DESCRIPTION • OPERATION • MAINTENANCE

INSTRUCTIONS

TYPE W SWITCH
FOR TRANSFORMER EQUIPMENT

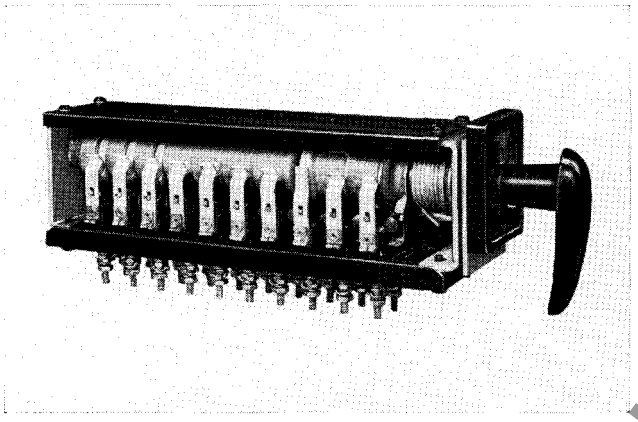

FIG. 1. Control Switch with Side Plates Removed.

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.

DESCRIPTION

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, made of cold-rolled steel rod, 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 silver finish are separated by molded moisture-proof arc resistant spacers. These 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 with the moving contacts assures clean, low resistance contact with long life. Multiple laminated copper shunts conduct the current from the contact to the terminal studs which are mounted on the base in such a manner that they will not turn or become loose.

The molded base 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 on the wiring diagram.

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.

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 a drilling plan are supplied.

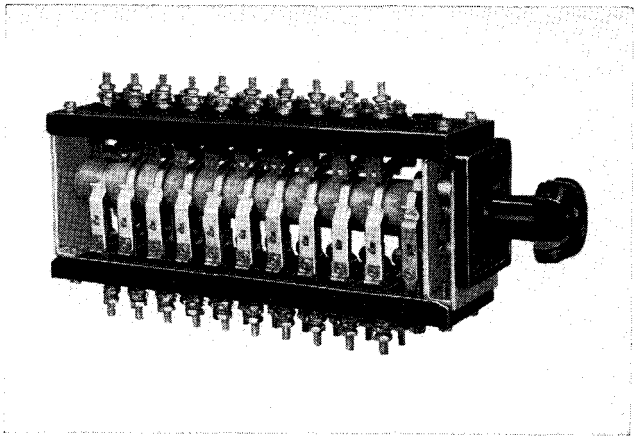

FIG. 2. Ten Pole, Double Throw Type W Switch.

The switches can be arranged for 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.

OPERATION

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

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.

MAINTENANCE

Only occasional inspections of the contacts are needed, at which time any accumulated dust should be blown out.

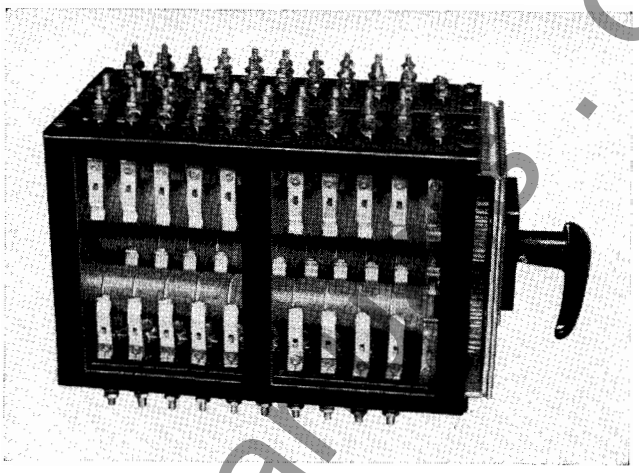

FIG. 3. Four 10-Circuit Geared Units.

RENEWAL PARTS

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

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