Chapter 40

ROTARY SWITCH, WESTERN, TYPE RS351

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LIST OF ILLUSTRATIONS

LEADING PARTICULARS

Rotary switch, Type RS351, Mk. 4 ...	*Stores Ref. 5CW/4684*
Operating voltage	*24 d.c.*
Current rating	*5 amp.*
Overall dimensions—	
Length	*4·32 in.*
Diameter	*2·3 in.*

Introduction

1. The rotary switch, Type RS351, Mk. 4, is used for the control of engine anti-icing equipment. It is provided with a 12-way rubber cable grommet and 4 B.A. terminals for making the electrical connections.

DESCRIPTION

2. A general view of the switch is given in fig. 1, with a sectional drawing in fig. 2. The switch has three positions, OFF, AUTO, and EMERGENCY, the latter engraved with red letters; at each setting of the operating knob, indentations on an index plate carried on the shaft engage with two spring-loaded balls in the switch mounting (not illustrated in fig. 2), so giving a positive detent action. A

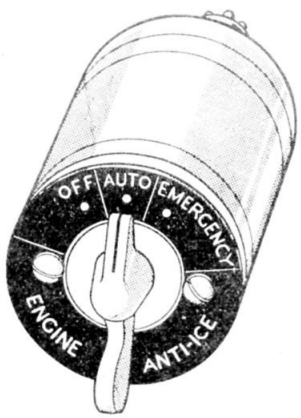
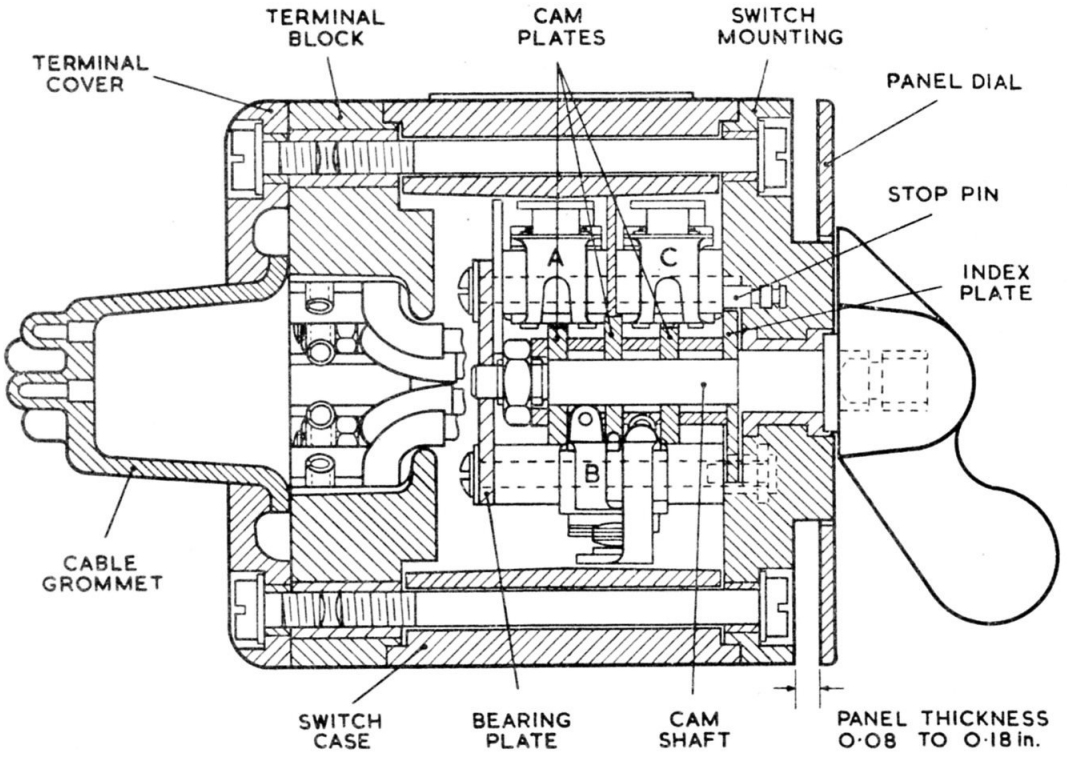
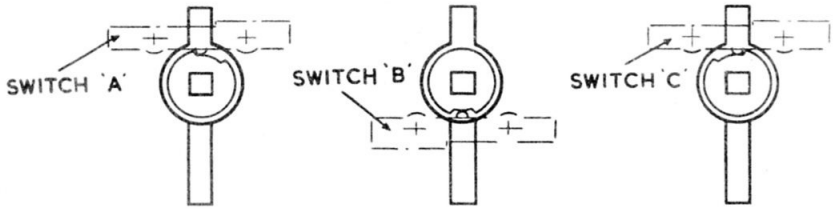


