

Chapter 18

SWITCH, MAGNETIC, TYPE 14A, No. 1 (ROTAX D92011)

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LEADING PARTICULARS

Switch, Magnetic, Type 14A, No. 1	Stores Ref. 5CW/4393
Voltage	
Main contacts	112 volt, d.c.
Closing coil	28 volt, d.c.
Tripping coil	28 volt, d.c.
Current rating	40 amperes
Resistance	
Closing coil	3.75 ohm.
Tripping coil	36 ohm.
Overall dimensions	
Length	5.250 in.
Width	4.0 in.
Height	4.750 in.

Introduction

1. This switch, in common with others in the D9200 series, is designed for use as a contactor on aircraft electrical systems where it is desired to make and break a 112 volt circuit by using a 28 volt d.c. control circuit.

DESCRIPTION

2. The Type 14A, No. 1 magnetic switch (*fig. 1*) is similar in construction to those described in A.P.4343, Vol. 1, Sect. 11, Chap. 16. The units provide two pairs of auxiliary contacts in addition to the main 112 volt contacts. It is not fitted with a bi-metal element or economy resistance.

SERVICING

3. When the units have been correctly installed and operated, they require little attention in service. If

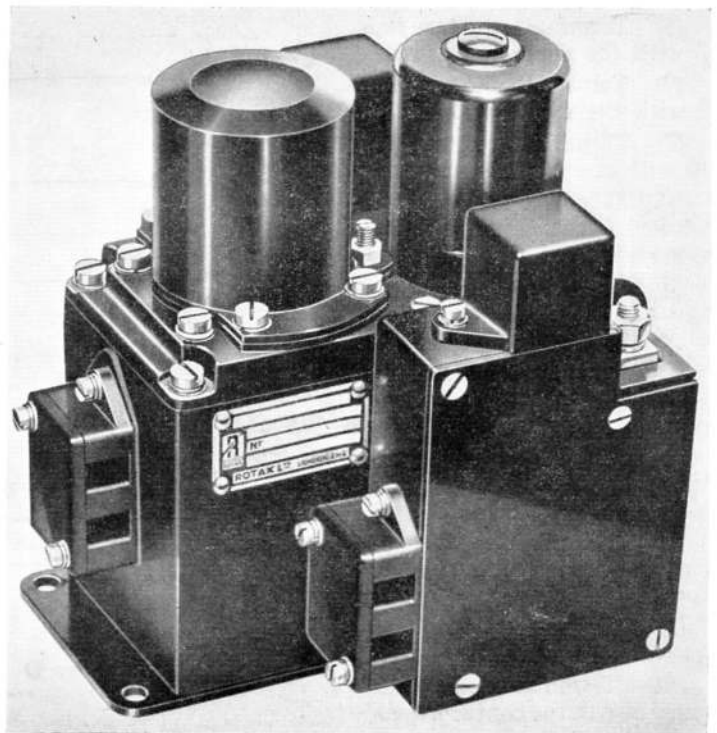


Fig. 1. General view of type 14A switch

(A.L.50, Dec. 55)

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a unit operates satisfactorily it may be assumed serviceable for continued use.

Inspection and interlock clearance

4. A visual inspection should be made from time to time to ensure that the units are not damaged physically. Inspect and if there is any sign of damage, remove the unit and substitute a new one. In instances where welding of the main contacts has caused the interlock mechanism to operate, remedial action (A.P.4343, Vol. 1, Sect. 11, Chap. 16) should be applied.

Insulation resistance tests

5. Insulation resistance tests should be applied to the unit, provided that it is accessible and can be isolated from its circuit. Using a 250 volt insulation resistance tester, the insulation resistance should be at least 2 megohm between the following points:—

(1) Terminal 1 and terminal 2 with the contacts open.

(2) Terminal 1 and terminal 3 with the contacts closed.

(3) Terminal 1 and terminal 5 with the contacts closed.

(4) Terminal 1 and terminal 6 with the contacts closed.

(5) Terminal 1 and terminal 7 with the contacts closed.

(6) Terminal 1 and terminal 9 with the contacts closed.

(7) Terminal 1 and terminal 10 with the contacts closed.

(8) Terminal 1 and the frame of the unit with the contacts closed.

(9) The frame of the unit and terminal 7 with the contacts open.

(10) The frame of the unit and terminal 8 with the contacts open.

(11) The frame of the unit and terminal 9 with the contacts open.

(12) Terminal 3 and terminal 7 with the contacts open.

(13) Terminal 3 and terminal 8 with the contacts open.

(14) Terminal 3 and terminal 9 with the contacts open.

(15) Terminal 5 and terminal 7 with the contacts open.

(16) Terminal 5 and terminal 8 with the contacts open.

(17) Terminal 5 and terminal 9 with the contacts open.

(18) Terminal 7 and terminal 8 with the contacts open.

(19) Terminal 7 and terminal 9 with the contacts open.

(20) Terminal 8 and terminal 9 with the contacts open.

(21) Terminal 5 and terminal 6 with the contacts closed.

(22) Terminal 9 and terminal 10 with the contacts closed.

(23) The frame and terminal 3 with the contacts open.

(24) The frame and terminal 5 with the contacts open.

(25) Terminal 3 and terminal 5 with the contacts open.

Note . . .

The values of resistances quoted apply to units being tested under normal workshop conditions. Allowance should be made for climatic conditions, in particular humid climates. Under these conditions, resistance readings may be lower and discretion should be exercised before rejecting units.

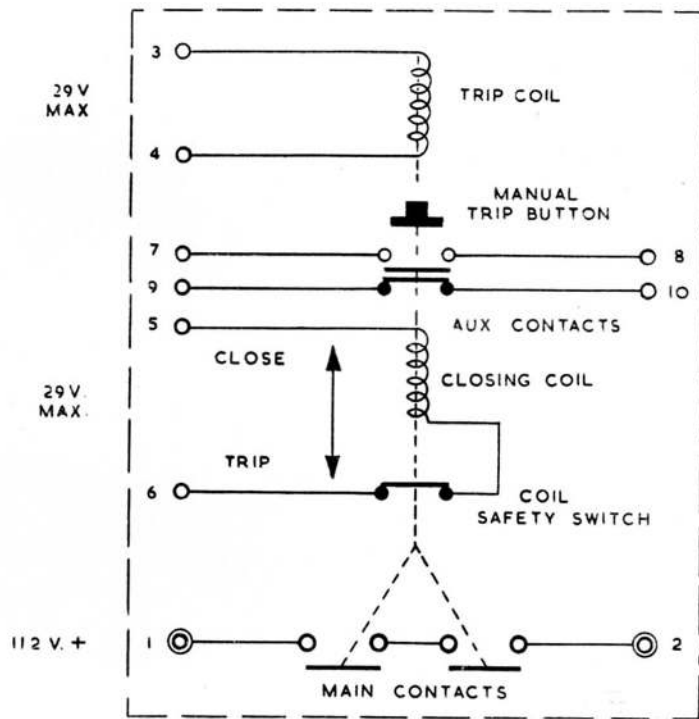


Fig. 2. Diagram of internal connections

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