



Title: RU-11A and RU-11B Converters USSR

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## THE RU-11A AND RU-11B CONVERTERS

The subject document is a brief manual of instructions on the maintenance and operation of the RU-11A and RU-11B Converters, for aircraft use.

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[A summary of Chapter I is given below.]

#### I. Purpose and Description

The converter is intended for conversion of low-voltage direct current to high-voltage direct current. It provides the plate supply for the aircraft radio receivers.

Two models of the converter, RU-11A and RU-11B, are produced by the factory. The models are identical in design but differ as to electrical data, and armature and pole windings. The RU-11A converter is manufactured with and without a filter box. The converter is a shielded, enclosed, two-pole, single-armature motor-generator set.

#### Filters

To smooth pulsations and eliminate radio interference, the converter is equipped with lf and hf filters consisting of chokes and capacitors located in a special box under the set.

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The plant manufactures several variants of the capacitor filter assembly (as to design of the capacitors and their operating voltage) but with the same main circuit.

Operating Conditions

The converter will operate normally under the following conditions:

- a) up to 11,000 m in altitude;
- b) ambient temperatures of +50°C to -60°C and abrupt temperature variations within these limits;
- c) up to 95% relative humidity of the surrounding air;
- d) vibrations at support points not exceeding 3000 cycles per minute at an amplitude of  $\pm 0.5$  mm.

When not in operation, the converter can undergo short-time jolts at the support points, not exceeding 900 cycles per minute at an amplitude of  $\pm 3.5$  mm.

The plant guarantees reliable operation of the converter for 400 hours over a period of 2 1/2 years if factory instructions are followed.

The guarantee covers 3 1/2 years from date of shipment, including storage time in the NKO (People's Commissariat of Defense) warehouse.

Technical Data of RU-11A and RU-11B Converters

		RU-11A		RU-11B	
		low voltage	high voltage	low voltage	high voltage
Rated Data (Continuous Operation)	Power, w	--	11	--	11
	Voltage, v	26	232	12	212
	Current, amp	1.3	0.5	2.8	0.05
	Rpm	--	8500	--	8500
	Efficiency (%-mdn)	--	31.5	--	31.5
Brushes	Make	M-6	EQ-2	MG-6	EQ-2
	No of brushes	2	2	2	2
	Dimensions	4x5x12	4x5x12	4x5x12	4x5x12
Excitation winding	Resistance, $\Omega$	134-156		36-42	
Bearings		Ball bearings OST/VKS 6121 No 6			
Weight in kg, not over		1.25			

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Remarks: Rated voltage on the high voltage side of RU-11A converter with filter box, 220v;  
efficiency of converter with filter box, not less than 29.5%;  
weight of converter with filter box, not less than 3.75 kg;  
other technical data for converter with and without filter box are identical.

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