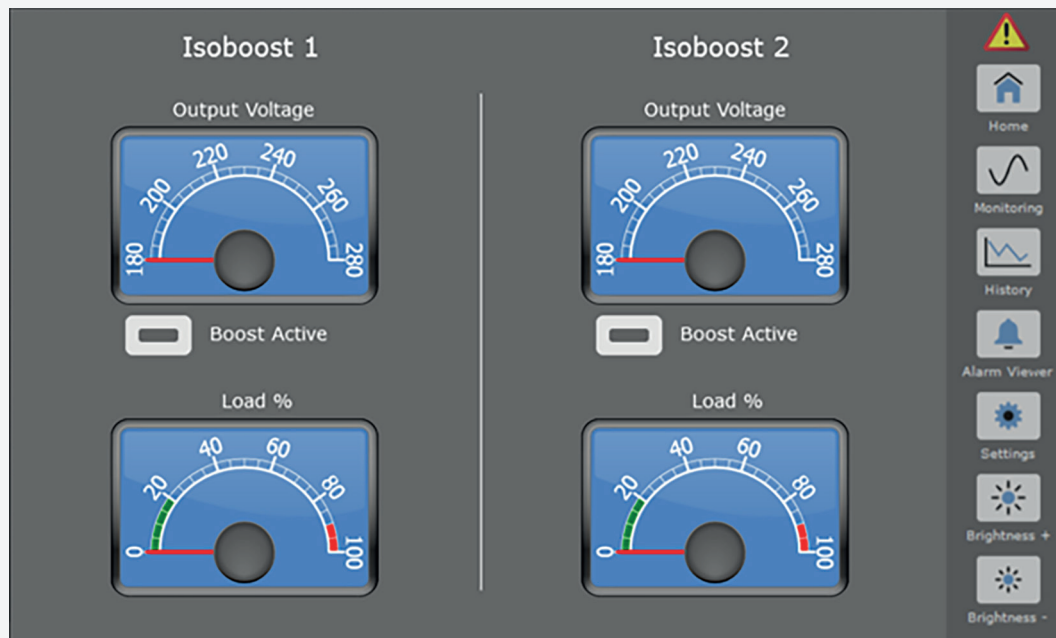


ES IsoBoost Remote Display Manual



Marine IsoBoost Transformers



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INTRODUCTION

Dear Customer,

Thank you for purchasing an Energy Solutions IsoBoost transformer Remote Display.

Energy Solutions designs and builds products to strict specifications and quality control procedures and with proper use and maintenance this product should bring you years of satisfactory service.

We want to help you get the best results from this product and ask that you spend a small amount of time reading this manual.

All information in this manual is based on the latest product information at the time of printing. Energy Solutions reserves the right to make changes at any time without obligation.

All pictures in this manual are for reference purposes only.

This manual should stay with the unit at all times.

SAFETY NOTICES

Important Information

Operator Manual

WARNING



You and others can be killed or seriously injured if you operate or maintain the unit without first studying the Owner's Manual. You must understand and follow the instructions in the Owner's Manual. If you do not understand anything, ask your supplier or Energy Solutions to explain it.

Do not operate the unit without an Owner Manual, or if there is anything on the unit you do not understand. Treat the Owner's Manual as part of the unit. Keep it clean and in good condition. Replace the Owner's Manual immediately if it is lost, damaged or becomes unreadable.

Safety Warnings

This safety alert system identifies important safety messages in this manual. When you see this symbol, be alert, your safety is involved, carefully read the message that follows, and inform other operators.

In this publication and on the machine, there are safety notices. Each notice starts with a signal word. The signal word meanings are given below.

DANGER

Denotes an extreme hazard exists. If proper precautions are not taken, it is highly probable that the operator (or others) could be killed or seriously injured.

WARNING

Denotes a hazard exists. If proper precautions are not taken, the operator (or others) could be killed or seriously injured.

CAUTION

Denotes a reminder of safety practices. Failure to follow these safety practices could result in injury to the operator (or others) and possible damage to the IsoBoost .

ABOUT THIS MANUAL

MODEL AND SERIAL NUMBER

This manual provides information for the following model:

IsoBoost Remote Display.

The serial number can be found on the unit.

