Chapter 93

ROTARY SWITCHES, MUIRHEAD

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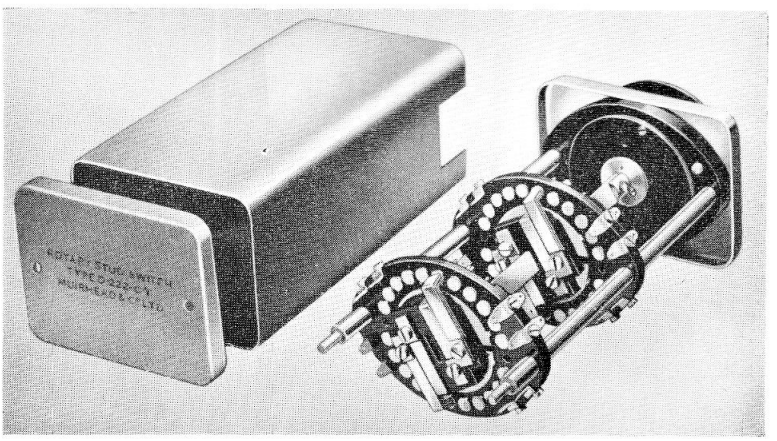

Fig. 1. Switch, Type D-222-C/1

Introduction

1. This range comprises of rotary switches with up to eight poles and a maximum of 24 studs per pole. A general description is given in this chapter and Type D-222-C/1 is shown in fig. 1 as a typical switch; details of individual types are given in Appendix 1 to this chapter.

DESCRIPTION

2. Each stud mounting board is a bakelite moulding, roughly elliptical in shape and thickened at the ends and the centre to provide fixing for the supporting pillars and a bearing for the brush mounting. The contact studs are pressed into holes in the board, and are provided with long soldering spills which

prevent undue heat conduction during soldering. The switch segment is fitted in a similar manner. Recesses in the side of the stud mounting provide for attaching up to eight connecting tags, four at each end.

3. The phosphor-bronze, triple laminated brushes of which there are two per pole, are located in slots in the moulded brush mounting which is provided with a boss on the underside fitting into the bearing in the stud mounting board. The centre of the brush mounting is slotted to take the straight-through flat steel shaft.

4. The mounting base is another bakelite moulding similar in shape to the stud mounting board and separated from it by two brass pillars. The centre is recessed to accommodate a ball and spring detent, and a centre hole forms a second bearing which carries a $\frac{1}{4}$ in. dia. spindle. The inner end of this spindle is slotted to take the end of the flat steel shaft.

5. Stop pins are provided to prevent the brushes over-riding the end studs. The mounting base has two 4 B.A. tapped holes to enable the switch to be mounted on a panel. A knob with a 1 in. radius pointer is fitted to the spindle and the switch may be enclosed in a metal screening can.

SERVICING

6. Little servicing is possible with these switches, beyond inspection for damage and security of electrical connections. The switch should operate in a positive manner; a faulty switch should be renewed.

Appendix 1

LEADING PARTICULARS

Type	Ref. No.	No. of poles	No. of studs per pole	No. of wafers	Maximum angle of rotation (degrees)	Depth behind mounting panel (in.)	Weight (oz.)
D-221-A/1	—	1	24	1	345	$3\frac{9}{16}$	$4\frac{3}{4}$
D-222-C/1	—	4	11	2	150	$6\frac{1}{4}$	$7\frac{1}{2}$
D-224-A	—	4	24	4	345	$6\frac{1}{4}$	$10\frac{3}{4}$