

# Power Distribution Cabinet

Cannon



## Introduction

This guidance document has been produced to alert customers, end users and installers of the standards that must be achieved for the Power Lock range. This guidance document is supported by:

- Technical reports
- FMEA (failure modes and effects analysis)
- Design drawings
- Detailed test lab results
- Health and safety risk assessments.

This document forms part of the overall technical construction file for the range, which has been constructed to support the company's certification for **CE marking**.

The Powerlock Power Distribution Cabinet has been designed and tested to conform to the requirements for CE marking by implementing the requirements of the Low Voltage Directive (LVD) 73/23/EEC which is implemented as the Electrical Equipment (Safety) Regulations 1994.

The document seeks to give all reasonable information to third parties, as required by section 6 of the Health and Safety at Work etc Act 1974, with regard to suppliers and manufacturers information.

It must be remembered that this document does not attempt to dictate absolute standards, for installation, and does not contain any technical information that a suitably trained and competent electrical installation/maintenance engineer would reasonably be expected to know.

To enhance the level of information made available for this product, this document along with all relevant information on the Power Lock range can be viewed on the ITT Industries website: [www.ittcannon.com](http://www.ittcannon.com)



# Power Distribution Cabinet

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## Dimensions & Testing

### Dimensions

The power distribution cabinet is constructed of 2mm stainless steel, which has been powder coated with a polyester finish. The dimensions of the cabinet are:

1.050m (Height) x (0.54m (Width)  
x 0.46m (Depth)

Maximum system weight: 100 Kg

As detailed, the cabinet is fitted with external access and blanking panels, which are designed to aid in the routing of cables both into and out of the cabinet. These panels are secured in place with M6 fasteners. The top and side panels are also fitted with sealing gaskets (10mm grey sponge seal).

### Testing

The cabinet has been subject to suitable laboratory testing and conforms to I.P. (International Protection) **IP34D**.

It is therefore recommended that the end user/installer conducts a risk assessment, which should include the geographical placing of the cabinet.

### Notes to Installer:

**Due to the I.P rating of the cabinet, this equipment must not be used, in a potentially flammable or explosive atmosphere, or in the vicinity of areas designated for the storage of flammable or explosive substances.**

**Care should be taken when in contact with components behind the internal access panels as they may be hot.**

**Further technical information is available upon request. Or can be found at [www.ittcannon.com](http://www.ittcannon.com)**



# Power Distribution Cabinet

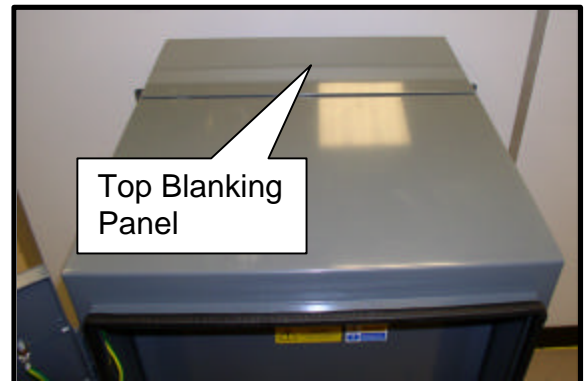
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## Access and Blanking Panels

### **Access Panels (Sealed)**

Access panels are fitted to either side of the cabinet. They enable the installer to gain access to the rear of the NRG unit when terminating the cables onto the threaded terminal posts. These panels are secured from inside the cabinet to prevent access to live parts.

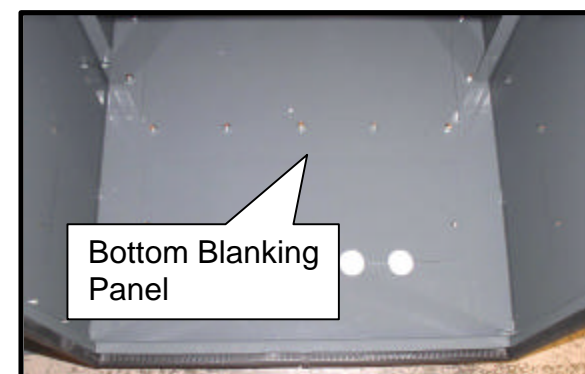
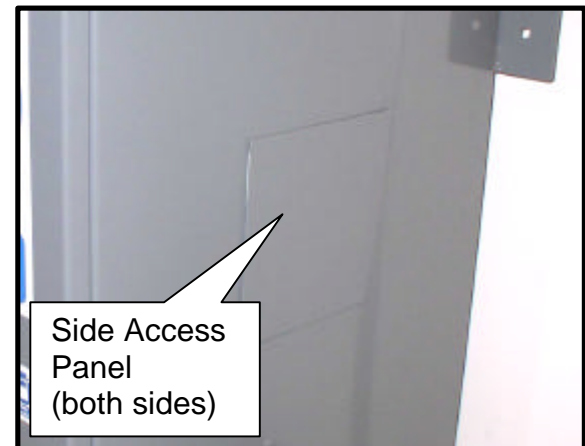


### **Blanking Panels (Sealed)**

Depending on the type of unit supplied, either the upper or lower blanking panels need to be modified by producing holes in them, to enable the cables to be routed through.

