



Converter Regulator Unit for Aviation

The Model 2037 Converter Regulator Unit (CRU) converts aircraft AC power to regulated 37 VDC power for the Electrical Flight Control System (EFCS) of the SAAB JAS 39 "Gripen" Fighter Aircraft, from a three-phase, AC power generated by a Permanent Magnet Generator (PMG). The voltage and frequency of this PMG varies as a function of engine speed.

This lightweight CRU has been especially designed to fulfil exceptional reliability demands. To achieve a high MTBF the principle of "Magnetic Amplifier" has been chosen which was an extraordinary challenge for the engineering since weight was also a critical issue.

The unit meets all environmental requirements of common military standards for airborne equipment and is fully qualified in accordance with equipment specification based on MIL-STDs.

Since cooling is provided by thermal conduction via the ground plate (no fan), the CRU is absolutely maintenance-free. Based on our ILS-Department's extensive Know-how, we are able to offer complete ILS packages.



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For Military Aircraft

Standard Features

- Completely qualified
- Short-circuit protected
- No fans
- Low weight and size
- High reliability

Application

- Military aircraft

Support Service

- Complete Integrated Logistic Support (ILS)



Electrical Specifications

Input

Voltage..... 80 to 130 Vrms
 Frequency 2400 to 4000 Hz

Output

Voltage..... 37 VDC, ± 2 V
 Power..... 620 W continuously,
 1000 W peak (0.5 s)
 Overload..... Fully protected against shorts and
 overload with automatic recovery
 Efficiency..... ≥ 90% at max. load (100% PMG speed)

Environmental Specification

Temperature range -40°C to +80°C (operation)
 -55°C to +80°C (storage)
 Humidity..... 95% max.
 (MIL-STD 810 C, M 507.1, Pr. II)
 Shock..... 30 g/2.5 ms, 11 g/20 ms
 Bump..... 25 g/6 ms

Vibration..... Random, 10-2000 Hz/10 g
 Gun fire 10-2000 Hz/15 g
 Altitude 9 kPa continuously, 4.5 kPa for 5 min.
 EMC Acc. to MIL-STD 461B, CE03, CE07,
 RE02, RS02, RS03, RS08
 Protection..... IP 66 according to DIN 40050

Physical Characteristics

Dimensions..... Height 100 mm
 Width 145 mm
 Depth 184 mm
 Weight..... 2.975 kg
 Interface Military qualified connectors (MS)

Design Characteristics

MTBF..... > 130,000 h
 Qualification Fully qualified in accordance with
 equipment specification,
 based on MIL-STDs