

ELECTRONIC TUBE REFERENCE

PL5553B

Specialized - Ignitron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

IGNITRONPOWERSWITCH

Water-cooled ignitron for welding-control and related high-current industrial switching service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	— / —	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 IgnitronPowerSwitch
No fixed ratings recorded.
Water-cooled ignitron for welding-control and related high-current switching service.

Water-cooled ignitron for welding-control and related high-current switching service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V3

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 PHILIPS ELECTRON TUBES HANDBOOK V3

Section 1 · IgnitronPowerSwitch

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
pi (q	0.35 kg/cm2	Typical characteristics pi (q = 9 1/min.) = max. 0.35 kg/cm2
Mains voltage	250 V	Limiting values 4) For mains voltages between 250 V and 600 V. Tav is
Mains voltage	600 V	Limiting values 4) For mains voltages between 250 V and 600 V. Tav is
Surge current	0.15 s	Welding service 3) T(Isurge) = max. 0.15 sec
Temps d'amorgage a la tension ou = max	100 µsec	Ignitor characteristics Temps d'amorgage a la tension ou = max. 100 µsec
Ignition time	100 µsec	Ignitor characteristics ignition time of max. 100 µsec. di/dt= min. 0.3 A/µsec)
Ignition time	300 mA	Ignitor characteristics ignition time of max. 100 µsec. di/dt= min. 0.3 A/µsec)

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Vc I Dans les conditions de fonctionnement	50 V	Ignitor characteristics Vc I Dans les conditions de fonctionnement = 650_50 V

1999 Philips E-Z

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1999 PHILIPS E-Z

Section 1 · IgnitronPowerSwitch

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Montage ϕ vertical, la connexion de l'anode enhaut	1 a	Montage ϕ vertical, la connexion de l'anode enhaut
1)When the cooling systems of the tubes are connected in	1 W	1)When the cooling systems of the tubes are connected in
2) When a number of tubes is cooled in series, ti min lis	2 W	2) When a number of tubes is cooled in series, ti min lis
using six tuves it ls recommended to cool notmore than	1 s	using six tuves it 1s recommended to cool notmore than
Ignitor connector. Unfolded length 330 mm	330 nf	Ignitor connector. Unfolded length 330 mm
Montage . vertical, la connexion de l'anode en haut)	1 a	Montage . vertical, la connexion de l'anode en haut)
Mains voltage 4'1	1 Ma	Mains voltage 4'1
*) For mains voltages between 250 V and 600 V, Tav is	600 ma	*) For mains voltages between 250 V and 600 V, Tav is
3)uax. value at the indicated voltage	3 ua	3)uax. value at the indicated voltage
4)For intermediate vaiues Tay is inversely proportional	4 a	4)For intermediate vaiues Tay is inversely proportional
Firing current _ 6-8 A	-8 A	Firing current _ 6-8 A
l'amorgage de l'anode principale	1 a	l'amorgage de l'anode principale
1) The rate of rise of the ignitor current must be suffi	1 a	1) The rate of rise of the ignitor current must be suffi-
l'amorgage de l'anode principale	1 a	l'amorgage de l'anode principale

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Onmic resistance of series inductance (1 mH)	1 s	Onmic resistance of series inductance (1 mH)
Ohmic resistance of 60 uH inductance	60 Ohm	Ohmic resistance of 60 uH inductance
[0 Two tubes connected in inverse parallel]]	0 w	[0 Two tubes connected in inverse parallel]]

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
will control 2400 kVA at 250 - 600 Vand 2120 kVA at	2120 w	will control 2400 kVA at 250 - 600 Vand 2120 kVA at
Irms	10 ms	Irms = max. 10A
phase control 1s used	1 a	phase control 1s used
2) Max. average current of each tube at max. demand	2 Ma	2) Max. average current of each tube at max. demand
3) Max. demand at max. average current	3 Ma	3) Max. demand at max. average current
moyen correspondant max. de 1l'anode par tube (Ia) peut	1 s	moyen correspondant max. de 1l'anode par tube (Ia) peut
1) Max. average current at max. peak current	1 Ma	1) Max. average current at max. peak current
2) Max. peak current at max. average current	2 Ma	2) Max. peak current at max. average current
ignition time of max. 100 psec, di/dt	0.3 ma	ignition time of max. 100 psec, di/dt= min. 0.3 A/usec)
ignition time of max. 100 usec, di/dt	0.3 ma	ignition time of max. 100 usec, di/dt= min. 0.3 A/usec)