



INSTALLATION • OPERATION • MAINTENANCE INSTRUCTIONS

TYPE JY FILAMENT FAILURE ALARM UNITS

CAUTION Before working on this equipment, turn off the power supply and ground or open circuit the R.F. lead to the carrier set assembly.

The outline dimensions of the two units are shown in Figures 3 and 4. The four-element unit is two panel units high, and the six-element unit is three panel units high.

APPLICATION

The type JY filament failure alarm units are used in type JY carrier assemblies for indicating when the filament or heater of any tube in a series connected circuit burns out. This unit can be used to ring a bell or energize an annunciator to call the operator's attention to the trouble.

CHARACTERISTICS

The coils of the relay elements in the type JY filament failure units are intended for 0.3 ampere d.c. (nominal) tube heater circuits. A resistor is provided on both styles to be connected in parallel with the coil of the adjacent relay element for use in a 0.9 ampere heater circuit (type 6L6 tubes).

CONSTRUCTION AND OPERATION

The type JY filament failure alarm units consist of small solenoid-type direct current relay elements mounted on standard 19-inch wide panels. The coil circuits are brought out to separate terminals so that one relay element can be connected in each series heater circuit of the carrier assembly.

One contact is brought out to terminals from each relay unit. This contact is held open when current is flowing through the relay coil. In event of a tube burnout, the current drops to zero and the contact closes to sound an alarm. The contact circuits of each element are also brought out to separate terminals.

Two styles of this unit are available to cover various applications. Style #1336953 has four relay elements for four tube-heater circuits, and will cover the majority of applications. For more elaborate carrier assemblies, style #1336954, which has six relay elements, is available. The internal wiring of these units is shown in Figures 1 and 2.

The pickup current of the relay elements is 0.15 to 0.22 ampere d.c., and the dropout current is 0.08 to 0.12 ampere d.c. These units are not suitable for a.c. operation, nor with parallel connected heater circuits where the current does not drop to zero when one tube burns out.

INSTALLATION

The filament failure units are usually supplied as part of a type JY equipment assembly. In those cases, it is shipped assembled with the other units in a cabinet, completely wired. Since there are no front-of-panel controls, the unit is often mounted on the rear rails on the inside of the cabinet.

When the unit is shipped separately, it can be mounted on the swinging rack if there is sufficient space. Mounting holes are provided along the entire length of the rack. If it is necessary to mount the unit on the rear rails, mounting holes must be drilled in the Z frame. They should be tapped for 10-32 screws. Refer to the outline drawing for mounting dimensions.