USING THIS MANUAL

This manual is arranged to give you a good understanding of the unit and its safe operation. It also contains maintenance information and specification data. Read this manual from front to back before using the unit for the first time. Particular attention must be given to all the safety aspects of operating and maintaining the unit.

If there is anything you are not sure about, ask your supplier.

General warnings in this chapter are repeated throughout the manual, as well as specific warnings.

The illustrations in this manual are for guidance only. Where the units differ, the text and or the illustration will specify.

All optional equipment included in this manual may not be available in all territories.

GENERAL SAFETY

The following safety checklist is intended to help remind you of safety procedures and practices.

SAFETY IS YOUR RESPONSIBILITY

You must also refer to local regulations in the country your equipment is being used in. Some of the information may be repeated in the following warnings and cautions pages and in the main text.

- Do not change the application or specification of the IsoBoost .
- Do not lift heavy objects on your own, use lifting equipment or obtain the help of an assistant.
- Use the right tools for the job.
- Always make the unit is safe before completing any maintenance tasks.

CAUTION

Injury may occur when lifting. Do not lift heavy objects on your own. Use lifting equipment or the help of an assistant.

OPERATING SAFETY

WARNING

Product Condition

A defective product can injure you or others. Do not operate an IsoBoost which is defective or has missing parts. Make sure the maintenance procedures in this manual are completed before using the IsoBoost.

WARNING

Product Limits

Operating the product beyond its design limits can damage the IsoBoost, it can also be dangerous. Do not operate the IsoBoost outside its limits.

MAINTENANCE REPAIRS

WARNING

If your IsoBoost does not function correctly in any way, get it repaired straight away. Neglect of necessary repairs could cause further damage or make the unit unsafe. Do not try to do repairs or any other type of maintenance work you do not understand. To avoid injury and/or damage get the work done by a specialist engineer.

MODIFICATIONS

⚠ WARNING

This unit is manufactured in compliance with legislative and other requirements. It should not be altered in any way which could affect or invalidate any of these requirements. For advice consult Energy Solutions.

CLEANING

⚠ CAUTION

Fully isolate the supply of power to the unit before cleaning. Clean the outside of the unit with a damp cloth. Do not spray water into the vents.

⚠ CAUTION

Do not drop or shock the unit. Severe internal damage may occur. Do not use the unit if it has been dropped, even if it appears to be undamaged.

PRODUCT FEATURES

The ES IsoBoost remote display allows the user access to key information and warning/alarm conditions from up to 2 IsoBoost transformers from a conveniently placed location.

SETUP AND CONNECTIONS

INSTALLATION

PLACEMENT

The remote display should be panel mounted, details below. It can be used outside – the rating from the front is IP65, NEMA 4X/ 12 and UL Type 4X/ 12. The rating from the back of the screen is IP20. The supplied DC-DC converter is not waterproof and must be mounted in a dry location.

The remote display requires a 24v DC supply @ 9.6W. A DC-DC converter and 2 metre cable is supplied with the package. The DC-DC converter will need to be installed in a suitable location close to the remote display. A 24V nominal supply is needed, protected by a 5A (max) fuse or circuit breaker. The DC-DC converter ensures that the remote display always receives a stable 24V supply. Make sure that relevant wiring regulations are followed.

The supply to the screen should normally come from a domestic switched supply. As soon as power is supplied, the remote display will start up. There is no power switch on the unit. Communication with the isolation transformer(s) happens automatically if they are powered up.