The diameter of the 5 holes will depend on the cable type used but the pitch is 77mm. Suitable cable glands should be used to maintain the IP 34D rating of the cabinet.

These panels are secured from inside the cabinet.



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## Cable Entry Blanking Panels

These panels are situated in the bottom of the cabinet. They are fitted around the cables from the generator to prevent access inside the cabinet during use and in the standby condition. The type of panel to fit depends on the type of unit supplied (1 or 2 NRG units).

### Supplied / Standby Condition

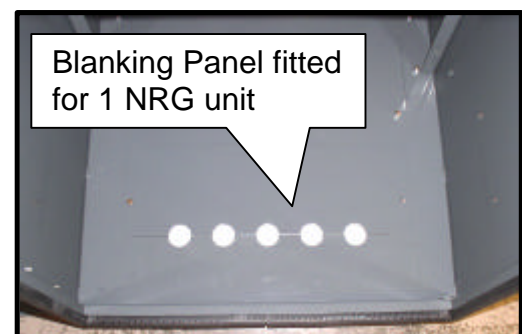
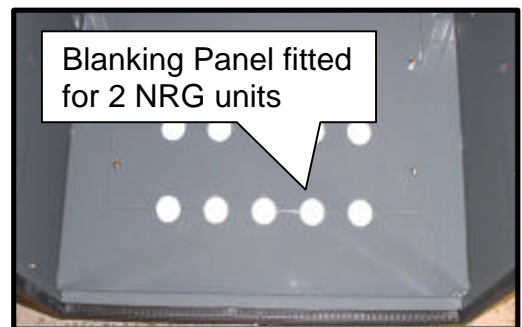
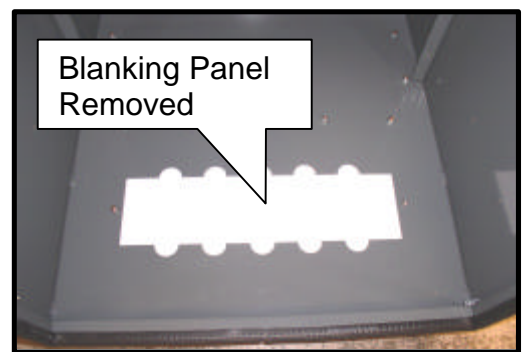
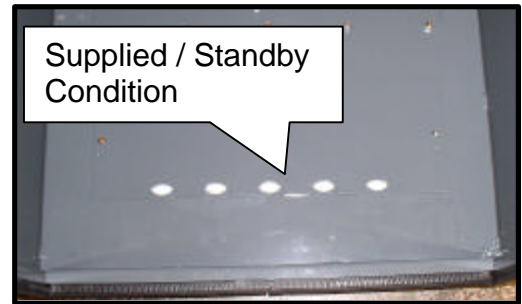
Both blanking panels are fitted on top of each other (as shown) leaving small apertures for ventilation.

### Fitting Operation

The cabinet can be supplied fitted with either 1 or 2 NRG units. This dictates which blanking panel should be used.

Both panels should be removed and then the required panel refitted after the generator cables have been connected.

After use, both panels should be refitted recreating the standby condition.



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## Internal Access Panels & NRG Blanking Plate

### Internal Access Panel

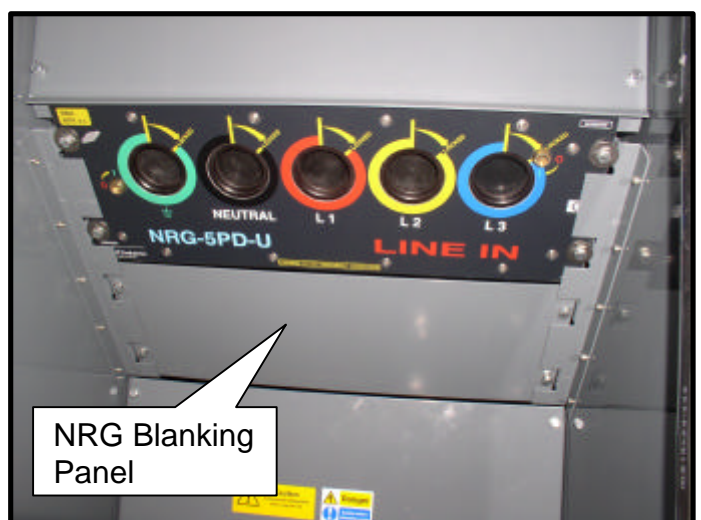
The internal access panels provide protection against unintentional contact with potentially live cable connections and busbars. The panels are constructed of 2mm stainless steel, which has been powder coated with a polyester finish. The panels are secured to in position with M6 fixings. The panels have been designed as a physical guard when fitted and as such must only be removed by a suitably trained and competent electrical installation or maintenance person.

