



RECOGNISED AS LEADERS IN
STANDBY POWER SOLUTIONS

Black Start Controller



A robust and simple microprocessor based controller
designed to allow automated isolation and reconnection of
DC supplies in substation environments



AC Emergency Lighting
Central Battery Systems (Inverters)

DC Emergency Lighting
Central Battery Systems

AC Uninterruptible Power Supply
(UPS) Inverter Systems

Constant Voltage Chargers

Telecommunications Battery
& Charger Systems

Standby Power Systems

Self-contained Emergency
Lighting Fittings

Installation, Commissioning,
Service and Maintenance.

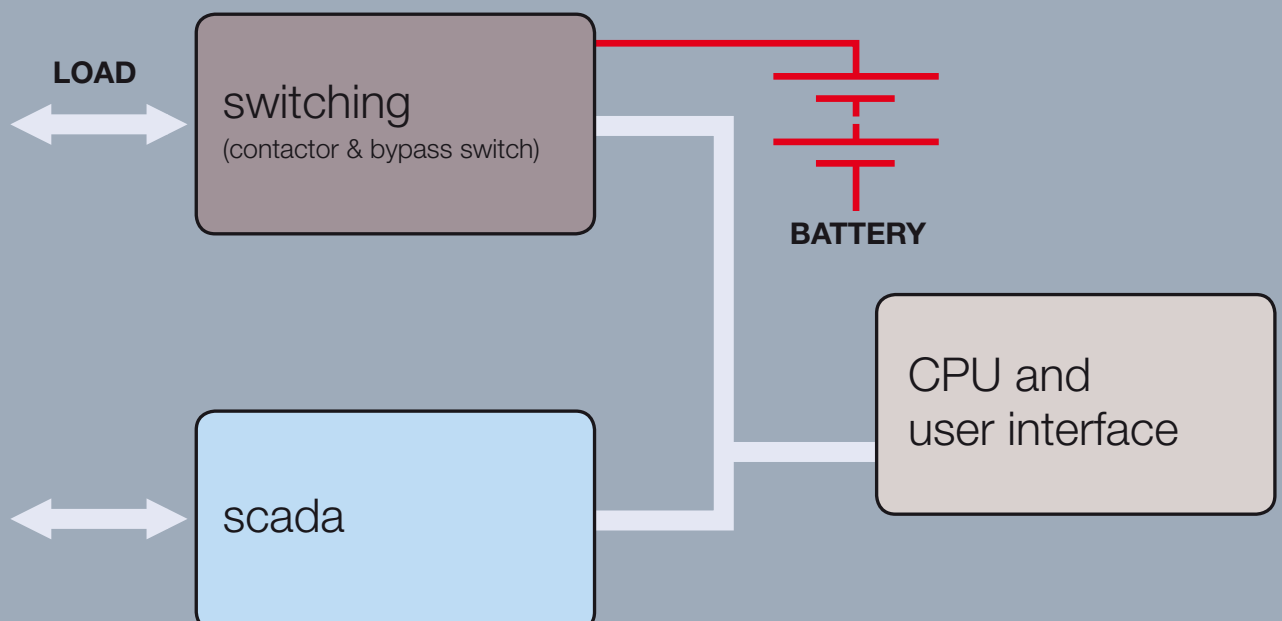
Main Functions

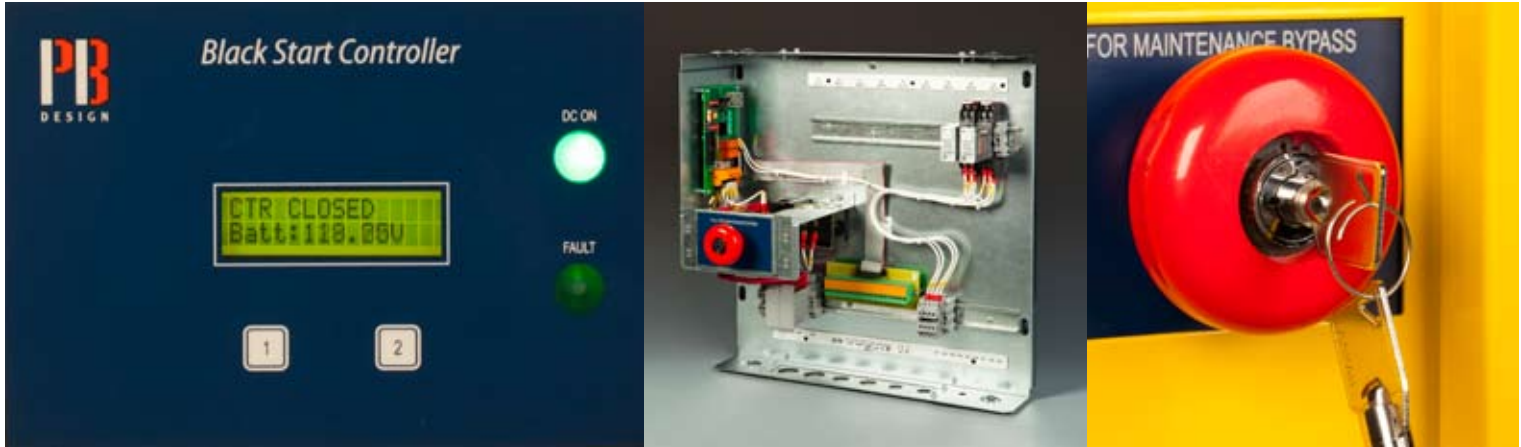
