

ELECTRONIC TUBE REFERENCE

PL5555

Specialized - Ignitron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

IGNITRONPOWERSWITCH

Water-cooled industrial ignitron for power rectification, welding control, and other high-current control applications.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	2.5 V / 5 A	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 industrial ignitron for power rectification, welding control and other high-current control applications.

Water-cooled industrial ignitron for power rectification, welding control and other high-current control applications.

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
and	900 V	and 900 V D.C. industrial rectifier circuits.
current rating is	200 A	current rating is 200 A per tube.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
P	0.2 kg/cm²	P1 (q = 9 l/min.) = max. 0.2 kg/cm ²
Va fwdp max	2100 V	Limiting values Va fwdp max. 900 2100 V
Peak inverse anode voltage	2100 V	Limiting values Va invp = max. 900 2100 V
Ia	225 A	Limiting values Ia 1)3) = max. 300 225 A
Ia	300 A	Limiting values Ia 2)3) = max. 400 300 A.
la surge (T = max	0.15 s	Limiting values la surge (T = max. 0.15 sec) = max. 12000 9000 A
la surge (T = max	9000 A	Limiting values la surge (T = max. 0.15 sec) = max. 12000 9000 A
lsurge(T = max	0.15 s	Limiting values lsurge(T = max. 0.15 sec) = max. 6000 6000 A
lsurge(T = max	6000 A	Limiting values lsurge(T = max. 0.15 sec) = max. 6000 6000 A
VC Dans les conditions de fonctionnement	50 V	Limiting values VC Dans les conditions de fonctionnement = 650±50 V
Rate of current decay during the last	10 µsec	Limiting values Rate of current decay during the last 10 µsec of

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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
Heater voltage	2.5 V	—
Heater current	5 A	—
IGNITRON & refroidissement par 1l'eau	1 s	IGNITRON & refroidissement par 1l'eau
Montage : vertical, la connection de 1'anode	1 a	Montage : vertical, la connection de 1'anode
Cooling ah	1 a	Cooling ah = min. 12 l/min
IGNITRON 4 refroidissement par 1'eau	4 s	IGNITRON 4 refroidissement par 1'eau
Montage : vertical, la connection de 1l'anode	1 a	Montage : vertical, la connection de 1l'anode
IGNITRON a refroidissement par 1'eau	1 a	IGNITRON a refroidissement par 1'eau
and 900 V D.C. industrial rectifier circuits	900 a	and 900 V D.C. industrial rectifier circuits.
Up to 400 V D.C. the continuous average anode	400 V	Up to 400 V D.C. the continuous average anode
current rating is 200 A per tube	200 a	current rating is 200 A per tube.
des mittleren Anodendauerstromes bils zu 400 V	400 s	des mittleren Anodendauerstromes bils zu 400 V
Montage: vertical, la connection de 1'anode en haut	1 a	Montage: vertical, la connection de 1'anode en haut
—> Connexion d'anode 55350	55350 a	—> Connexion d'anode 55350
Voltage range 5	5 V	Voltage range 5

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage range 3	3 V	Voltage range 3
Ignitor connector. Unfolded length 330 mm	330 nf	Ignitor connector. Unfolded length 330 mm
2) For substantially constant load	2 s	2) For substantially constant load
4) Hax. value at the indicated voltage	4 a	4) Hax. value at the indicated voltage
3) Overload based on the thermal characteristics of the	3 v	3) Overload based on the thermal characteristics of the
Caractéristiques limites pour l'anode auxiliaire (Limites)	1 a	Caractéristiques limites pour l'anode auxiliaire (Limites)
1) Main anode conducting	1 Ma	1) Main anode conducting
2) Main anode not conducting	2 Ma	2) Main anode not conducting
Caractéristiques limites pour l'anode auxiliaire (Limites)	1 a	Caractéristiques limites pour l'anode auxiliaire (Limites)
Ohmic resistance of series inductance (1 mH)	1 Ohm	Ohmic resistance of series inductance (1 mH)
Ohmic resistance of 60 pH inductance	60 Ohm	Ohmic resistance of 60 pH inductance
Rate of current decay during the last 10 usec of	10 a	Rate of current decay during the last 10 usec of
6.3x10 ⁻⁶ , point on P scale for one arc-back per	0 s	6.3x10 ⁻⁶ , point on P scale for one arc-back per

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
connection will control 2400 kVA at 2400 V	2400 w	connection will control 2400 kVA at 2400 V
Application: Power rectification: Operation in 300, 600	600 A	Application: Power rectification: Operation in 300, 600
Irms	4 ms	Irms = max. 15 4
v inv, q anode principale conduisant	25 v	v inv, q anode principale conduisant =max. 25V
V inv_ \$ anode principale non conduisant	160 V	V inv_ \$ anode principale non conduisant = max., 160 V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
3) 4, (2400 V rms) max. 30 °C	2400 V	3) 4, (2400 V rms) max. 30 °C
Irms	15 ms	Irms = max. 15 A
v inv, 4 anode principale conduisant	25 v	v inv, 4 anode principale conduisant = max. 25V
V inv, < anode principale non conduisant	160 V	V inv, < anode principale non conduisant = max., 160 V
3 t, (2400 V rms) max. 30 °C	2400 V	3 t, (2400 V rms) max. 30 °C
1) Two-hours overload; Tav	1 w	1) Two-hours overload; Tav = max. 2 min.; repeated not more
2) One-minute overload; Tqy	2 v	2) One-minute overload; Tqy = max. 1 min.; repeated not
Limiting values for guxiliary anode (Absolute limits)	1 v	Limiting values for guxiliary anode (Absolute limits)
Limiting values for ignitor (Absolute limits)	1 v	Limiting values for ignitor (Absolute limits)