



## VACUUM THERMAL DELAY SWITCH

TYPE DLS.10

### RATING.

Filament Voltage .. .. .	4.0
Filament Current (approx. at 4 v.) .. .. .	1.4
Delay Time at 4 v. (secs.) .. .. .	min. 30 : max. 90
Maximum Peak Current (Low Voltage Rating) ..	6 amps. at 250 v.
Maximum Peak Current (High Voltage Rating)	200 mA at 2,000 v.

### DIMENSIONS.

Maximum Overall Length .. .. .	116 mm.
Maximum Diameter .. .. .	45 mm.

### GENERAL.

This vacuum delay switch is designed on a new principle intended to overcome the disadvantages of the ordinary bi-metallic strip delay switch. The operating parts are enclosed in a glass bulb which is evacuated, thus rendering the action immune from atmospheric influence.

A small filament is mounted vertically on a glass stem, and adjacent to it is a thin strip of special thermostatic metal. Attached to this strip is a springy contact which is normally clear of a fixed contact. On application of current to the filament the metal strip is heated by radiation and curves away from the filament. This springy contact then presses firmly against the fixed contact and remains in position as long as the heater is alight.

On switching off the heater the contact is broken after a lapse of some seconds. The time taken for the contact to close can be varied by inserting a series resistance in the heater circuit to reduce the temperature.

### APPLICATION.

This delay switch is recommended for use with all mercury vapour rectifiers in order to provide the necessary delay before the anode voltage is applied. The normal delay time is 60 seconds but the periods of delay up to approximately  $1\frac{1}{2}$  minutes can be arranged for if necessary. The heater should be connected across the rectifier filament (4v.) and the contacts on the pins A and G are connected in the H.T. positive supply.

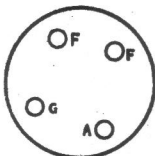
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It is essential that negligible potential difference should exist between the filament and moving contact, or trouble may be experienced due to thermionic emission. Alternatively the switch contacts may be connected in the primary of the H.T. mains transformer.

## NOTE.

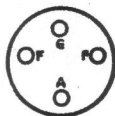
This switch is normally intended to operate at 4.0 volts and higher values of heater voltage will affect the life adversely.

## BASING.

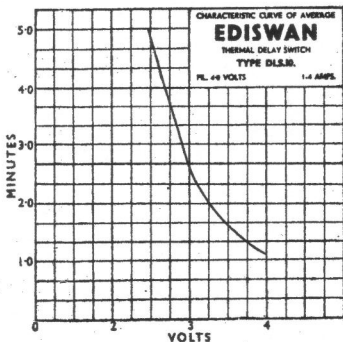


**DLS.10.**

American U.X. (made to order).



**B.V.A. 4-pin base  
(Standard)**



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**EDISWAN**  
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**VACUUM THERMAL DELAY SWITCH**

DLS.10

CHARACTERISTIC CURVES OF AVERAGE  
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THERMAL DELAY SWITCH  
**DLS.10**

