Ignitron *Type MPS 1A*

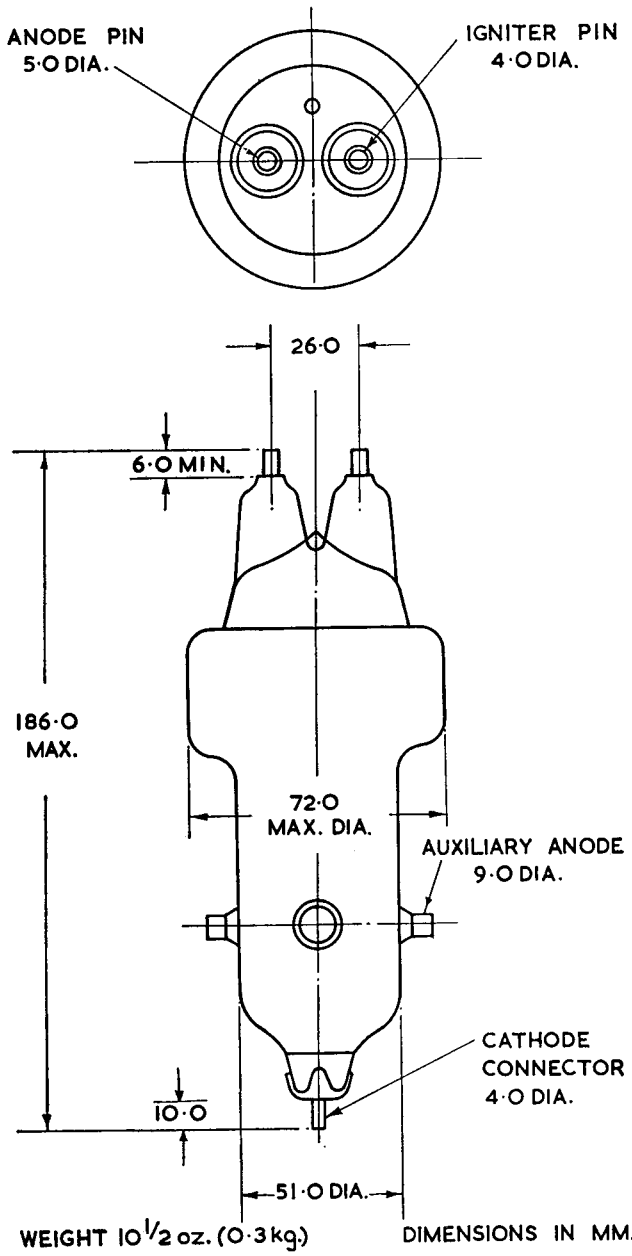
General. The Type MPS 1A is a mercury-pool ignitron, employing an electrostatic ignition electrode. It is fitted with a main anode and four auxiliary anodes. The main anode is screened from the cathode by a metal shroud which is connected to the ignition electrode. The cathode is a mercury-pool into which the ignition electrode dips. The area of the insulated surface of the ignition electrode in contact with the mercury meniscus is large, in order to ensure regular ignition and long life in the presence of a film of contamination which is apt to develop on the surface of the mercury in this type of tube after many hundreds of hours of use. The valve is of compact design and is mounted in a hard glass envelope.

The MPS 1A, in addition to its use as a mercury-pool switch (in which it functions as a relay through which energy is provided for the operation of the main anode and auxiliary circuits) may also be employed as a grid controlled rectifier for forward voltages up to 6 kV.

IMPORTANT NOTE

The mercury switch, by nature of its design, is unsuited to ordinary methods of transport. In order to ensure against mechanical damage the following points must be rigidly observed:

1. The switch is normally packed inverted in a sprung crate. No alteration to this packing must be made and the crate must always remain in an upright position.
2. During transport the crate must not be subjected to severe vibration or shocks.
3. When the switch is unpacked it must be inverted to obtain its operating position. When this is done mercury will flow to the opposite end of the switch, and care must be taken to see this is done slowly to prevent damage to the ignitor electrode through violent contact.



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APPROXIMATE DATA

PFV	6	kV
PIV	6	kV
$V_{(ign)(pk)}$ for T_{amb} 15-50°C	9·5	kV
for T_{amb} 20-50°C	8	kV
Permissible negative ignitor voltage	1	kV
I_{pk} (normal)	500	A
$I_{r.m.s.}$ (normal)	1	A
Normal duty factor	2×10^{-3}	
Maximum permissible duty factor (at 1,000 A pk)	$0{\cdot}625 \times 10^{-3}$	

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