

## Transformer Rectifier Unit

**3RC5KA**



The Transformer Rectifier Unit type 3RC5kA provides a high quality output of 27.4 volts dc.

It is built into a custom built steel enclosure, 1160mm x 457mm x 500mm overall dimensions, which is designed for deck mounting with top steadies. The enclosure is suitable for direct mounting for shock levels up to 30g, above this suitable shock mounts can be used. Protection level is to IP23.

Access for maintenance and repair is from the front via a hinged door that opens to the left, it will open to 180° with a minimum maintenance opening requirement of 90°. The door contains panel meters, indicating lamps and the mains ON/OFF switch S1.

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 kVA	6.9kVA
Input Power	5.9kW
Input Rated Voltage	440V
Input Rated Current	13A/phase
Internal fuses rated at	20A
Power Factor	0.85
Inrush Current	<I <sub>nom</sub>

ACH 115V 50/60Hz

### Output

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

Voltage Regulation	<2%
Ripple and noise	<2V pk-pk
Voltage Ripple	<5% (0 to full load)
Voltage transients	<20% (75% load step)
Voltage recovery time	<100ms (75% load step)
Isolation	> 10Mohm

Option: Earth isolation monitor

### Load

Output Power: 5kW

**Wild heat** 1.25kW max

**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 mounted with top steadies. Lifting eyes.

### Dimensions

(O/A)(hwxwd) mm 1160 x 457 x 500

A clearance of at least 100 mm should be allowed around the unit to allow proper ventilation.

Fixings (mm)

4 holes 13.0mm dia. Centres 386(w) x 275(d) mm

2 holes 13.0mm dia. Centres 386(w) x 1127(h) mm

**Weight** 208kg

### Cable Entry

Bottom via gland plate. Aperture 250mm x 90mm

### 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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