Chapter 92

RELAY, OLIVER PELL, TYPE RH1

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LIST OF ILLUSTRATIONS

LEADING PARTICULARS

Relay, Type RH1	*Stores Ref. 5CW/5026*
Operating voltage—	
Main winding	*16 volts d.c.*
Trip winding	*10 volts d.c.*
Coil resistance at 60 deg. F—	
Main winding	*132·7 ohms ± 5 per cent*
Trip winding	*32·6 ohms ± 5 per cent*
Coil current—	
Main winding	*0·12 amp. ± 5 per cent*
Trip winding	*... 0·292 to 0·322 amp.*

Introduction

1. The relay, Type RH1, is a change-over relay with three sets of contacts. One application is in the reheat control circuit for gas turbine engines.

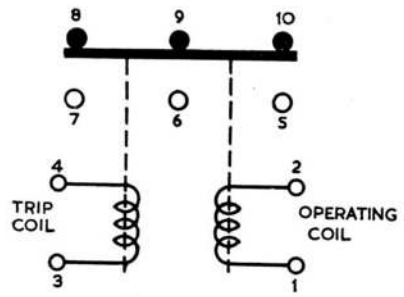

Fig. 1. Circuit diagram

DESCRIPTION

2. A circuit diagram of the relay is given in fig. 1. It is a double-wound relay, with a main operating coil (terminals 1 and 2), and a trip coil (terminals 3 and 4). Contacts 8, 9 and 10 are normally closed, and contacts 5, 6 and 7 normally open.

3. When a suitable voltage is applied to terminals 1 and 2, the relay will operate breaking contacts 8, 9 and 10 and making contacts 5, 6 and 7. If now a voltage is applied to terminals 3 and 4, with terminals 3 and 4 of different polarity respectively from terminals 1 and 2, the relay will be tripped and return to the unoperated position.

4. By arranging the connections to the relay so that the polarity of terminals 3 and

4 is the same respectively as that of terminals 1 and 2, the coil between terminals 3 and 4 can be used as the operating coil and the coil between terminals 1 and 2 the holding coil, which keeps the relay in the operated position with reduced current.

INSTALLATION

5. When the relay is used as described in para. 4, with the coil between terminals 1 and 2 as a holding coil, it should be mounted in such a position that the armature movement is not vertical.

SERVICING

6. The relay may be tested for correct operation as follows. With 16 volts d.c. applied to terminals 1 and 2, terminal 2 being positive, the relay should operate to close contacts 5, 6 and 7; the current should be 0·12 amp.

7. With 10 volts d.c. applied to terminals 3 and 4, terminal 3 being positive, the relay should be tripped, closing contacts 8, 9 and 10; the current should be between 0·292 amp. and 0·322 amp.

8. The insulation resistance between the two coils, the coils to the frame, and any live metal parts to the case should be not less than 50 megohms when measured with a standard 250-volt insulation resistance tester.

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