Type W Switch

as used on Transformer Equipment

INSTRUCTIONS

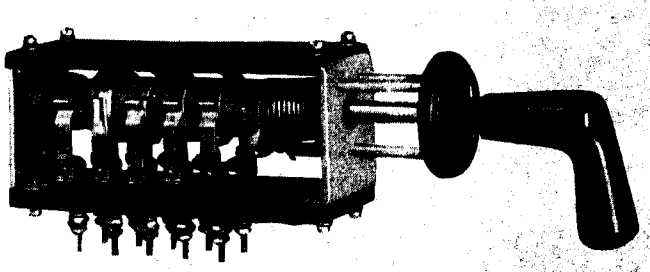

FIG. 1—CONTROL SWITCH WITH SIDE PLATES REMOVED

General

The type W switches are of the rotary type, of rugged construction, easily accessible for inspection and require very little maintenance. They may be used as instrument, control or auxiliary switches.

Construction

A control switch with pistol grip operating handle is shown in Fig. 1.

The type W switch consists of a built up rotor or drum supported in end frames to which are attached the stationary contact finger base and a steel top. In some combinations of switches the steel top is replaced by an additional finger base. See Fig. 2. The switch is usually entirely enclosed by side plates of Micarta which can be slid out of grooves, for inspection of contacts.

The operating shaft, of $\frac{7}{16}$-inch diameter cold rolled steel, rotates in bronze bearings which are riveted in steel end plates. These end plates also provide support for the top. The enameled steel top is channel-shaped, providing additional strength. This arrangement assures permanent alignment of contacts.

Brass moving contacts with a corrosion-resisting finish are separated by molded moisture-proof spacers.

The contacts have numbered key notches to facilitate assembly, and are keyed to Micarta insulating tubes covering the shaft. Spacers and contacts are clamped to the shaft.

Stationary contacts are self-aligning and provide positive contact pressure by use of non-current-carrying compression springs. The high-pressure wiping action of the moving contacts assures clean, low-resistance and long-life contacts.

Multiple laminated copper shunts conduct the current to the studs which are mounted on the base in such a manner that eliminates turning or looseness.

The base of black, molded material has high mechanical and dielectric strength, and is ribbed to give ample creepage distance between studs. Each stud hole is numbered to identify the connection of the wiring diagram.

Mounting—The switches can be arranged for $\frac{1}{8}$ to 2-inch thick panels by changing the mounting screws.

The correct shaft length is obtained by moving the handle and pointer screw to the proper tapped hole in the shaft.

Three-hole mounting is standard for all instrument and control switches.

The maximum number of circuits in the unit switch are 10. Additional circuits can be arranged by using a double base switch as in Fig. 2 or multiple switches operated from one handle as in Fig. 3.

Operation

Being of the rotary type, the operation of the different classes of type W switches is similar.

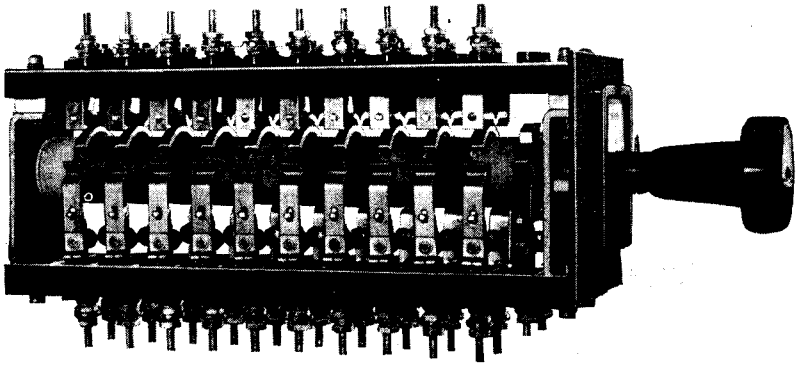

FIG. 2—TYPE W, 10-POLE, DOUBLE-THROW SWITCH IN ONE UNIT

Type W Switch—Continued

INSTRUCTIONS—Continued

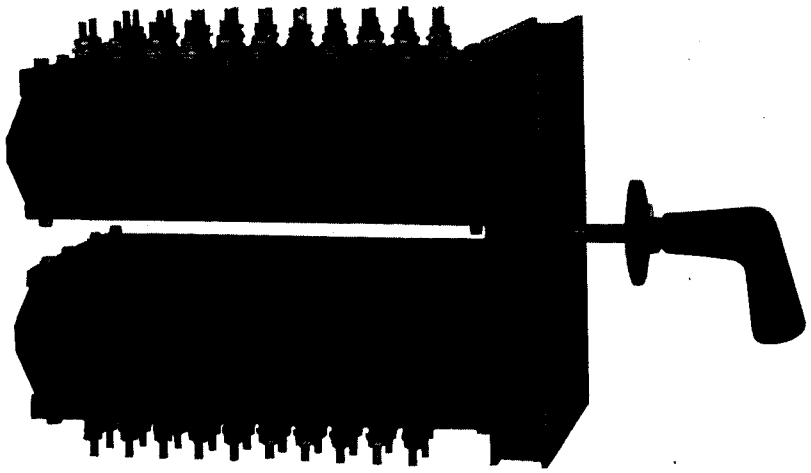

FIG. 3—FOUR 10-CIRCUIT GEARED UNITS

The ammeter, regulator transfer and temperature switches are operated by a fixed handle; all other instrument switches are operated by a removable key.

The control switches are operated by a fixed handle with a spring that automatically returns the switch to the "off" position. See Fig. 1.

The auxiliary switch is operated by a lever clamped to the squared end of the shaft.

Installation

The switch is usually mounted on a panel with the other control parts and shipped with the transformer. In some instances these switches are to be mounted by the customer on a station switchboard and in such cases an outline and drilling plan are supplied.

Maintenance

It is necessary to inspect only occasionally the contacts of the switch and to blow out any dust which may have accumulated.

Renewal Parts

In case renewal parts are required order from the nearest Westinghouse Elec. Corporation Office or direct from the Sharon Works, giving description of the parts required and S.O. or serial number as stamped on the diagram nameplate on the transformer.

Westinghouse Electric Corporation

Sharon, Pa.

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