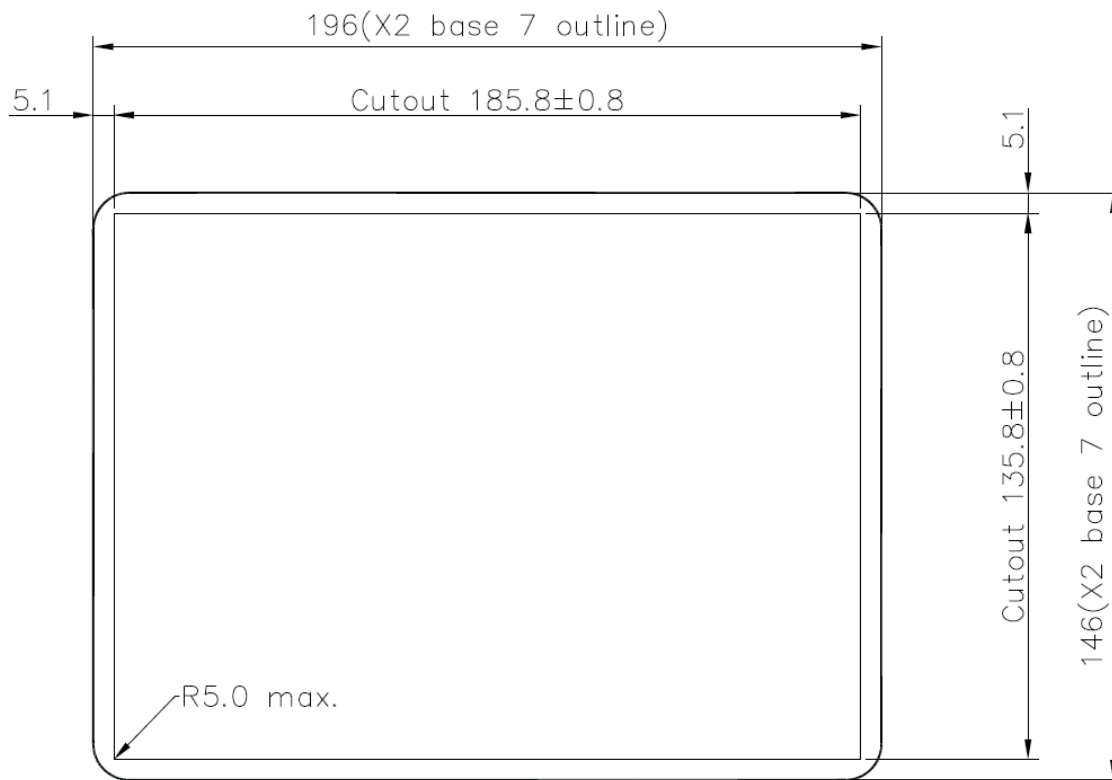
Communication to the IsoBoost transformer(s) is over RS485 using the supplied 25 metre cable. This cable will need to be routed through the vessel, and it should be kept away from high power DC or AC cabling. It can be extended if required but that must be with suitable shielded twisted pair, 120 ohm cable.

Communication can only happen correctly between the remote display and the connected transformer(s) if they are set to the right communication address. Contact your dealer if this has not been done.

