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	ENGINEERING PRODUCT SPECIFICATION	Issue: 1
Specification Number: CS 7727	Product Number: 078214-XXXX	Product Description: Powerlock NRG Cabinet Assembly



Powerlock NRG Cabinet Assembly

Part No. 078214-XXXX



DCN NUMBER		K7727						
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1.0 General

1.1 Description

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.

It complies with the following specifications;
 BS EN 60439-1:1999, BS EN 60439-5:1996 and IEC 60529:1992

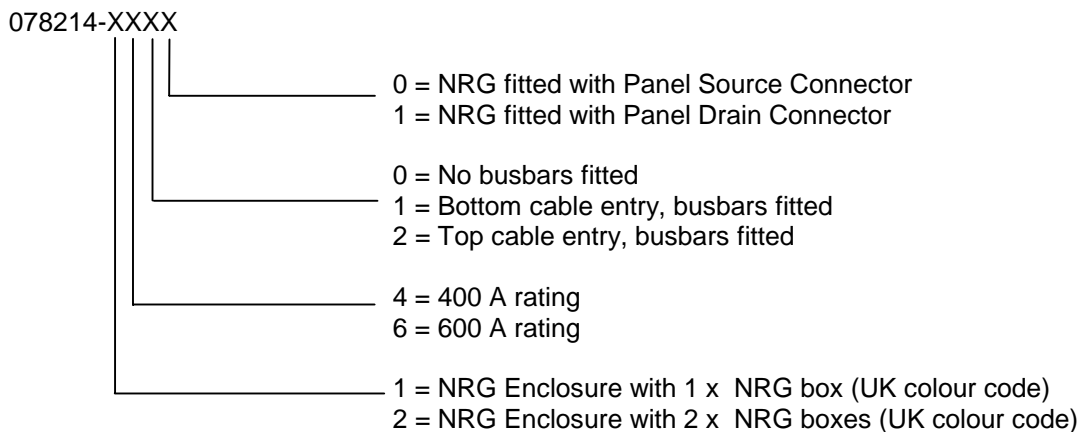
The cabinet is fitted with either 1 or 2 NRG sequential units rated at 400A or 600A. These units allow safe connection, in the correct sequence, of Powerlock connectors (ground, neutral, phase 1, phase 2, phase 3). The unit incorporates a key lockable switch, which can be connected to auxiliary safety circuits. Once locked, it prevents un-mating of the system by unauthorized personnel.



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.

An information plate is fitted onto the side of the cabinet incorporating data for traceability.
 The cabinet door incorporates 2 door locks (triangular key type) for security. When latched, the cabinet has an IP34D environmental rating. For additional security, a padlock can also be fitted.
 Fixing plates are provided to enable the unit to be securely fixed during installation, prior to electrical operation.

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. All signs supplied conform to the current requirements of the Health and Safety (Safety Signs and Signals) Regulations.

1.2 Part Number Structure



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1.3 Materials and Finishes

- 1.3.1 Cabinet
Material - Stainless Steel (grade 304) 2mm thk construction.
Finish - Powder coated with a polyester finish, colour Admiralty Grey, Full Gloss, Smooth, ML653X.
Labels - Vinyl, self adhesive.
- 1.3.2 NRG Unit
Casing - Thermoplastic case UL94 V0.
Gaskets - Chloroprene Rubber.
Contacts - Copper Alloy, Silver Plated.
- 1.3.3 Busbars - Copper bar, commercial grade (stock condition).



1.4 Physical Data

- 1.4.1 Dimensions
Overall cabinet size: 1.050m (Height) x (0.54m (Width) x 0.46m (Depth).
For cabinet outline dimensions see page 5.
All dimensions are in mm.
- 1.4.2 Weight
Rated mass is 100 kg in as supplied condition.

2.0 Ratings

2.1 Electrical

- 2.1.1 Cabinet
Current Rating:
1 x 400A NRG unit: 400 A.
2 x 400A NRG units: 800 A.
1 x 600A NRG unit: 600 A.
2 x 600A NRG units: 1200 A.
Temperature Rise: Within limits of table 2 of IEC 60439-1.
Electric Shock Protection: IP2X (standby condition).
IP23C (when Powerlock connectors are fitted).
- 2.1.2 NRG Unit
Current Rating:
400A NRG unit: 400 A.
600A NRG unit: 600 A.
Rated Voltage: 2KV ac / 3KV dc.
Dielectric Strength: 9.5KV dc.
Insulation Resistance: >5M Ohms at 500V DC.
Operating Temperature: -30°C to +125°C.
- 2.1.3 Busbar Data
400A Rating: 40 x 10mm CSA.
600A Rating: 60mm x 10mm CSA.

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2.2 Mechanical

- 2.2.1 Cabinet
Resistance to Static Load: 8500N/m² for 5 minutes to requirements of IEC 60439-5.
Impact Withstand Force: 2kg pendulum test to requirements of IEC 60439-5.
Mechanical Strength of Doors: 5kg and 45.45kg test to requirements of IEC 60439-5.
Resistance to Mechanical Shock By Sharp Objects: 5kg pendulum test to requirements of IEC 60439-5.
Environmental IP Rating: IP34D.
Dry Heat Test: 100°C for 5 hours to requirements of IEC 60439-5.
Verification of Corrosion and Ageing Resistance: Cabinet base material is Stainless Steel.
- 2.2.2 NRG Unit (when mated to Powerlock Connectors)
Environmental IP Rating: IP65.

3.0 Packing

- 3.1 Supplied on a euro size flat pallet.

4.0 Specification References

- 4.1 The enclosure is defined as a Cable Distribution Cabinet in accordance with IEC 60439-5:1996. The following sections of the specifications are referenced.
- 4.1.1 Temperature Rise
Reference clause 7.3 of IEC 60439-1. Limits defined by Table 2 of IEC 60439-1.
- 4.1.2 Protection against Electrical Shock
Reference clause 7.4.2.2 of IEC 60439-1.
- 4.1.3 Resistance to Static Load
Reference clause 8.2.9.1.1 of IEC 60439-5. Test 1.
- 4.1.4 Impact Withstand Force
Reference clause 8.2.9.2 of IEC 60439-5. Test 1.
- 4.1.5 Mechanical Strength of Doors
Reference clause 8.2.9.3 of IEC 60439-5.
- 4.1.6 Resistance to Mechanical Shock By Sharp Objects
Reference clause 8.2.9.5 of IEC 60439-5. Test 1.
- 4.1.7 Enclosure and Degree of Protection
Reference clause 7.2 of IEC 60439-5. Level IP34D.
- 4.1.8 Dry Heat Test
Reference clause 8.2.10.3 of IEC 60439-5.
- 4.1.9 Verification of Corrosion and Ageing Resistance
Reference clause 8.2.11.3 of IEC 60439-5.

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5.0 Safety Information

5.1 Usage Limitations

Due to the IP 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.

5.2 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 the access panels. Once all cables have been fitted, the access panels must be replaced and secured prior to the provision of electrical current.

Care should be taken when in contact with components behind the internal access panels, as they may be hot for some time after electrical loading.

5.3 Further technical information is available upon request or can be found at www.ittcannon.com

6.0 Outline Drawing

