

Chapter 23

CONTROL UNITS, FIRETEC SINGLE ZONE

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LEADING PARTICULARS

<i>Control unit, Type TP4501</i>	<i>Ref. No. 5CZ/5832</i>
<i>Control unit, Type TP5901</i>	<i>Ref. No. 5CZ/6909</i>
<i>Electrical supply—</i>	
<i>Nominal</i>	<i>24V d.c.</i>
◀ <i>Minimum</i>	<i>20V d.c.</i> ▶
<i>Overall dimensions—</i>	
<i>Length</i>	<i>7.394 in.</i>
<i>Width</i>	<i>4.687 in.</i>
<i>Height</i>	<i>3.312 in.</i>
<i>Weight</i>	<i>3 lb. 4 oz.</i>

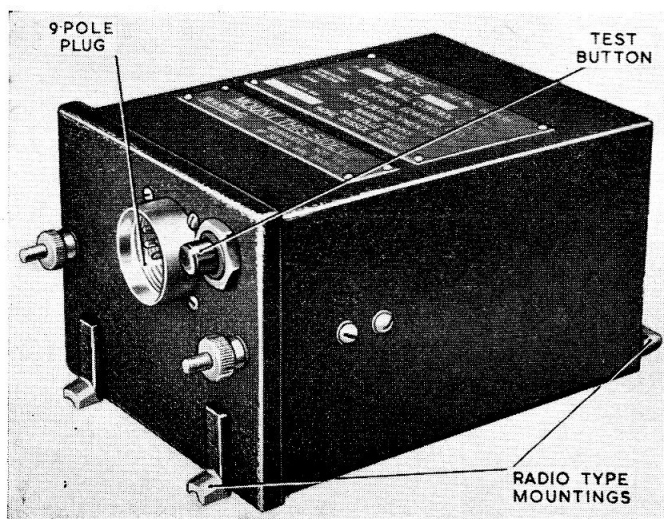


Fig. 1. Control unit, Type TP4501

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Introduction

1. The control units Type TP4501 and Type TP5901, which is a modified unit fitted with new type pulsing relays and resistors R2 and R9, are used in the Firetec fire detecting system in conjunction with a single chain of thermocouple detector heads. Information on the complete system is contained in A.P.4343, Vol. 1, Sect. 22. Information on the thermocouple detector heads in chapter 8 of this Section.

DESCRIPTION

2. The control unit (fig. 1) contains one pulse circuit and one fire warning circuit, the two pulse relays are Post Office Type 600 relays in units Type TP4501 and Post Office Type 2400 in units Type TP5901. The components of the unit are shown in fig. 2 and fig. 4 is a theoretical circuit diagram. A full description and details of operation are given in A.P.4343, Vol. 1, Sect. 22.

3. The circuit includes one 2.5 amp fuse situated in the aircraft positive supply line to the control unit and failure of this fuse interrupts the pulse circuit and the warning circuit.

INSTALLATION

4. The installation of the control unit is illustrated in fig. 3 which shows a typical installation of a unit in a single zone fire warning system. Further information is contained in A.P.4343, Vol. 1, Sect. 22.

SERVICING

5. Servicing instructions are contained in A.P.4343, Vol. 1, Sect. 22. In addition to these, check the fuse for being blown or intact when a fault in the system has occurred. If a fuse has blown fit a new one of the correct type in its place.