- Disconnects the battery to protect from prolonged discharge that might prevent safe substation operation
- Provides local Indication of DC system status
- Reconnects the battery upon supply return
- Allows timely & orderly start-up following a supply failure
- Allows monitoring of the battery and controller by the SCADA system
- Allows local manual control
- Options of retrofit (add on) or incorporated within new chargers

Being microprocessor based it also allows:

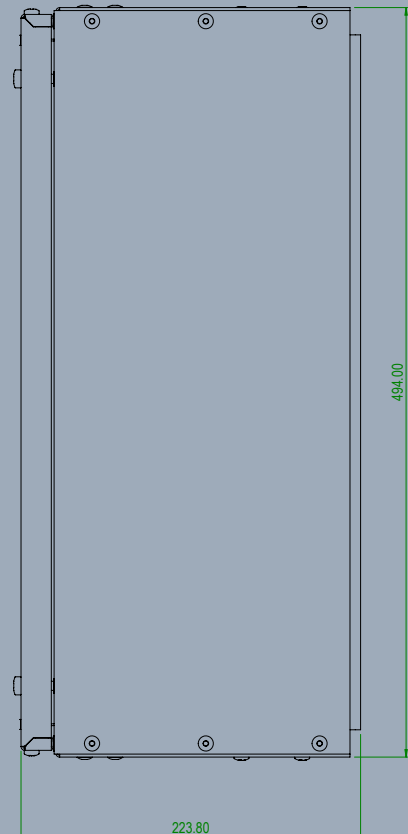
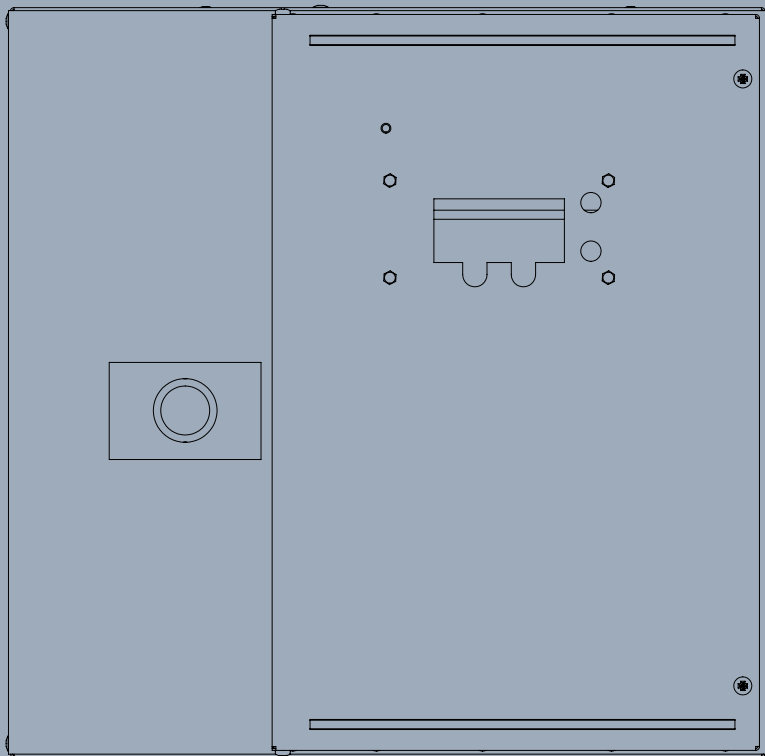
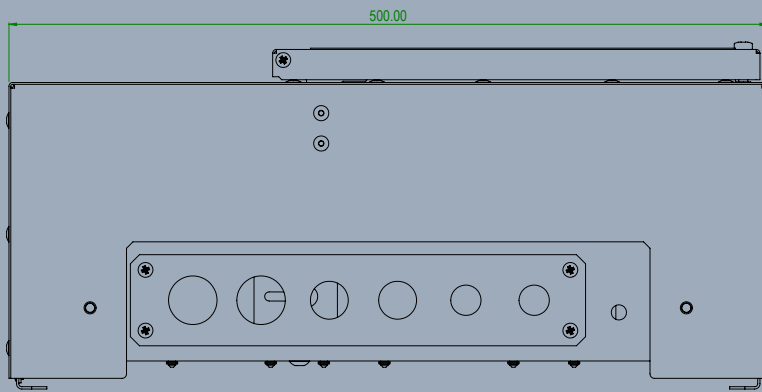
- Self checking
- History log recording
- Custom messages
- Custom Language

