VALVE ELECTRONIC CV274

ADMIRALTY SIGNAL ESTABLISHMENT

Specification AD/CV274/Issue 4	SECURITY			
Dated 8.10.46.	Specification	Valve		
To be read in conjunction with K1003	Restricted	Unclassified		

- indicates a change

TYPE OF VALVE:- Cathode Ray Tube DEFLECTION:- Magnetic TYPE OF FOCUS:- Electrostatic BULB:- Internally coated with conductive coating GCREEN:- To give a white trace with negligible afterglow TO give a white trace with negligible afterglow RATINS: Note RATINS: Note RATINS: Note Heater Voltage (V) 4.0 Pin Electrode Heater Current (A) 1.0 J Modulator Max. Va1 (kV) 0.25 A1 (250 V) EXPECTATION OF TABLE AND CONNECTIONS We see K1001/AIV/D4.10 Pin Electrode Note 1 Heater 2 Cathode Heater Heater Current (A) 5 A1 (250 V) EXPECTATION OF TABLE AND CONNECTIONS We see K1001/AIV/D4.10 Pin Electrode Note 1 Heater 2 Cathode Heater 4 Blank 7 Blank 7 Blank 7 Blank 7 Blank 7 Blank 8 A2 9 Blank 10 Blank 11 Heater DIMENSIONS See Figure 1. Page 4. PACKING See K1001/7			→ j	ndica	tes a c	change		
BULB:- Internally coated with conductive coating To give a white trace with negligible afterglow RATING RATING RATING Heater Voltage (V) 4.0 S. Magnal. 11 Pin See K1001/AIV/D4.10 Pin Electrode Heater Current (A) 1.0 3 Modulator Max. Va1 (kV) 0.25 4 Blank Max. Va3 (kV) 7.0 A 5 A1 (250 V) TYPICAL OPERATING CONDITIONS Va1 (V) 1000 9 Blank Va2 (V) 1000 9 Blank Va3 (kV) 6.0 10 Blank Packing DIMENSIONS See Figure 1. Page 4 PACKING	DEFLECTION: - Magnetic							
Serial No To give a white trace with negligible afterglow RATING RATING Heater Voltage (V) 4.0 Pin Electrode Heater Current (A) 1.0 3 Modulator Max. Va1 (kV) 0.25 4 Blank Max. Va3 (kV) 7.0 A 5 A1 (250 V) TYPICAL OPERATING CONDITIONS Va1 (V) 250 8 A2 Va2 (V) 1000 9 Blank Va3 (kV) 6.0 10 Blank Desirable line width (mm) 0.4 B Side Con- A3 DIMENSIONS See Figure 1. Page 4 PACKING				l with	Additional Marking:-			
with negligible afterglow RATING RATING Heater Voltage Heater Current Max. Va1 Max. Va3 Max. Va3 Max. Va3 Max. Va1 Max. Va3 Max. Va1 Max. Va3 Ma	conductive coating			1				
RATING See K1001/AIV/D4.10	with	negli			BASE AND CONNECTIONS			
Heater Voltage	afterglow					U.S. Magnal. 11 Pin See K1001/AIV/D4.10		
Heater Voltage	RATIN	}			Pin			
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Wa3 Beam Current Desirable line width (mm) Blank Heater Side Con- tact DIMENSIONS See Figure 1. Page 4.	•		K - I			·		
Beam Current (ALA) 100 0.4 B Side Contact DIMENSIONS See Figure 1. Page 4.	-							
Desirable line width (mm) 0.4 B Side Contact DIMENSIONS See Figure 1. Page 4. PACKING	, -	3 7						
Con-tact DIMENSIONS See Figure 1. Page 4. PACKING		Y .		_		Heater		
tact DIMENSIONS See Figure 1. Page 4. PACKING	Desirable line width	(mm)	0.4	В				
See Figure 1. Page 4. PACKING						A3		
See Figure 1. Page 4. PACKING					tact	DT GLOT GIG		
PACKING					DIMENSIONS			
					See Figure 1. Page 4.			
See K1001/7	·							
					See K1001/7			

NOTES

- A. The tube shall be used with the cathode earthy.
- B. Measured with a beam current of 100 ALA and an 8" x 6" 405 line raster repeated 25 times per second.

CV274

TESTS

To be performed in addition to those applicable in K1003.

	Test Conditions					Limita		No.	
	Vh (V)	Va3	Va2 (V)	Vg (V)	Test	Min.	الأدار بعرب المساق	Tested	Note
a	-	•	•	-	Inter-Electrode Capacity. Modu- lator to all other elec- trodes (AMF)	6	10	0.5%	
b	4.0	-	440	••	Ih (A)	0.7	1.2	5%	
C	4.0	6.0	Ad- just- ed	Ad- just- ed	(i) Light out- put (E.F.C.)	7.0		100%	1
	IB;	tube o	o give perated size 8*	with	(ii) Vg (V)	To be least negative.r.	t 1V tive t.	100%	
đ	From initial conditions as in "c", and scanning with 405 lines interlaced 2:1 repeated 25 times per second, adjust the line scan to 23.5 cms. and decrease the amplitude of vertical line scan until the horizontal lines just merge				(i) Focus (new height of raster when lines just merge) (cms.)	_	13.7	100%	
					(ii) Focussing voltage Va2 (V)	700	1200	100%	
6	4.0	6.0		Ad- just	(i) Vg (V)	-	-4 0	100%	
	visual cut off on an 8" x 6" raster				(ii) Change in Vg from value in 'c' (ii) (V)	•	15	100%	
f		6.0 K1003/5	5•4•2• = 5 Mego	-80 hms	Grid insulation (i) Leakage Current (MA)	1	16	100%	
	<i>y</i> 2.30.23				(ii) Increase in Voltmeter reading	-	100%	100%	

TESTS (Continued)

	7	est Co	ndition	S		Limits		No.	
	Vh (V)	Va3 (kV)	Va2 (V)	Vg (V)	Test	Min.	Max.	Tested	Note
g	4.0	A voltage of 100 V applied between heater and cathode			Heater-Cathode Insulation (Cathode positive) Leakage current (MA)	•	200	100%	
h	4• O	6.0	As in test 'c'	Any con- ven- ient value	Deviation of spot from centre of screen (mm)	1	10	100%	
j	4.0	6.0	As in test 'c'	Any con- ven- ient	Effective screen area and screen graininess	100%	2		
				value	The tube must be scanning this ar shall show no gr worse than a sta				
k	k Glasswork blemishes. Any blemishes on the face of the tube less than ½ sq.mm. in area may be ignored; not more than 5 blemishes of size ½ to ½ sq.mm. may appear, and of these no 2 shall be closer together than 1 inch. Blemishes of area greater than ½ sq. mm. shall cause the tube to be rejected.								

NOTES

- 1. The light output shall be measured using a photo-electric cell which has a spectral response equivalent to that of the eye.
- 2. This area is obtained by using the rubber mask supplied by A.S.E., rounding of the corners, as produced by the mask, is permitted in scanning this area.

ALL DIMENSIONS IN MILLIMETRES.

9.5312 R

256±7



153 R

CV274/4/IV