Chapter 9

MAGNETIC RELAY SWITCH, TYPE T1

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LIST OF ILLUSTRATIONS

LEADING PARTICULARS

Type T1	*Stores Ref. 5CW/4620*
Operating voltage	*24*
Continuous rating	*100 amp.*
Dimensions	*3 in. × 2·8 in. × 4 in.*

Introduction

1. The magnetic relay switch, Type T1, supersedes the Type K3 for the remote control of circuits where the current does not exceed 100 amp.

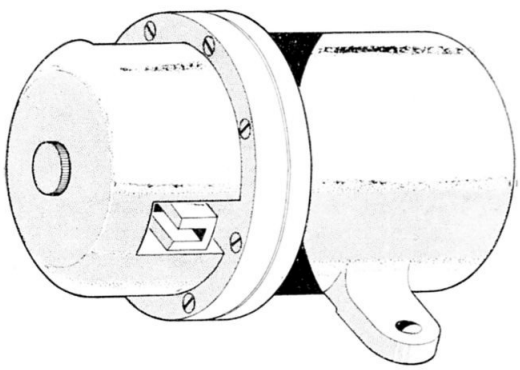

Fig. 1. Magnetic relay switch, Type T1

DESCRIPTION

2. The relay switch (*fig.* 1) is a single-pole, double break switch, operated by an electro-magnet. The closing of a control switch energizes the coil, and attracts the core until it touches the magnet end plate (*fig.* 2). The core is carried on a central spindle which moves downwards against spring tension. Also mounted on the spindle is a copper contact plate, with inset contact studs; when the relay is energized, this plate bridges the main terminals and completes the circuit to the load.

INSTALLATION

3. The control switch may be mounted in any convenient position, enabling the relay to be placed in or near the main run of heavy cables. The relay should be mounted on a vertical panel, with the cable entry uppermost, since in this position the action of the

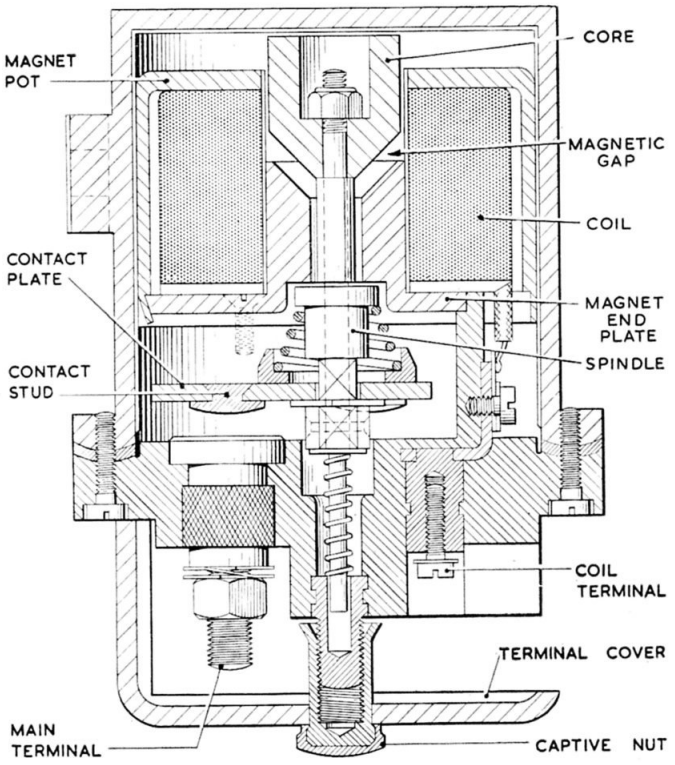

Fig. 2. Sectional view of switch

return spring is assisted by gravity when the relay is de-energized. The terminal arrangement is shown in fig. 3.

SERVICING

4. The relay normally requires very little attention. The switch contacts and contact plate should be kept clean, and the operation of the unit should be checked.

Testing

Closing voltage

5. With the relay mounted on a vertical panel, terminals uppermost, the coil voltage should be gradually increased until the relay closes and the closing voltage noted. The relay must close in one movement at a voltage between 14 and 16 volts.

Drop-out voltage

6. With the relay mounted on a vertical panel, terminals uppermost, the coil voltage is to be gradually decreased until the relay opens; the opening voltage must not exceed 5 volts.

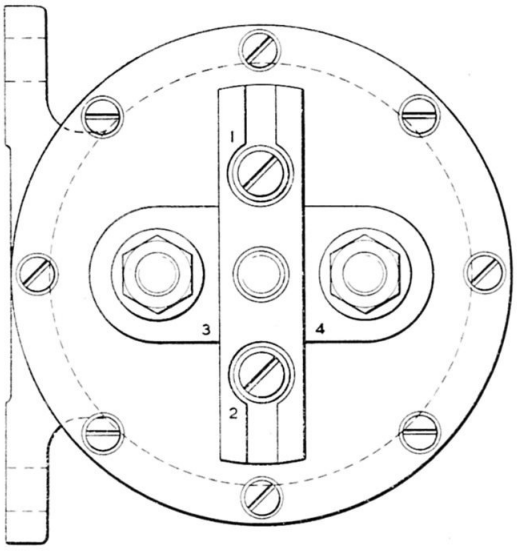

Fig. 3. Terminal arrangement

Contact resistance

7. The millivolt drop across the switch contacts, with 100 amp. flowing in the main circuit, must not exceed 25 millivolts.

Insulation resistance

8. The insulation resistance is to be measured between the following points with a 250-volt insulation resistance tester, Type C (Stores Ref. 5G/152), and should not be less than 20 megohms.

(1) Between one coil terminal and the case.

(2) Between one coil terminal and both main terminals.

(3) Between the main terminals.

(4) Between one main terminal and the case with the relay closed.

(5) Between one main terminal and one coil terminal with the relay closed.