PANEL CUT OUT DETAIL

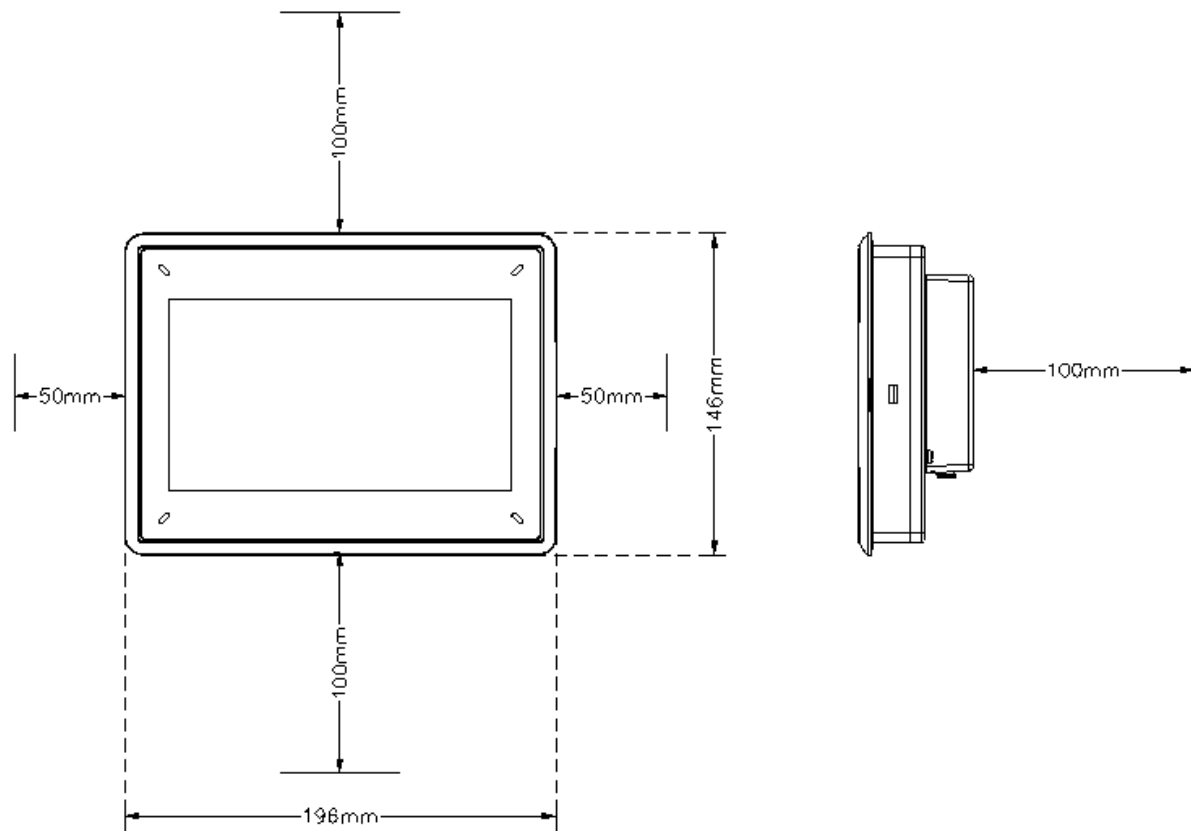
Dimensions in millimetres

Maximum installation plate thickness: 6.5mm



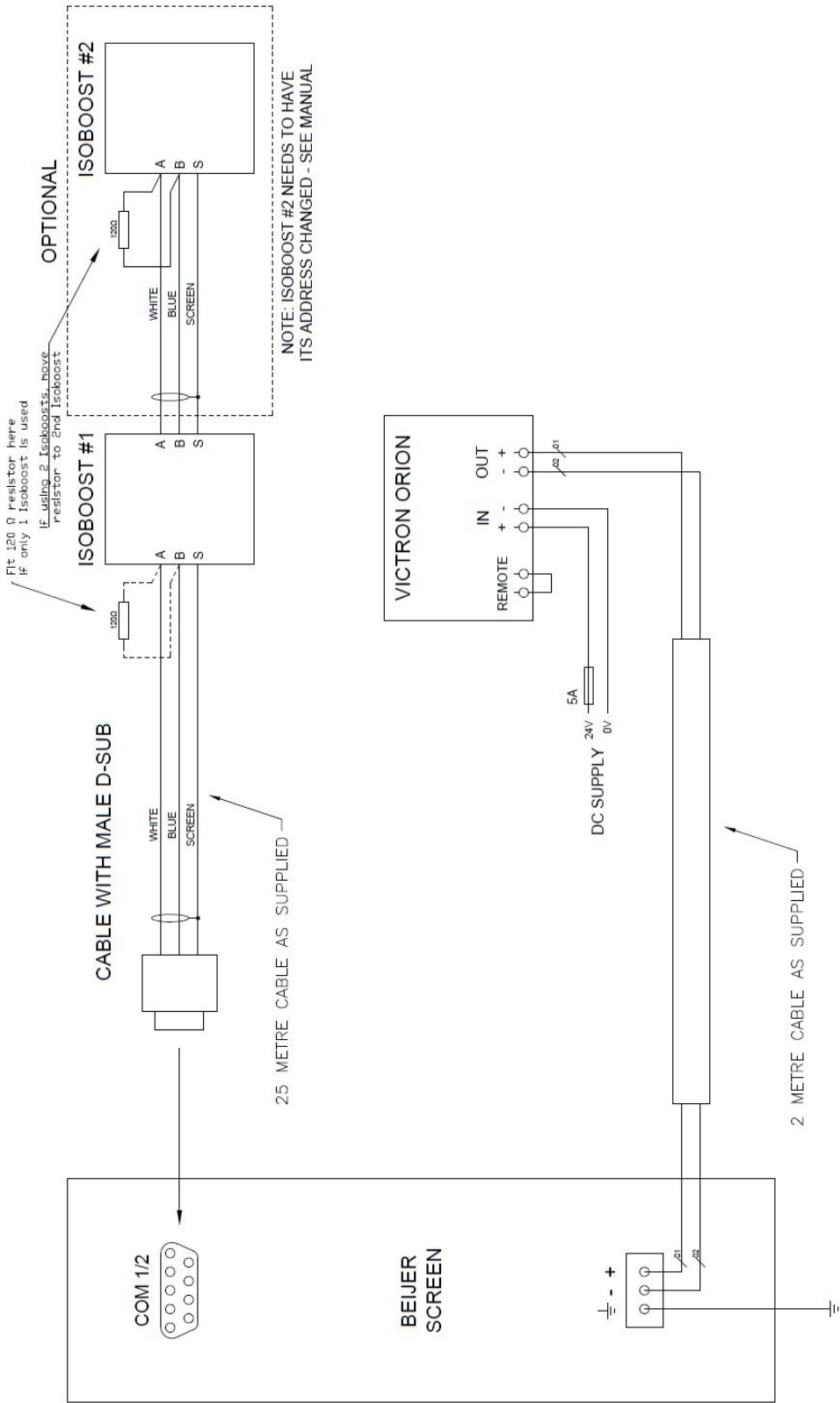
SPACE REQUIREMENTS

Space requirements in millimetres when installing the remote display.



CUSTOMER CONNECTIONS

