

Transformer Rectifier Unit



3RC Range



The Transformer Rectifier Units (TRUs) provide a high quality output of 27.4 volts dc.

Built into steel enclosures for deck or bulkhead mounting, the TRUs are suitable for shock levels up to 30g. Above this suitable shock mounts can be used.

Ingress Protection level is to IP23, suitable for electrical compartments.

Louvres pressed inwards on the front and sides, with a grill on the bottom of the assembly provide for fan assisted cooling during normal operation, and natural convection when the Anti Condensation Heaters are operating.

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ELECTRICAL CHARACTERISTICS

Input

440 volts 3 phase 3 wire 60Hz in accordance with STANAG 1008 Edition 8

Input Rated Voltage 440V
Power Factor 0.85
Inrush Current <Inom

Anti Condensation Heater 230V/115V 50/60Hz

Output

27.4V DC nominal 26-32V adjustment available (internal)

Voltage Regulation <2%
Ripple and noise <200mV pk-pk
Voltage transients <20% (75% load step)
Voltage recovery time <100ms (75% load step)
Isolation > 10Mohm

Option: Earth isolation monitor

Option: 24V Output

Load

Output Power: 1, 2, 3, 4, 5, 10, 15kW

Efficiency >85%

Protection

Inputs fused, output current limited, over-voltage trip, over-temperature trip.

Local Controls and Indications.

Supply ON/OFF selector switch
Output Voltmeter
Output Ammeter
Supply available LED
ACH On LED
Output On LED
Fault LED

Remote Indications.

Fault, Output ON, and Alarm remote indication by means of volt free contacts.

Remote Sense

To compensate for output cable voltage drop.

MECHANICAL FEATURES

Enclosure

Fabricated mild steel folded and welded for strength. Deck/bulkhead mounted with lifting eyes.

Cable Entry

Top or bottom via gland plate.

Ingress Protection Rating

IP23

Cooling

Naturally cooled via louvers. Fan assisted by two speed fans.

Maintenance

Front maintenance - Hinged door for access.

Internal wiring

Low fire hazard cross linked polyolefin RADOX 125.

Earthing

M10 external earth stud.

ENVIRONMENTAL CHARACTERISTICS

Shock

Designed to meet the "minimum ruggedness" requirement of DGS 349, 30g in each of the three orthogonal directions when solidly mounted. For installed shock levels in excess of this shock mounts should be fitted.

Vibration.

Designed to meet the vibration requirements of DGS 350. (5 to 33Hz +/- 0.125mm)

Noise

< 60dbA @1m

Electromagnetic Compatibility

Designed to meet the requirements of Def Stan 59-41

Ambient Temperature

0°C to + 45°C

Relative Humidity

10% to 95% non-condensing

Ships Motion

The equipment is designed to withstand, without damage or degradation of performance or spillage of fluids, ship motion due to the action of the sea and weather as well as accelerations and velocities deriving from deliberate ship manoeuvres. Typically:

Roll angles	± 30°
Pitch angles	± 10°
Steady list angles	± 15°
Steady trim angles	± 5°



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