### NRG Blanking Panel

The NRG blanking panel (as shown) is designed for distribution cabinets with one NRG unit. This panel must not be removed when only one NRG unit is installed within the cabinet.

### Safety Notes To Installer:

Due to the nature of the electrical hazard, it is vital that all electrical sources are effectively isolated prior to removal of these access panels. Once all cables have been fitted, the access panels must be replaced and secured prior to the provision of electrical current.



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Dimensions are shown: mm (inch)  
Specifications and dimensions subject to change

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## Signage

The cabinet is fitted with generic safety signs. These signs give warning of the potential electrical hazard, together with mandatory signs regarding cabinet security and isolation. It should be remembered that these signs are supplied as a standard, and as such, the end user may need to compliment these signs with additional signs to suit the specific application. All signs supplied conform to the current requirements of the Health and Safety (Safety Signs and Signals) Regulations.

An information plate is attached to the side of the cabinet for traceability.



## External Features

### **Information Plate**

This plate shows details of the cabinet and the works order and manufacture date.

### **Fixing Plate**

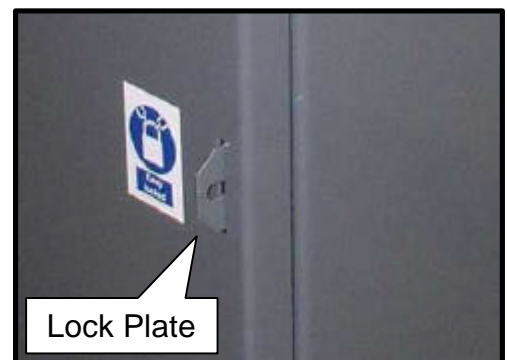
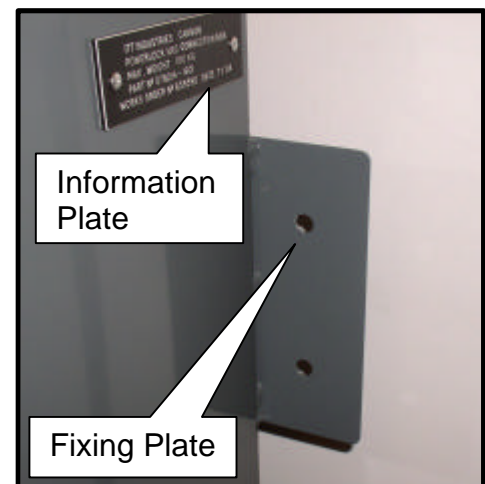
The cabinet must be fixed securely prior to electrical operation. Fixing plates are provided on either side of the rear face of the cabinet, with two 13mm holes on each plate suitable for M12 fasteners.

### **Lock Plate**

A lock plate is fitted to the cabinet to enable a padlock (up to 6mm) to be fitted for security.

### **Door Locks**

2 door locks are provided for securing the door. The locks require a triangular type key which is provided with the cabinet. These must be locked to maintain IP34 protection.

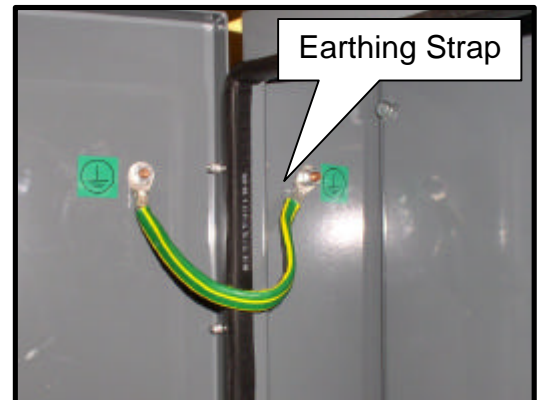


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## Equipotential Bonding

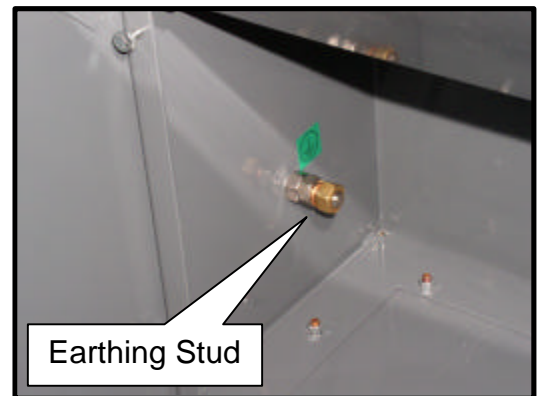
### **Door Earth-Bonding Strap**

The door-earthing strap is attached to the door and the cabinet body by a 6mm earth strap with M6 fixings. It is essential that these fixings remain in place and are regularly inspected to ensure an effective earth bond between the door and the main body of the cabinet.



