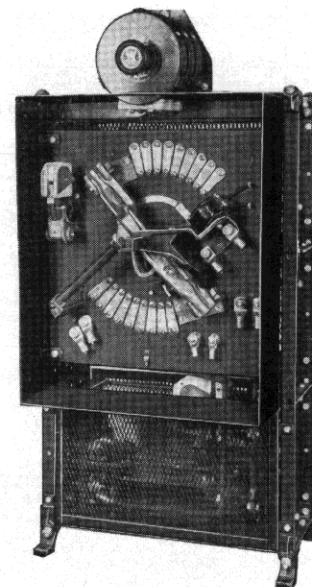


FIG. 2—CLASS 7210 STARTING AND SPEED REGULATING RHEOSTAT, COVER REMOVED, TYPICAL OF RATINGS ABOVE 50 HP.

Dimensions

See DLP 42A604 for standard.
See DLP 45A720 for drip proof.

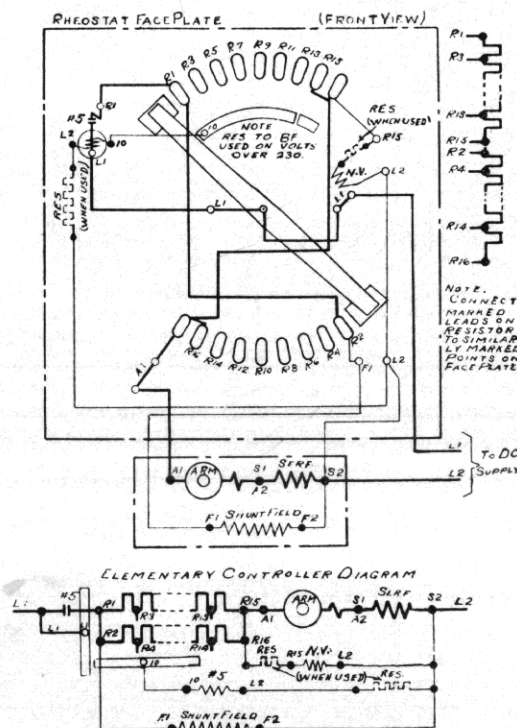


FIG. 3—WIRING DIAGRAM.

The above diagram is for compound-wound motors. For shunt-wound motors the series field coil is omitted.

*To be filed as an Instruction Leaflet and as Renewal Parts Data; for Renewal Parts, see reverse side of this sheet.