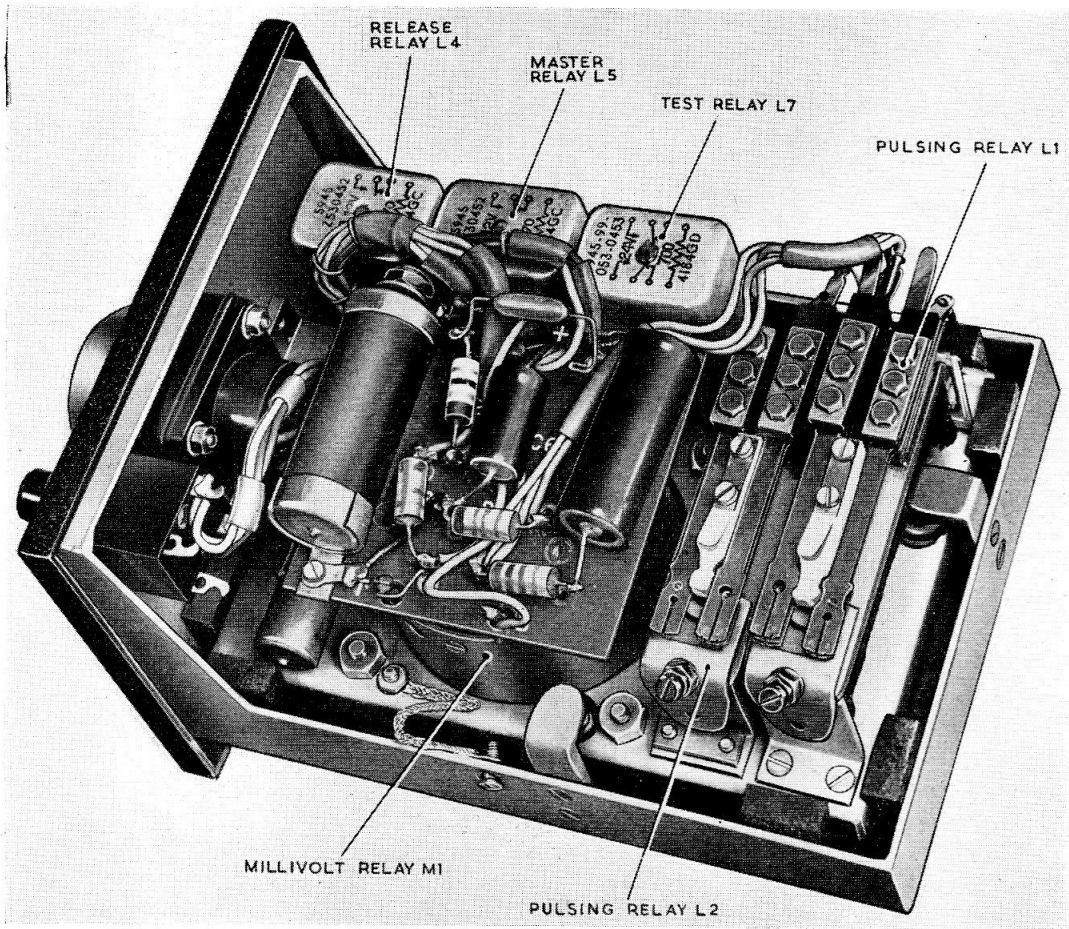


Fig. 2. Control unit with cover removed

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9-POLE PLUG CONNECTIONS.

1. +VE SUPPLY.
2. +VE CHAIN.
3. -VE CHAIN.
4. TEST BUTTON.
5. -VE SCREEN.
6. -VE SCREEN.
7. -VE SUPPLY.
8. TEST BUTTON.
9. WARNING LAMP.