Fig. 1. Rotary switch, Type RS351, Mk. 4
(A.L.49, Dec. 55)





RELATIVE POSITIONS OF CAMS AND SWITCHES VIEWED FROM TERMINAL END

Fig. 2 Sectional drawing of switch

cut-away portion of the index plate comes up against a stop pin in the switch mounting at each extreme of travel of the operating knob.

3. On the shaft are three cam plates, which operate three snap-action switches, designated A, B and C respectively. These switches are shown in the diagram in fig. 4, together with the circuits connected at each setting of the operating knob.

4. Electrical connection is made by 4 B.A. terminals; the cables pass through a 12-way rubber grommet, the tips of the sleeves required being cut off on installation. The terminal arrangement is shown in fig. 3, with the terminal cover removed. The internal wiring is shown in fig. 3; access to the switch mechanism is obtained, after removal of the switch from the panel, by unscrewing the two 4 B.A. ch/hd. screws which secure the terminal block to the switch case.

INSTALLATION

5. The switch is panel mounted, being secured by means of the two 2 B.A. screws passing through the panel dial, which are suitable for a panel thickness of 0·08 in. to 0·18 in. When connecting up a new switch, remove the terminal cover, nip the extreme tips off the sleeves of the grommet required, and feed the conductors through, causing the sleeves to invert. Finally pull the conductors back to re-invert the sleeves.

SERVICING

6. No serving is permissible, apart from an inspection for freedom from damage and security of connections. The switch should operate positively for each setting of the operating knob; a faulty switch must be renewed.

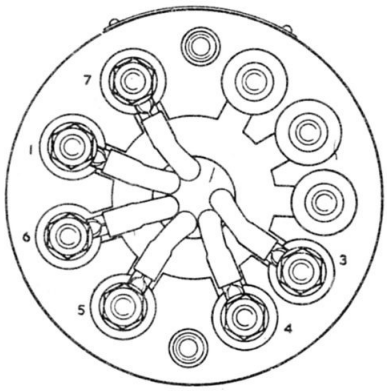
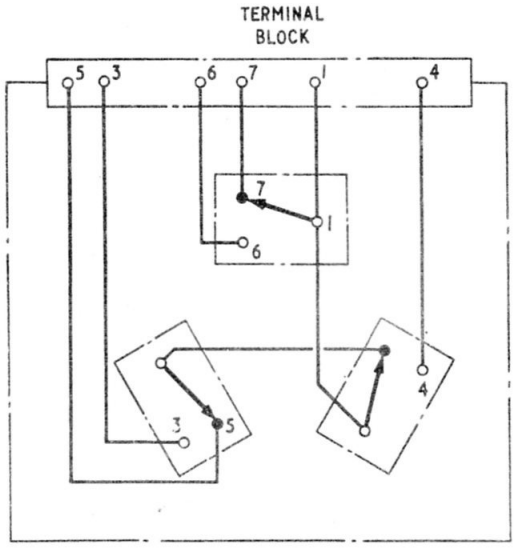


Fig. 3. Terminal arrangement



KNOB POSITION	CIRCUIT CONNECTED
OFF	1–6–3
AUTO	1–7–4
EMERGENCY	1–7–5

Fig. 4. Circuit diagram