TYPE JY FFA UNITS

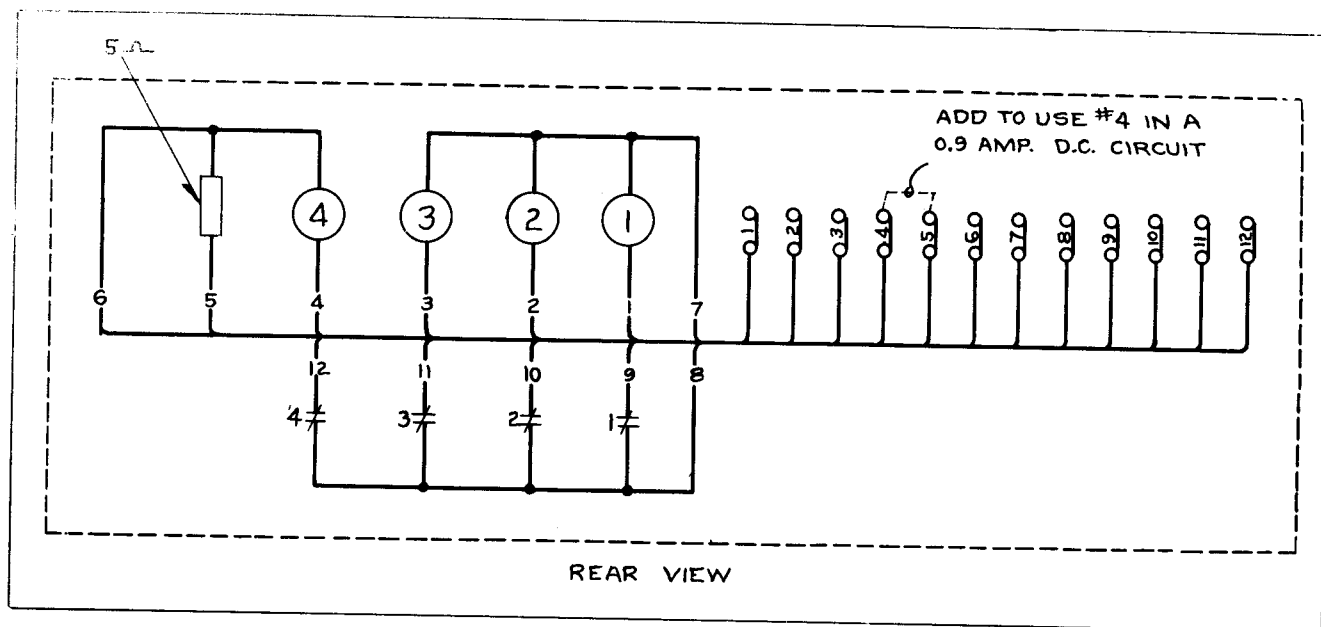


Fig. 1—Internal Schematic of Four-Element Type JY Filament Failure Alarm Unit.

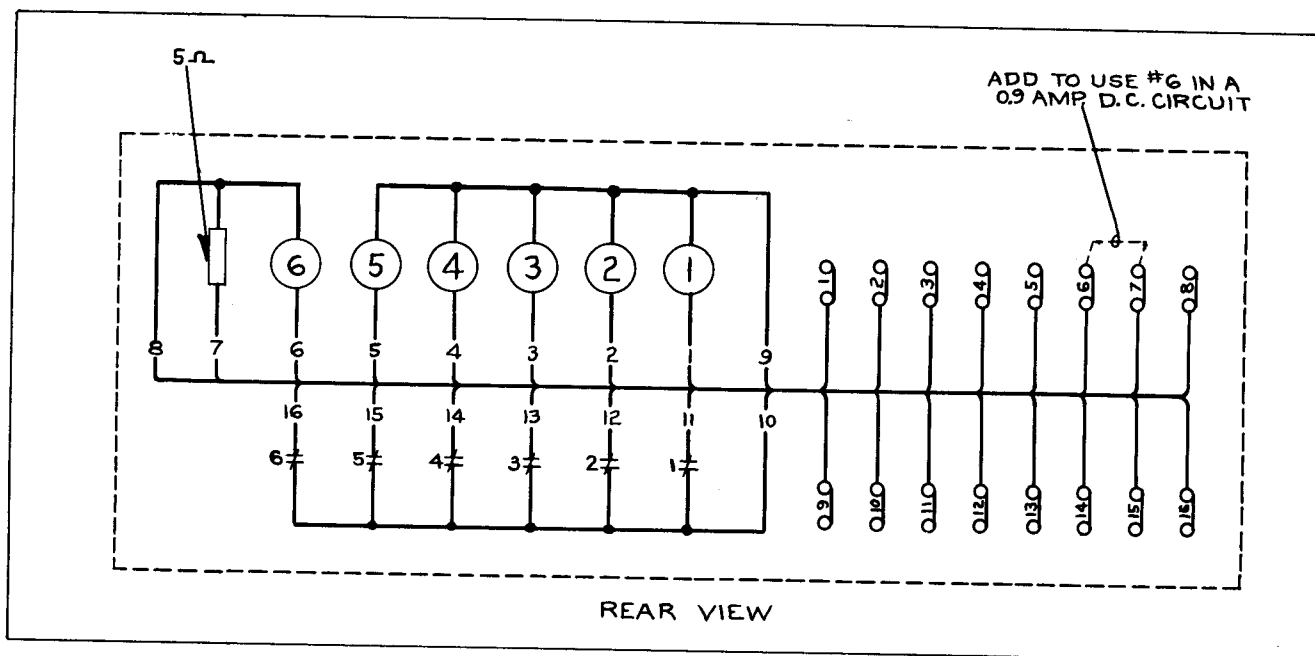


Fig. 2—Internal Schematic of Six-Element Type JY Filament Failure Alarm Unit.

