

DESCRIPTION AND ADJUSTMENTS
OF THE TELETYPE REC17 RECTIFIER

Description

The REC17 rectifier is designed to deliver continuously 1.0 ampere and intermittently 1.4 ampere at 120 volts D.C. from a 105 to 125 volt 60 cycle A.C. single phase power supply. It consists of an insulated type input transformer with variable primary taps, a full wave selenium rectifying element, a power factor correction condenser, a filter consisting of a choke and condenser, a bleeder resistor, and a regulator with variable taps. All parts are secured to a metal base and the base is arranged for mounting on either a shelf or a relay rack. The rectifier is furnished complete with cover, which is held in position by spring type detents.

The metal cover is finished in black wrinkle.

The approximate dimensions of the rectifier are 19" long, 14" wide, and 12-1/4" high.

Rating

Input: 105 to 125 volts, 60 cycles A.C. single phase.

Output: 1.0 ampere continuously or 1.4 ampere intermittently at 120 volts D.C. (A.C. component in D.C. output voltage 2% r.m.s. at 1.0 ampere load.)

No load voltage when new: Not over 135 volts.

Adjustments

CAUTION: The secondary voltage of the power transformer is 300 volts. All the control elements including the power factor correcting condenser are therefore 300 volts above ground potential.

The left-hand panel has terminals for the transformer primary taps which are marked for input voltages of 105, 115, and 125 volts and a 6 ampere primary fuse for protecting the transformer is also mounted on this panel. A flexible lead is used for connecting A.C. to the required primary tap. The selection of the primary tap will depend on the voltage of the A.C. power supply. In no case should the connection to these taps be changed for the purpose of regulating the D.C. output voltage.

To regulate the D.C. output and to compensate for aging the rectifying element, three coarse regulator taps marked L, M, and H and five fine regulator taps marked 1, 2, 3, 4 and 5 terminate on the right-hand panel. The method normally employed in checking the D.C. output of this rectifier is to disconnect all apparatus from the D.C. side and connect a 60 watt Mazda lamp in series with a suitable ammeter across the output. For correct adjustment of the output, the flexible leads should be connected to those taps which will cause an ammeter to register a current flow which is nearest but not less than .5 amperes. This adjustment should be checked when the rectifier is installed and periodically thereafter. The amount of aging will be somewhat greater during the first few months of use. After this, the rectifier should operate for long periods without the necessity of readjusting.

If at any time, it is necessary to use the maximum regulating tap to obtain the proper output current, the rectifier should be withdrawn from service and repaired.

A 1.6 ampere fusatron is located on the right-hand panel for overload protection in the output circuit.

Wiring diagram W.D.2014 which forms a part of this specification, shows the actual and theoretical wiring of this rectifier.