

Firedoor Rectifier

CU11605



The Control Unit CU11605 is a control panel dedicated to Fire Door Control.

The 440V 3ø 60 Hz ship's supply feeds an integral Transformer Rectifier Unit which provides a high quality output of 120 volts dc at 10A. The Control Panel is operated from this 120V dc power source.

The Control Unit Unit is built into a custom built steel enclosure, 796mm x 480mm x 265mm 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 indicating lamps and the control switch.

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

Electrical connections to and from the CU11605 are made on rail mounted terminals inside via a cable access glands mounted on a gland plate that is situated on the bottom of the enclosure.

An M10 external earth stud is provided adjacent to the gland plate, on the bottom of the enclosure. Earth terminals are also provided on the terminal rail.

ELECTRICAL CHARACTERISTICS

Input

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

Input kVA 1.8kVA
Input Power 1.5kW
Input Rated Voltage 440V
Input Rated Current 3A/phase
Circuit Breaker protected 16A.
Power Factor 0.85
Inrush Current <Inom

ACH 115V 50/60Hz

Output

120V DC nominal

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

Load

Output Power: 1.2kW

Wild heat kW max

Efficiency >80%

Protection

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

Local Controls and Indications.

Rectifier ON-OFF switch
Doors Retained/Released
Doors Retained
Doors Released
Supply Available

Remote Operation

Doors Retained/Released

Remote Indications

Doors Released/Retained Volt free Changeover contacts
Rectifier Failure: N/O contacts.

Output Distribution

MECHANICAL FEATURES

Enclosure

Fabricated mild steel folded and welded for strength. Deck mounted with top steadies. Lifting eyes.

Dimensions

(O/A)(h)x(w)x(d) mm 796 x 480 x 265

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 420(w) x 150(d) mm
2 holes 13.0mm dia. Centres 410(w) x 775(h) mm

Weight 60kg

Cable Entry

Bottom via gland plate. Aperture 260mm x 85mm

Ingress Protection Rating

IP23

Cooling

Naturally cooled via louvers

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°