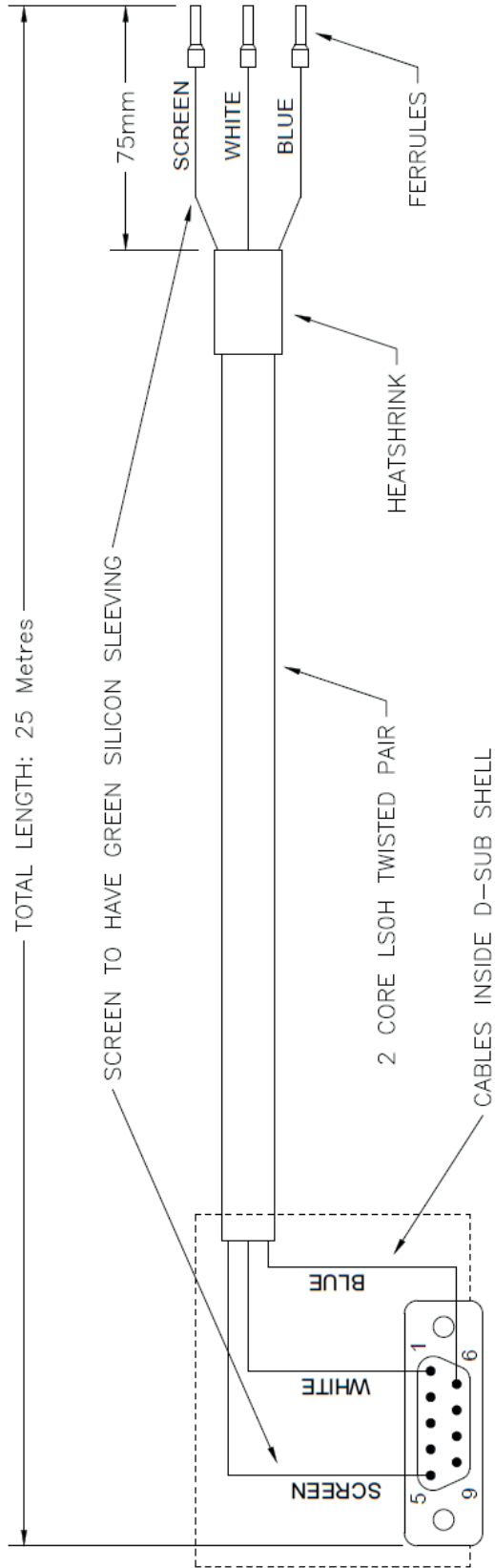
CUSTOMER CONNECTIONS



SUPPLIED COMMUNICATION CABLE

A 25 metre 2 core screened cable wired to a 9-way male D Type connector is supplied with the remote display package. This cable can be shortened if necessary.

Should the cable need to be replaced or extended the details are below.

