Half-Wave Mercury-Vapour Rectifier

Code: 866A (CV32) ←

This rectifier is equivalent to the U.S.A. 866/866A type.

CATHODE

Oxide-coated filament, shielded		
Filament voltage	2.5	V
Nominal current	5.0	A
Minimum cathode heating time	30	sec

MECHANICAL DATA

Maximum overall length	170	mm
Maximum bulb diameter	62	mm
Base	American medium 4-pin bayonet	
Socket	4020A	
Net weight	125	g
Mounting position	Vertical, base down←	

MAXIMUM RATINGS

Maximum peak inverse voltage		10	kV
Maximum peak anode current	At P.I.V.	1.0	A
Maximum average anode current	up to 10 kV	0.25	A
Maximum peak anode current	At P.I.V.	2.0	A
Maximum average anode current	up to 2 kV	0.5	A
Maximum voltage drop		14	V
Maximum condensed mercury temperature range		25 to 70	°C

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

Half-Wave Mercury-Vapour Rectifier

Code: 866A (CV32) ←

CATHODE HEATING TIME

The minimum pre-heating time is 30 seconds. After shipment or transit the pre-heating period must not be less than 5 minutes before any anode voltage is applied, so that the mercury may be correctly distributed.

Ambient Temperature	10 to 20°C	20°C and above
Minimum pre-heating period	1 minute	30 seconds

MAXIMUM PEAK INVERSE VOLTAGE RATINGS AND CONDENSED MERCURY TEMPERATURES

Condensed Mercury Temperature	25 to 70°C	25 to 60°C
Peak Inverse Voltage	Up to 2 kV	Up to 10 kV

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.

Half-Wave Mercury-Vapour Rectifier

Code: 866A (CV32) ←

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	3180	0.5
Single Phase Full Wave Bridge Circuit No. 2	4	7070	6360	0.5
Three Phase Half Wave Circuit No. 3	3	4080	4780	0.75
Three Phase Double Y Parallel Circuit No. 4	6	4080	4780	1.5
Three Phase Full Wave Circuit No. 5	6	4080	9570	0.75

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.

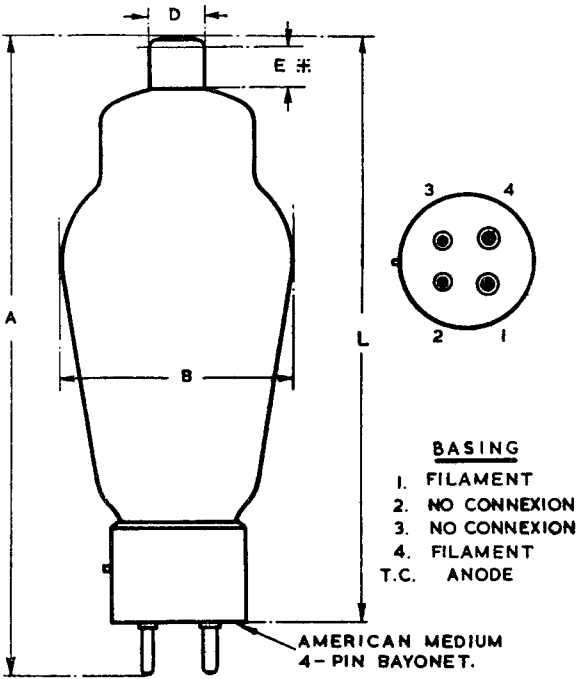
This rectifier being directly heated it is recommended that the output circuit be taken from the mid-point of the filament supply transformer secondary winding.

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

Ref.: 2V/400A

Half-Wave Mercury-Vapour Rectifier

Code: 866A (CV32) ←



DIM	MILLIMETRES	INCHES
A	170 MAX	6·7 MAX
B	62 MAX	2 7/16 MAX
D	14·30±0·25	0·562±0·010
E ⁜	10·3 MIN	13/32 MIN
L	155·6 MAX	6 1/8 MAX

BASIC FIGURES ARE INCHES.
⁜ DENOTES, CONTACT LENGTH.