The 20 kW Transformer Rectifier Unit (TRU) is designed to convert a 3-ph aircraft AC voltage of 200 VΔ-400 Hz into a voltage of 270 Vdc. The TRU consists state-of-the-art power conversion components and provides a galvanic isolation and was developed for a US defense program. All components are housed in an modular aluminium cabinet designed according to the general requirements of military aircraft.

For Military Aircraft & UAV

Standard Features
- Wide temperature range
- High efficiency > 95%
- Low weight and size
- RTCA DO 160G
- MIL-STD 704F
- Galvanic isolation

Application
- Military fixed & rotary wing

Support Service
- Complete integrated logistic support (ILS)

Key Features of the TRU:
- 24 pulse rectifier
- Input EMI suppression filter
- Front panel LED indicators & external monitoring interface connector
- Power / weight ratio:
  - > 605 W / kg
- High MTBF
- Passive components
### Electrical Specifications

**Input**
- Voltage: 200 Vac, 3-ph
- Frequency: 400 Hz, ± 8%
- Voltage spikes: Acc. to MIL-STD 704 F
- Frequency transients: Acc. to MIL-STD 704 F

**Output**
- Voltage: 270 Vdc
- Current: 75 A
- Ripple: < 6 Vrms at 20 kW load (without capacity load)
- Overload: 110 A for 2 min, 160 A for 10 sec
- Efficiency: > 95% at 100% load

**Monitoring**
- Temperature of the transformer and rectifier by PT100

**Environmental Specification**
- Temperature range: - 40°C to +71°C (operation), - 55°C to +85°C (storage)
- Humidity: < 95%
- Shock: 20 g/11 ms, crash 40 g/11 ms
- Vibration: Random, 15 g RMS
- Altitude: -500 up to +15,000 m
- EMC: Acc. to MIL-STD 461B, CE102 (> 150 kHz), CE106 CS101, 103-105, 114, 116, RE102, RE103, RE02
- Protection: IP 20 acc. to DIN 40050

**Physical Characteristics**
- Dimensions: Height 270 mm, Width 150 mm, Depth 400 mm
- Weight: 33 kg

**Design Characteristics**
- Power per weight/per volume: 605 W/kg
- Isolation resistance: > 100 MQ
- MTBF: > 100,000 (FH)

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**TRU 2062 Block Diagram**

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