Bi-directional 12-way Computing Tube with Intermediate Outputs

GC 12/4 B

Limit Ratings

Maximum counting rate: sine wave and rectangular pulses	4,000 p.p.s.
Maximum total anode current	550 μA
Minimum total anode current	250 μA
Minimum anode supply voltage (normal room illumination)	350 V
Maximum potential difference between guides and cathodes	140 V
Maximum output cathode load	150 kΩ

Characteristics

Running voltage at 300 μA	191 V approx.

Recommended Operating Conditions

*Anode current		310 μA ± 20%
**Guide bias	+20 V	+ 40 V
Bias on output cathode resistor	—20 V	Zero
Resultant pulse	40 V	40 V
Forced resetting pulse		—120 V
Double pulse drive-amplitude		—80 V ± 10 V
Double pulse drive-durations		60 μS
Integrated pulse drive-amplitude		—145 V ± 15 V
Integrated pulse drive-duration		80 μS
Sine wave drive-amplitude		40—70 V r.m.s.

* The required anode current may be obtained from a 475 V supply via an 820 kΩ resistor.

** This does not apply in the case of the sine wave drive.

The following table shows the number of input pulses for which outputs may be obtained for both directions of drive and with each cathode used as the zero electrode.

Number of pulses to give output from :—

A	B	C	D	
0	1	7	9	Clockwise, A zero
0	11	5	3	Anti-clockwise, A zero
11	**0**	**6**	**8**	**Clockwise, B zero**
1	**0**	**6**	**4**	**Anti-clockwise, B zero**
5	6	0	2	Clockwise, C zero
7	6	0	10	Anti-clockwise, C zero
3	4	10	0	Clockwise, D zero
9	8	2	0	Anti-clockwise, D zero

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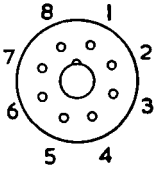
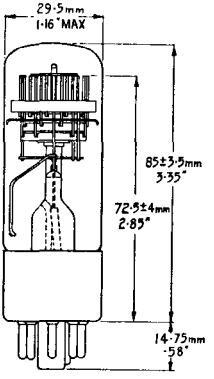
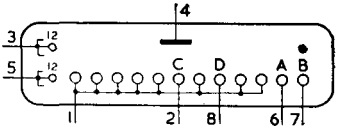
Mechanical Data

Mounting position	Any. For visual indication the tube is viewed through the dome of the bulb.
Alignment	Cathode " B " is aligned with pin No. 6 to an accuracy of ± 10°.
Weight	43 g (nominal).
Escutcheon	N79369 Brass
Base	I.O.

Base Connections
(underside view)



Pin 1 Common cathodes
2 Cathode " C "
3 1st Guides
4 Anode
5 2nd Guides
6 Cathode " A "
7 Cathode " B "
8 Cathode " D "