



Half-Wave Mercury- Vapour Rectifier

Code: 872A (CVI449)

This rectifier is equivalent to the U.S.A. 872/872A and F353A← types.

CATHODE

Oxide-coated filament, shielded

Filament voltage	5	V
Nominal current	7.25	A
Minimum cathode heating time	1	min

MECHANICAL DATA

Maximum overall length	216	mm
Maximum bulb diameter	62	mm
Base	Large 4-pin bayonet	
Socket	4009C or 4039A	
Net weight	225	g
Mounting position	Unrestricted←	

MAXIMUM RATINGS

Maximum peak inverse voltage	10	kV
Maximum peak anode current	5	A
Maximum average anode current	1.25	A
Maximum volt drop	14	V
Condensed mercury temperature range with forced ventilation	15 to 70	°C

The above ratings apply to operation with a choke-input filter and a supply frequency of 50 c/s.

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CATHODE HEATING TIME

Ambient Temperature	10 to 20°C	20°C and above
Minimum pre-heating period	2 minutes	1 minute

MAXIMUM PEAK INVERSE VOLTAGE RATINGS AND CONDENSED MERCURY TEMPERATURE

Natural Ventilation	15 to 50° C	15 to 45° C
Forced Ventilation	15 to 70° C	15 to 60° C
Peak inverse Voltage	Up to 5 kV	5 to 10 kV

After shipment or transit the valve must be pre-heated for not less than 30 minutes before any anode voltage is applied, so that the mercury may be distributed correctly.

The temperature limits given under "Natural Ventilation" are only valid for unrestricted natural ventilation. Forced air cooling is recommended and is required for operation up to the limit of condensed mercury temperature.

Before putting a valve of this type into service it is recommended that reference be made to the General Information Section K in the introduction to this handbook.



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TYPICAL OPERATING CONDITIONS

Circuit	No. of valves	Maximum A.C. Input Voltage (V _{r.m.s.})	Maximum D.C. Output Voltage (V)	Maximum D.C. Output Current (A)
Single Phase Full-Wave Circuit No. 1	2	3535	3200	2.5
Single Phase Full-Wave Bridge Circuit No. 2	4	7070	6400	2.5
Three Phase Half-Wave Circuit No. 3	3	4080	4780	3.75
Three Phase Double Y Parallel Circuit No. 4	6	4080	4780	7.5
Three Phase Full-Wave Circuit No. 5	6	4080	9570	3.75

The above tables suitable circuits for this rectifier, and shows their safe maximum input and output conditions. The values are based on sine wave input and the use of a suitable choke input filter.

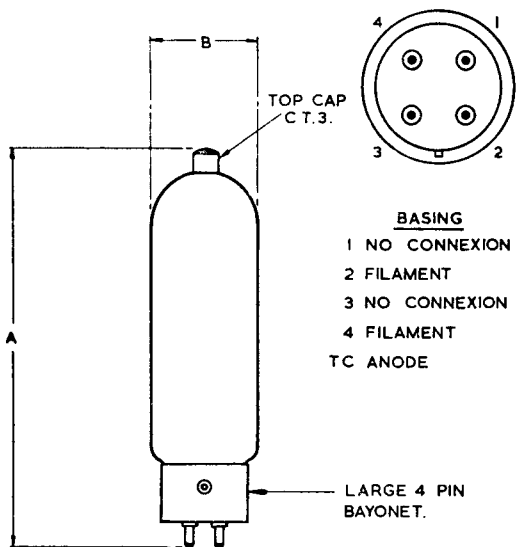
This rectifier being directly heated, it is recommended that the output circuit be taken from the mid-point of the filament supply transformer secondary winding.

For details of the circuits referred to see sheet K—8 in the introduction to this handbook.

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DIM:	MILLIMETRES	INCHES
A	215.9 MAX:	8 $\frac{1}{2}$ MAX:
B	61.9 MAX:	2 $\frac{7}{16}$ MAX:

NOTE:-BASIC FIGURES ARE INCHES