### **Cabinet Earth-Bonding Stud**

An earth-bonding stud is provided for equipotential connection and is situated internally behind the lower access panel. A hole in the cabinet should be produced to suit the size of earth cable used.



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## NRG Unit

During installation, the cables can be connected to the NRG unit either directly onto the threaded posts on the back of the NRG unit or onto busbars.

The M12 nuts on the threaded posts should be tightened to 32 Nm.

The access panels should be removed to provide access to the NRG unit for cable termination.

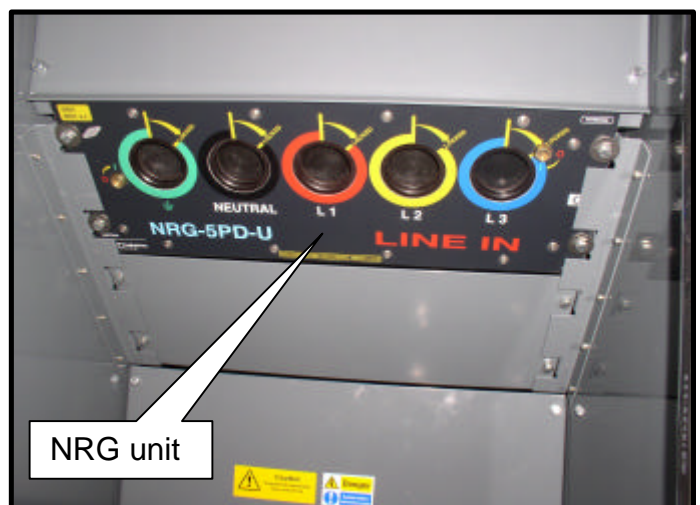
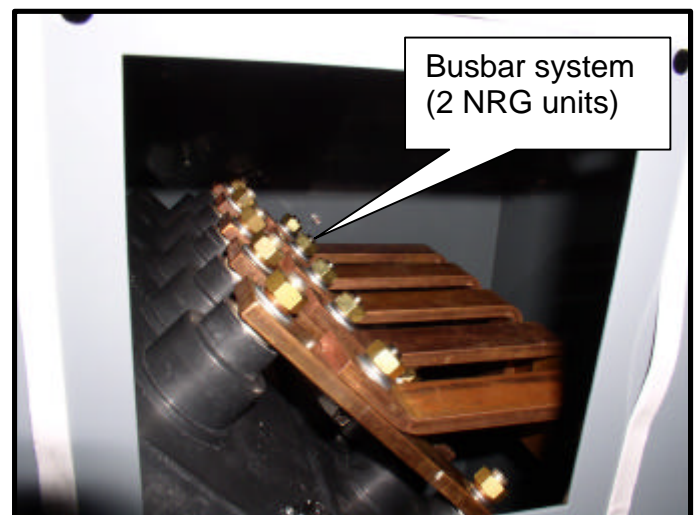
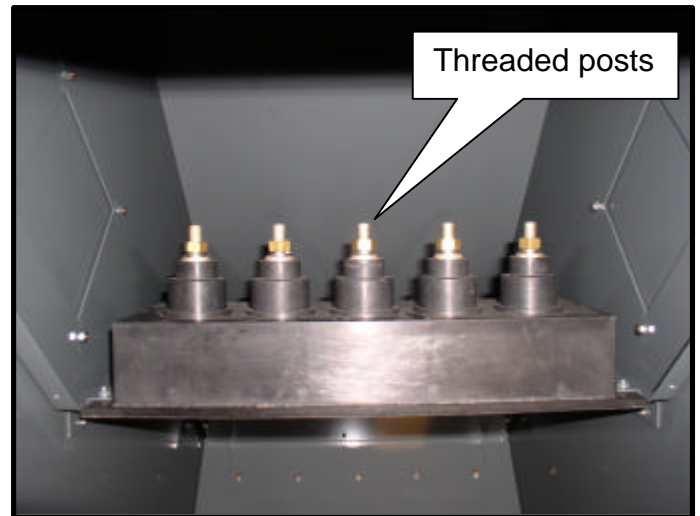
A data sheet for the particular NRG unit fitted in the cabinet is placed inside the cabinet.

The busbar arrangement depends on the type of cabinet supplied. They should be removed, cleaned and refitted during installation, using the correct tightening torque, to ensure a suitable joint.

## Contact Details

If any assistance is required, please contact;

UK	44.1256.311200
Germany	49.7151.699.0
Italy	39.2.93532.1
USA	1.860.274.9681



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