Chapter 56
TIME SWITCH, TEDDINGTON, TYPE FHM/A/27

LIST OF CONTENTS

LIST OF ILLUSTRATIONS

LEADING PARTICULARS

Time switch, Type FHM/A/27	*Stores Ref. 5CW/4648*
Voltage	*12 to 29 d.c.*
Governed speed of motor	*6,000 r.p.m.*
Reduction gearing	*6,000: 1*
Current consumption at 24 V (nominal)	*0·5 amp.*
Weight	*1 lb. 14 oz. (approx.)*
Overall dimensions	*... 4·2 in. × 4·3 in. × 3·6 in.*

Introduction

1. The time switch, Type FHM/A/27, may be used for a variety of applications where d.c. of controlled duration is required at pre-determined intervals.

2. This switch is similar to that described in A.P.4343, Vol. 1, Sect. 11, Chap. 19, but is of the non-resetting type, with no clutch, and varies in the contact arrangement and operating sequence.

DESCRIPTION

3. The switch (*fig.* 1) is encased within a cast aluminium housing, the cover plate of which provides a base for the mechanism. The cover is secured by four 4 B.A. hex/hd. bolts, and has bolted to one corner of it a 9-pole Breeze plug. A rubber gasket between the housing and the plate, together

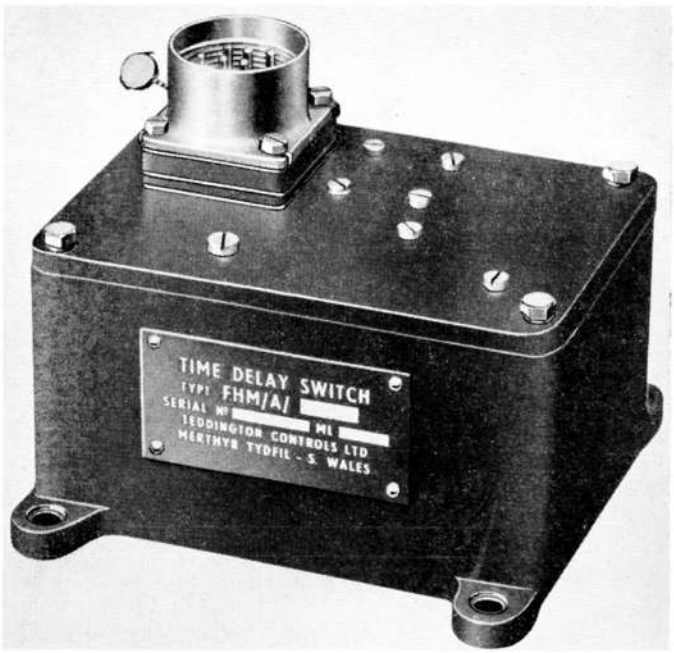

Fig. 1. Time switch, Type FHM/A/27

(A.L.79, Sep. 56)

with varnish treatment of the plug, ensure effective sealing of the unit.

4. The mechanism of the switch consists of a governed, series wound electric motor, coupled to reduction gearing, which drives two cams arranged to operate two leaf-spring contact banks.

5. Mounted on the top of the gearbox is a bracket which carries a resistor, of either 80 or 90 ohms, which is shunted across the motor governor contacts to prevent undue arcing and heating.

OPERATION

6. A circuit diagram of the switch is shown in fig. 2. The operating cycle is 30 seconds.

7. When a positive supply is connected to pin 3, pin 5 being negative, the motor is energized. After 10 seconds, the rotating cams close contacts A. After 20 seconds, contacts B are closed, and opened again after 25 seconds. Contacts A open after 30 seconds, at the end of the cycle.

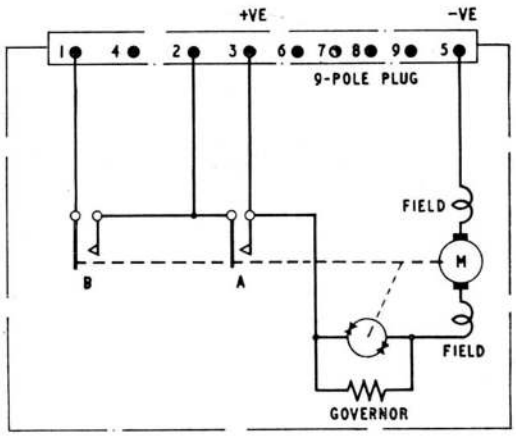

Fig. 2. Circuit diagram

8. Should the power supply fail during the operating cycle, the camshaft will remain where it is at the moment of supply failure, and will continue running from this point directly the power is restored.