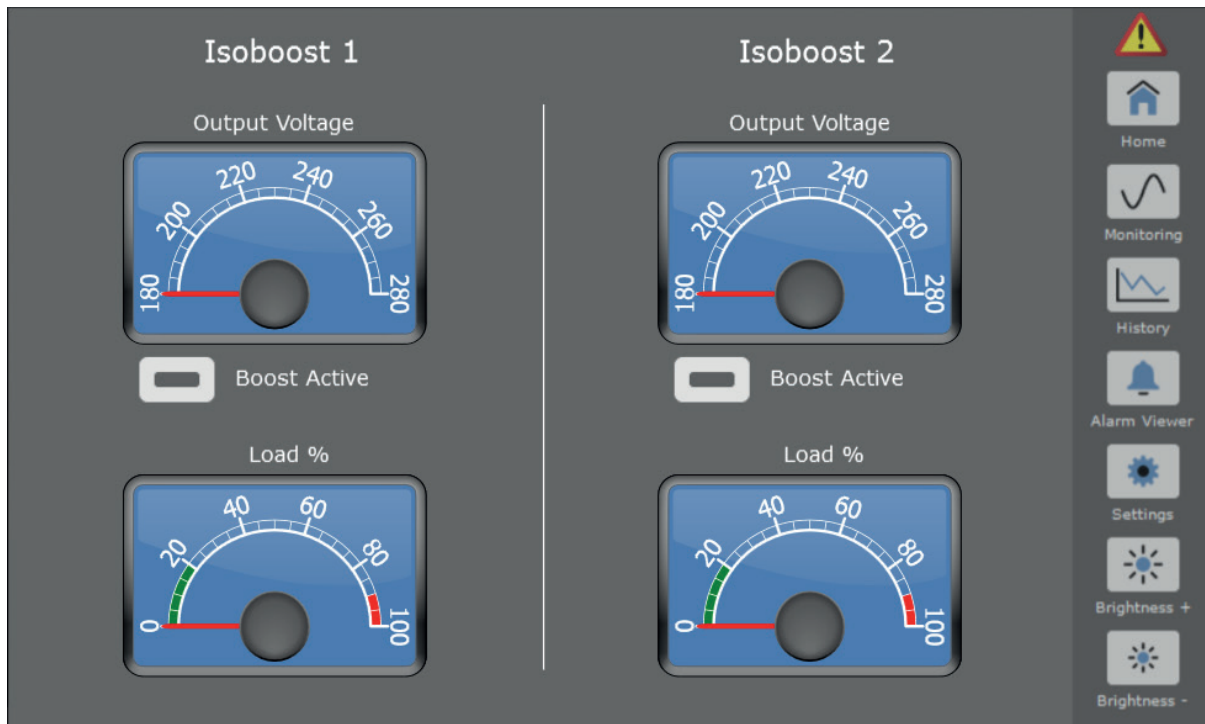


- FIT SHELL TO D-SUB
- APPLY GREEN SILICONE SLEEVING TO SCREEN (AT BOTH ENDS OF CABLE)

DISPLAY PAGES

The right hand side of the screen functions as a toolbar. Press the relevant icon to change page, or alter the display brightness.