Basic Blackstart Configuration





Dimensional Drawings



Standard Specification

Input Voltage

24/30/48/110v +/- 25% DC

Rated Current

Up to 200A

Standards Approvals

NGTS 3.24.15
EN 55022 Class A
EN 61000
EN 60255-5

SCADA Interface

Opto isolated inputs for:

Remote Trip
Remote Close
Supply Fail

Volt free Indication contact:

Closed main contact
Open main contact

Volt free alarm contact:

Bypass
Disconnect in progress
Alarm

4-20mA analogue:

Battery voltage (offset zero)

Consumption

7W approximately depending upon indications and relay status (all relays are fail safe)

Component Rating

All components are designed and rated for continuous operation with life expectancy typically 35 years(not including memory battery).

Cooling

Air natural convection

Temperature Range

Operating: -10°C to 35°C

Storage/transportation:

-20°C to 65°C

(NB: Higher operational temperatures are possible. Refer to manufacturer for details).

Instrumentation

Single 16 character backlit LCD with soft keys

Indicators & Alarms

FUNCTIONS LED COLOUR

DC on	Green
Fault	Red

Fuses

Electronics protection fuse for main DC supply to monitoring.

Termination

M8 stud terminals for the main switched DC.
Disconnection terminals for all control signals
Bottom mounted connections

Optional Extras

Voltage monitoring relays for individual circuit monitoring up to a maximum of 9 circuits (110v VT supplies)

Cubicles

Fabricated from minimum 1.2mm thick zinc coated mild sheet steel of folded construction to provide maximum strength and rigidity.

Paint Finish

Standard Finish is powder coat traffic yellow shade 381c631 semi gloss to BS4800, other finishes are available upon request at extra cost.

Cubicle Access

Wall mounting – via removable covers and left hand hinged lockable doors.

Cable Access

Cable gland plates in both top and bottom.

Cubicle Ingress Protection

To EN60529: IP32 code.

CUBICLE SIZE	BS
HEIGHT (mm)	494
WIDTH (mm)	500
DEPTH (mm)	223.80

Additional Products

Details are also available on the following range of products & services.

AC Emergency Lighting Central Battery Systems (Inverters) | DC Emergency Lighting Central Battery Systems | AC Uninterruptible Power Supply (UPS) Inverter Systems | Constant Voltage Chargers | Telecommunications Battery & Charger Systems | Standby Power Systems | Self-contained Emergency Lighting Fittings | Installation, Commissioning, Service and Maintenance.

This publication is issued for guidance and to provide outline information only and is not deemed to form part of any offer or contract. Our policy is one of continued improvement and we reserve the right to vary details without prior notice.



PB Design & Developments Ltd
Units 9/10, Hither Green Industrial Estate
Clevedon, Bristol BS21 6XT
Tel: +44 (0)1275 874411 Fax: +44 (0)1275 874428
email: sales@pbdesign.co.uk www.pbdesign.co.uk