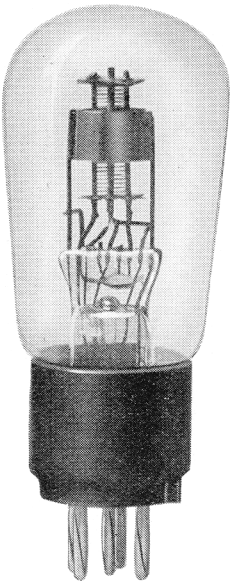
HOT CATHODE MERCURY VAPOUR RELAY TYPE 4039A



CHARACTERISTICS

Heater Volts ...	4·0
Heater Current (amps.)	1·0
Peak Anode Current (mA)	200
Continuous Anode Current (mA) ...	100
Peak Anode Volts ...	500
Control Ratio (approx.)	35/1
Cathode Heating Time	30 seconds minimum

DIMENSIONS (APPROX.)

Overall length ... 115 mm. Overall diameter ... 47 mm.

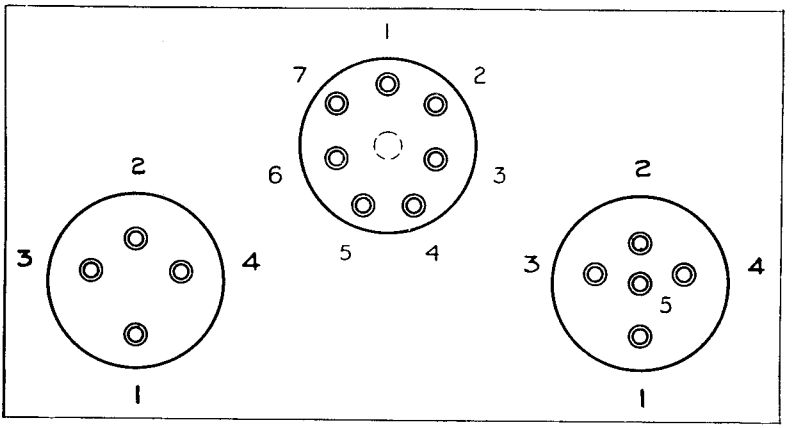
The 4039A. is a grid controlled mercury vapour relay with an indirectly heated cathode. In using this valve it is important to remember that once the anode discharge has been started, it cannot be cut off except by reducing the anode voltage below the ionisation value of mercury vapour (about 15-25 V. according to the temperature of the vapour). The 4039A. is particularly suited for use in linear time base circuits for cathode ray oscillograph and television equipment, etc.

The actual grid control ratio of the valve is dependent upon the temperature of the surrounding air. Reduction in temperature will be found to increase the control ratio. This change in the control ratio is due to the change in the pressure of the mercury vapour inside the valve.

The valve should not be placed in a position where its temperature is likely to rise appreciably during operation. This is particularly important where voltages approaching the maximum allowed are being used.

The 4039A. is fitted with a five-pin base, connections being as shown on page 51.

BASE CONNECTIONS OF VALVES



UNDERSIDE VIEW OF BASES

4-PIN VALVES

TYPE	1	2	3	4
HLB.1, PB.1	A	G	F.M	F
R.1, R.2, R.3, 1A.7	A1	A2	H	H.C
4037A.	A	—	F	F

5-PIN VALVES

TYPE	1	2	3	4	5	Top Cap
8A.1, 9A.1 ...	G2	G1	H	H	C.M	—
HLA.2, PA.1 ...	A	G	H	H	C.M	—
PenB.1, PenA.1 ...	A	G1	F	F	G2	—
4039A	A	G	H	H	C	—
1D5	A	—	H	H	C	—

7-PIN VALVES

TYPE	1	2	3	4	5	6	7	Top Cap
4D.1 ...	—	—	—	H	H	C	A	G
7A.3, 7D.8, 7D.6, 7A.2, & 7D.3 ...	—	G1	G2	H	H	C	A	—
9D.2 ...	—	A	G3	H	H	C	G2	G1
11A.2, 11D.3	D1	M	D2	H	H	C	A	G1
15A.2, 15D.1	G2	G1	G3.G5	H	H	C	A	G4

A. *Anode.* G1, G2, G3, G4, 1*st*, 2*nd*, 3*rd and* 4*th Grids.*
F. *Filament.* H. *Heater.* C. *Cathode.* D1, D2, *Diodes.*
M. *Metallising.*