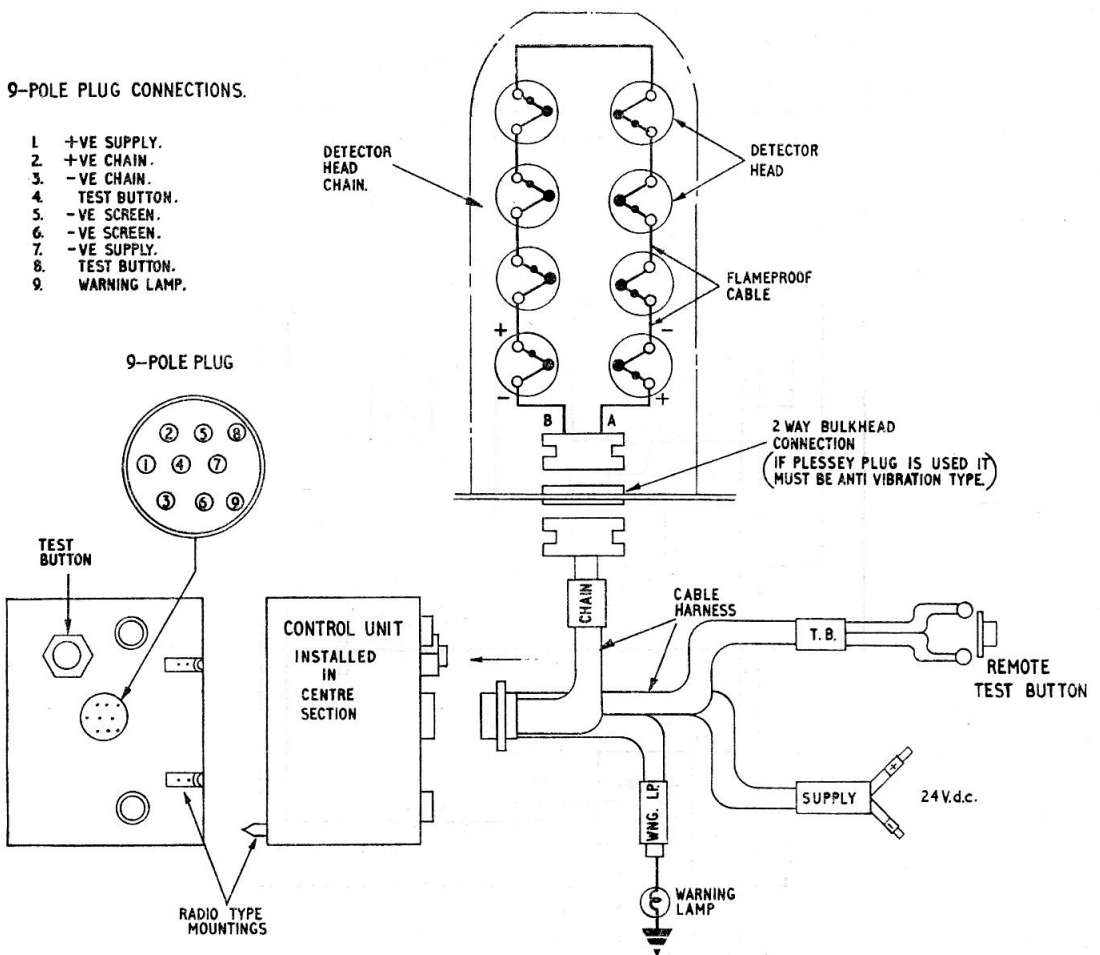


Fig. 3. Typical installation in a single zone fire warning system

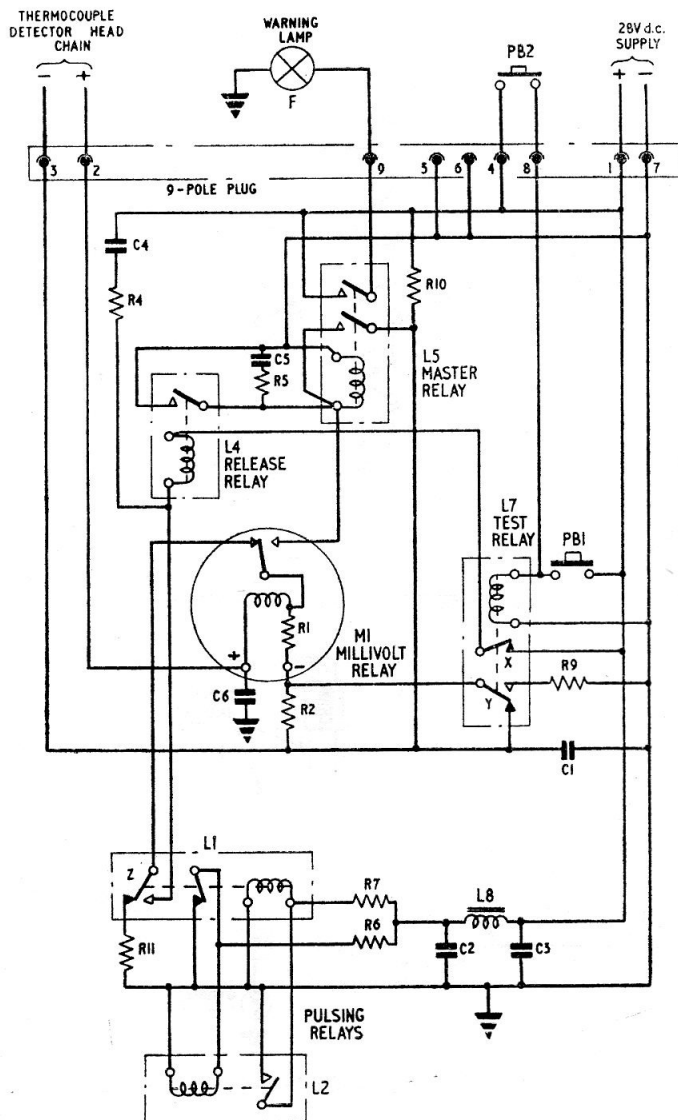


Fig. 4. Circuit diagram of control unit and external connections

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TABLE 1

List of components

Reference	Component	Type
◀ Plug	Plessey, 9 pole, Mk. 4	CZ50357
Socket	Plessey, 9 pole, Mk. 4	CZ56100 ▶
C1	Capacitor, 2 μ F, 150V d.c.	WA.19
C2	Capacitor, 0.75 μ F, 150V d.c.	WA.11
C3	Capacitor, 0.75 μ F, 150V d.c.	WA.11
C4	Capacitor, 0.1 μ F, 350V d.c.	CP45N
C5	Capacitor, 0.1 μ F, 350V d.c.	CP10N
C6	Capacitor, 0.1 μ F, 150V d.c.	WA.57
◀ L1	Relay, P.O., 1 C.O./1B, 600 Ω	600 (T.P.4501)
L1	Relay, P.O., 1 C.O./1B, 600 Ω	2400 (T.P.5901)
L2	Relay, P.O., 1M, 600 Ω	600 (T.P.4501)
L2	Relay, P.O., 1M, 600 Ω	2400 (T.P.5901) ▶
L4	Relay, S.T.C., 12V, 170 Ω , sealed	4184GC
L5	Relay, S.T.C., 12V, 170 Ω , sealed	4184GC
L7	Relay, S.T.C., 700 Ω , sealed	4184GD
L8	Choke, R.F., 0.5mH	Dust cored
M1	Millivolt relay unit, 5 Ω coil, screened	0.5-0.75mA
PB1	Test switch push-button	10F.1786
R1	Resistor, 5 Ω , $\frac{1}{4}$ W incorporated in M1	Wire wound
◀ R2	Resistor, 18 Ω , $\frac{1}{4}$ W	Moulded carbon (T.P.4501)
R2	Resistor, 1 $\Omega \pm 5\%$, 4W	Wire wound (T.P.5901) ▶
R4	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R5	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R6	Resistor, 800 Ω , $\frac{1}{2}$ W	Moulded carbon
R7	Resistor, 800 Ω , $\frac{1}{2}$ W	Moulded carbon

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TABLE 1 (Continued)

Reference	Component	Type
◀ R9	Resistor, 5000 Ω , $\frac{1}{4}$ W	Moulded carbon (T.P.4501)
R9	Resistor, 1300 Ω , $\pm 5\%$, 4W	Wire wound (T.P.5901) ▶
R10	Resistor, 330 Ω , 4W	Wire wound vitreous
R11	Resistor, 150 Ω , $\frac{1}{4}$ W	Moulded carbon
R12	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R13	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R14	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R15	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R16	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R17	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R18	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R19	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R20	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R21	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R22	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R23	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R24	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R25	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R26	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R27	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R28	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R29	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R30	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R31	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R32	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R33	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R34	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R35	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R36	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R37	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R38	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R39	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon
R40	Resistor, 100 Ω , $\frac{1}{4}$ W	Moulded carbon

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