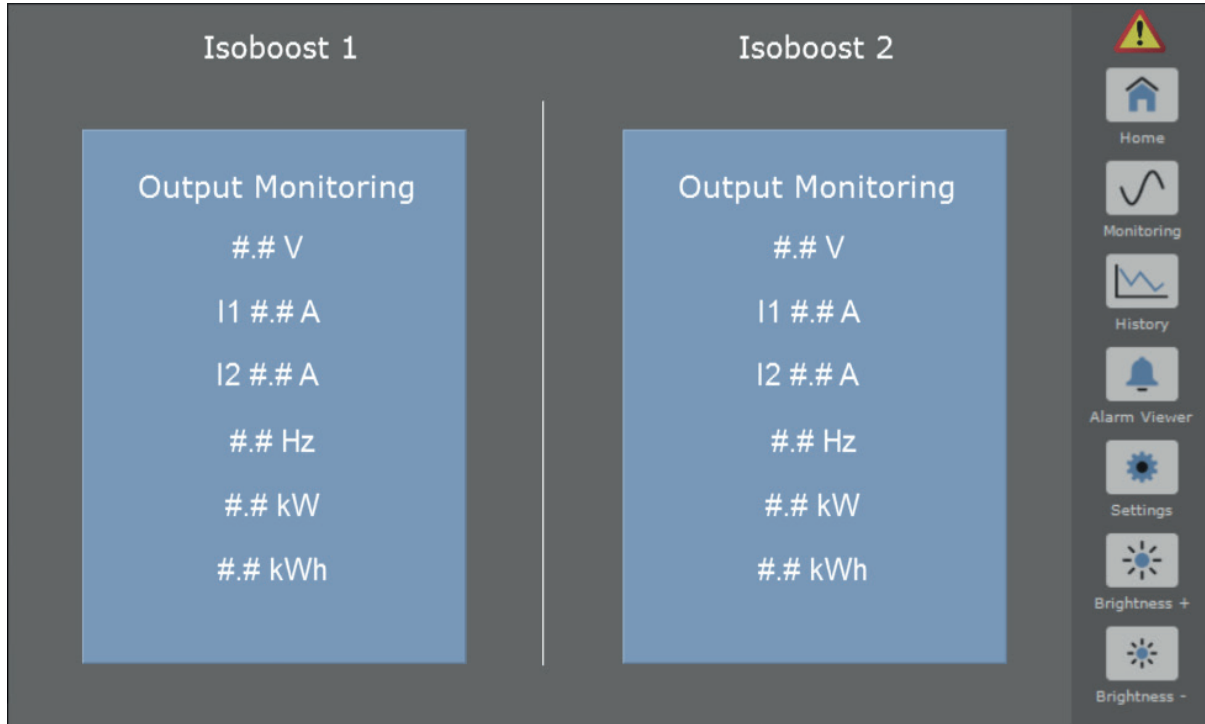
HOME PAGE



Output Voltage and load percentage displayed, when the supply voltage is low and boost is active this is indicated by the 'Boost active' indicator turning green.

Note: IsoBoost 2 information will only be visible if a second IsoBoost transformer is connected to the display.
Navigation to other pages is from the side menu

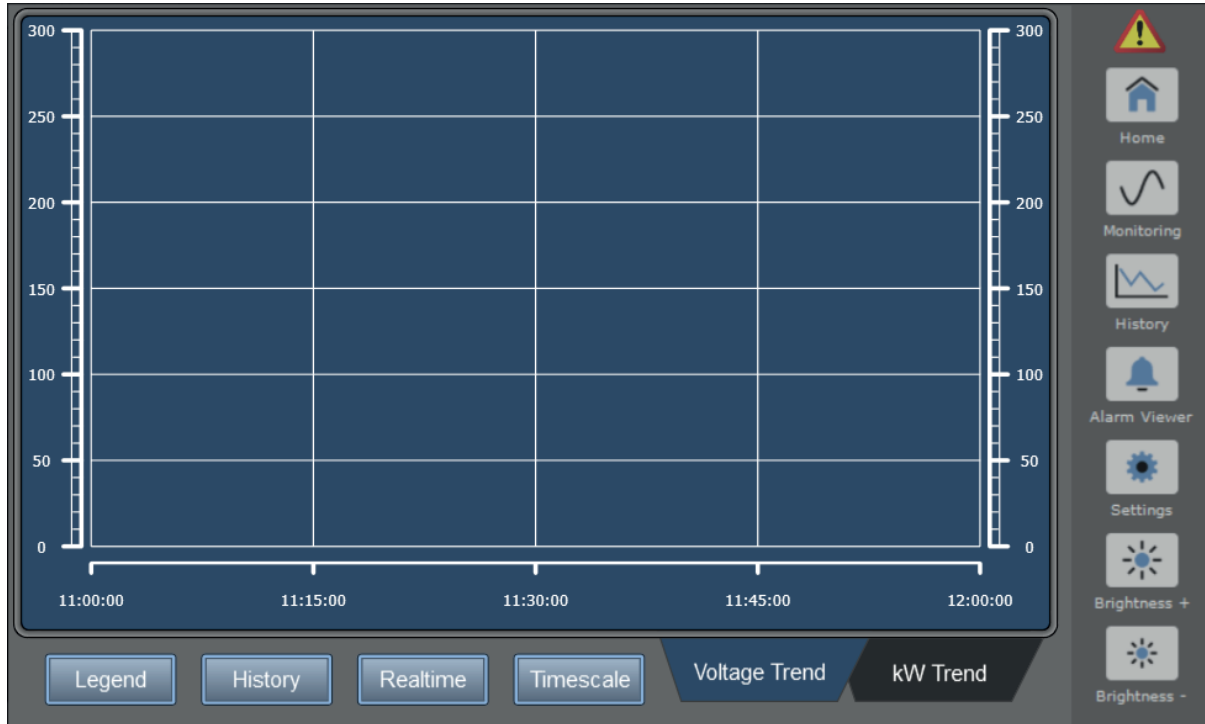
MONITORING PAGE



IsoBoost output is displayed in detail on this page.