ADJUSTMENTS AND MAINTENANCE

The proper adjustments to insure correct operation of these units have been made at the factory and should not be disturbed after receipt by the customer. If the adjustments have been changed or the relay elements taken apart for repairs, the following instruction should be followed:

Adjust the stationary core of the relay ele-

ment for a clearance between the stationary core and the moving core of 1/64 inch when the switch is picked up. This can best be done by turning the relay upside down. Then screw in the core screw until the moving core starts rotating. Back off the core screw one turn and lock in place. This prevents the moving core from striking and sticking to the stationary core because of residual magnetism. With this adjustment, the pickup current will

be 0.15 to 0.22 ampere, and the dropout current 0.08 to 0.12 ampere d.c.

During regular maintenance periods, the contacts of the relays may be cleaned if necessary with a fine file. S#1002110 file is recommended for this purpose.

RENEWAL PARTS

When ordering renewal parts for this unit, include the following data from the nameplate.

1. The name of the unit
2. The style or DL number
3. The serial number

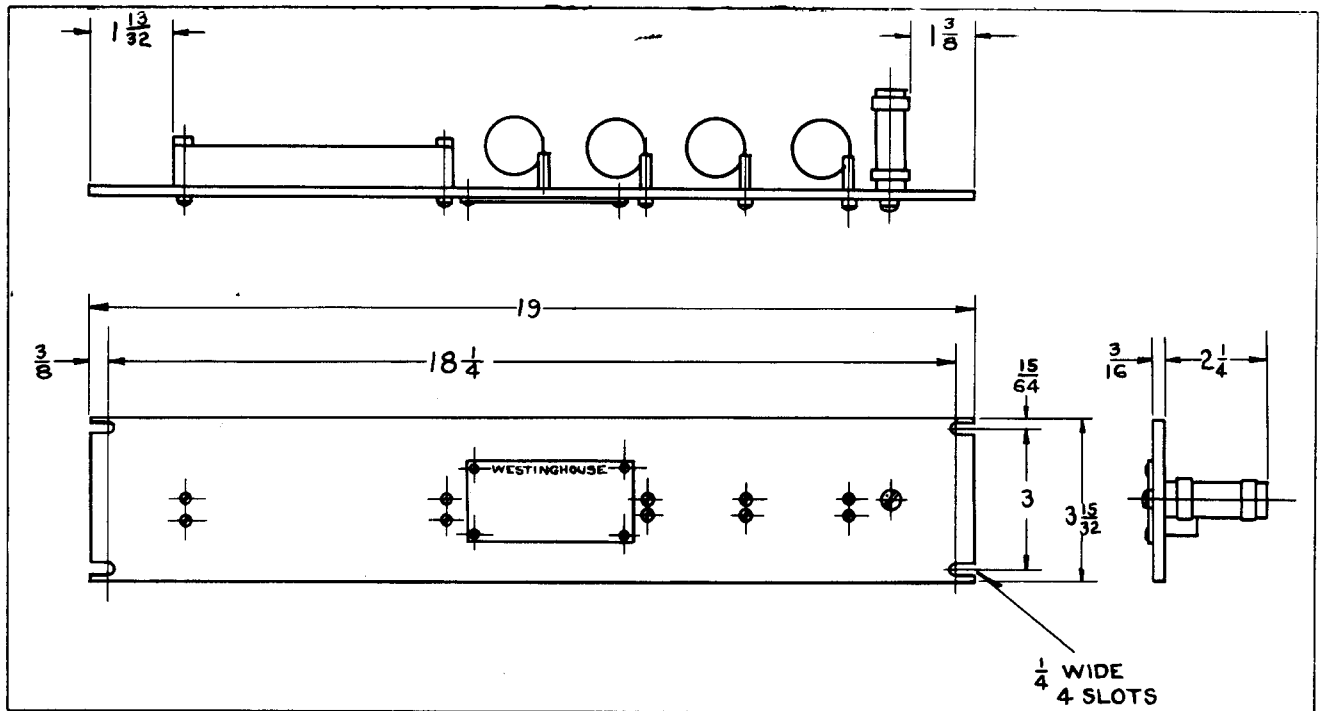


Fig. 3—Outline of the Four-Element Type JY Filament Failure Alarm Unit.

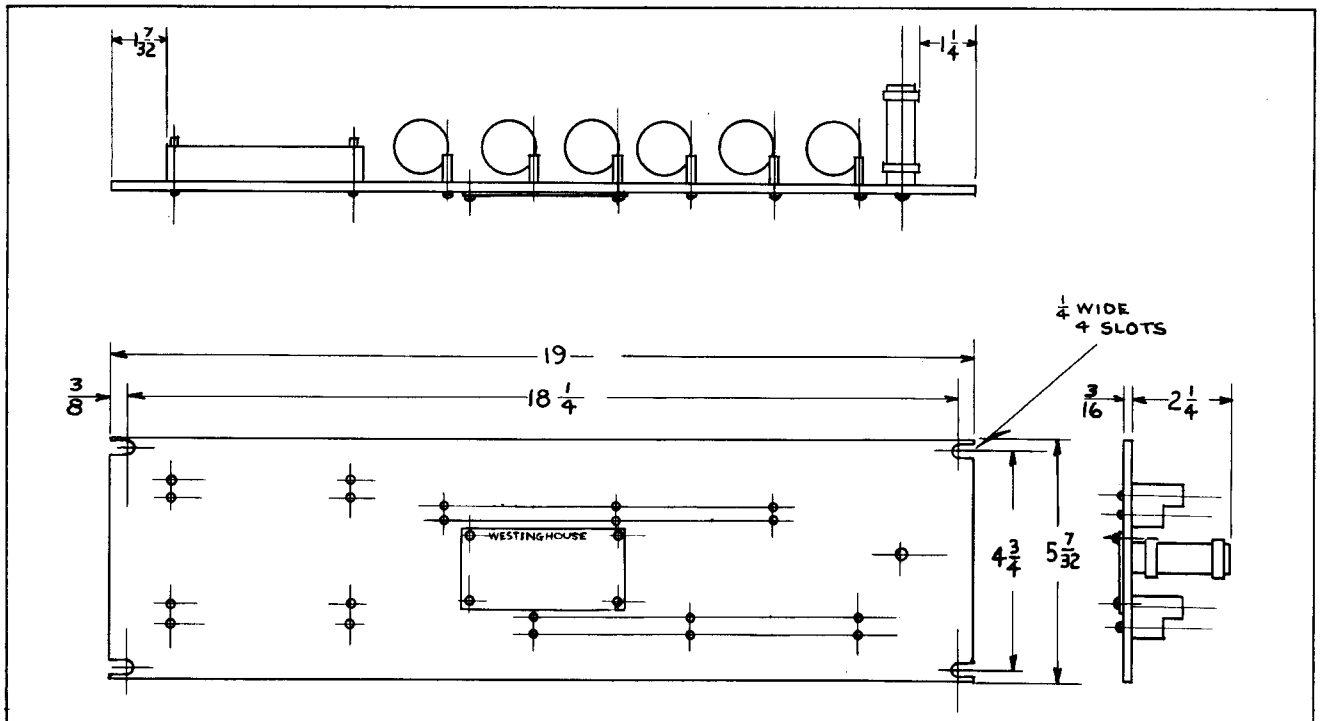


Fig. 4—Outline of the Six-Element Type JY Filament Failure Alarm Unit.



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