Note: IsoBoost 2 information will only be visible if a second IsoBoost transformer is connected to the display.

HISTORY PAGE



Buttons

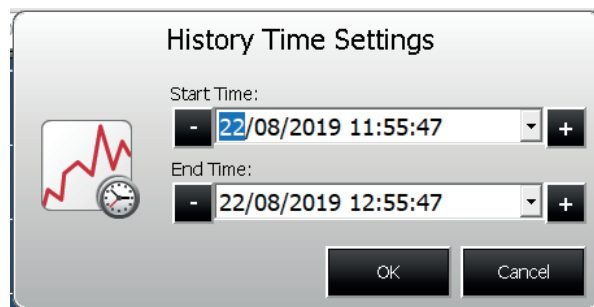
Legend - Displays trend line colours



History - Displays a static trend

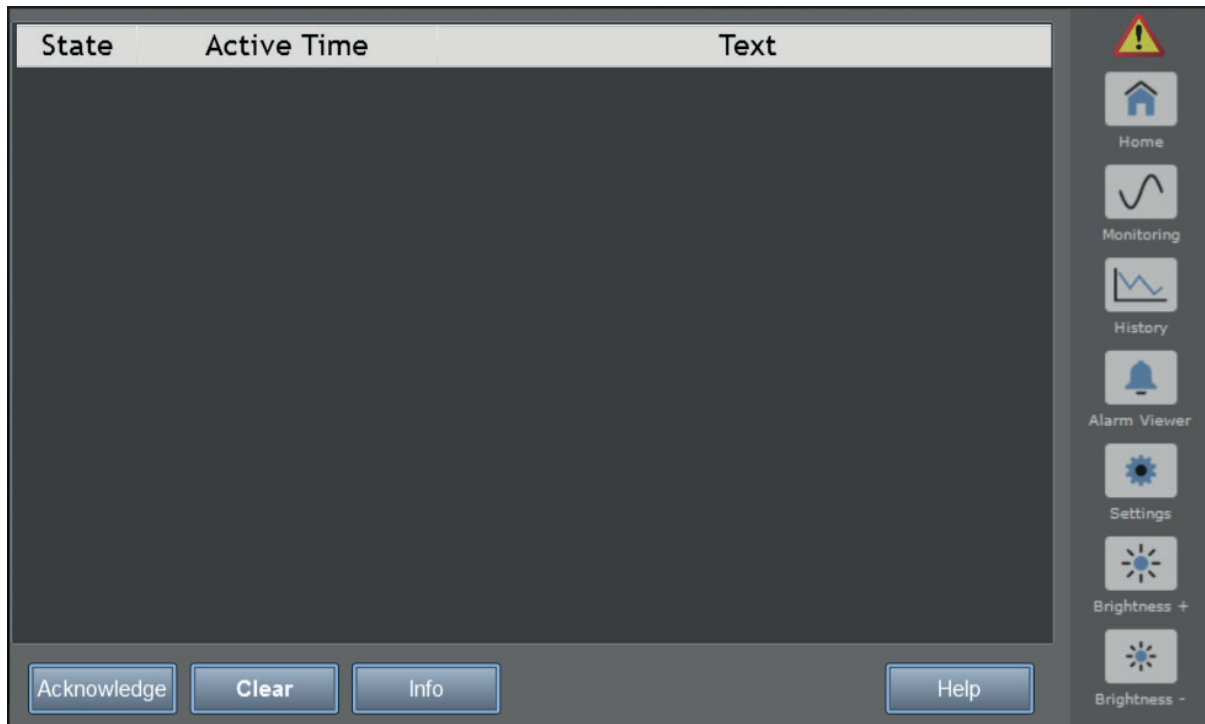
Realtime - Returns the display to a rolling trend

Timescale - Allows the user to set the time displayed on one page



There are 2 tabs on the bottom right of the display for selecting between the output voltage Trend and the kW Trend.

ALARM VIEWER PAGE



Buttons

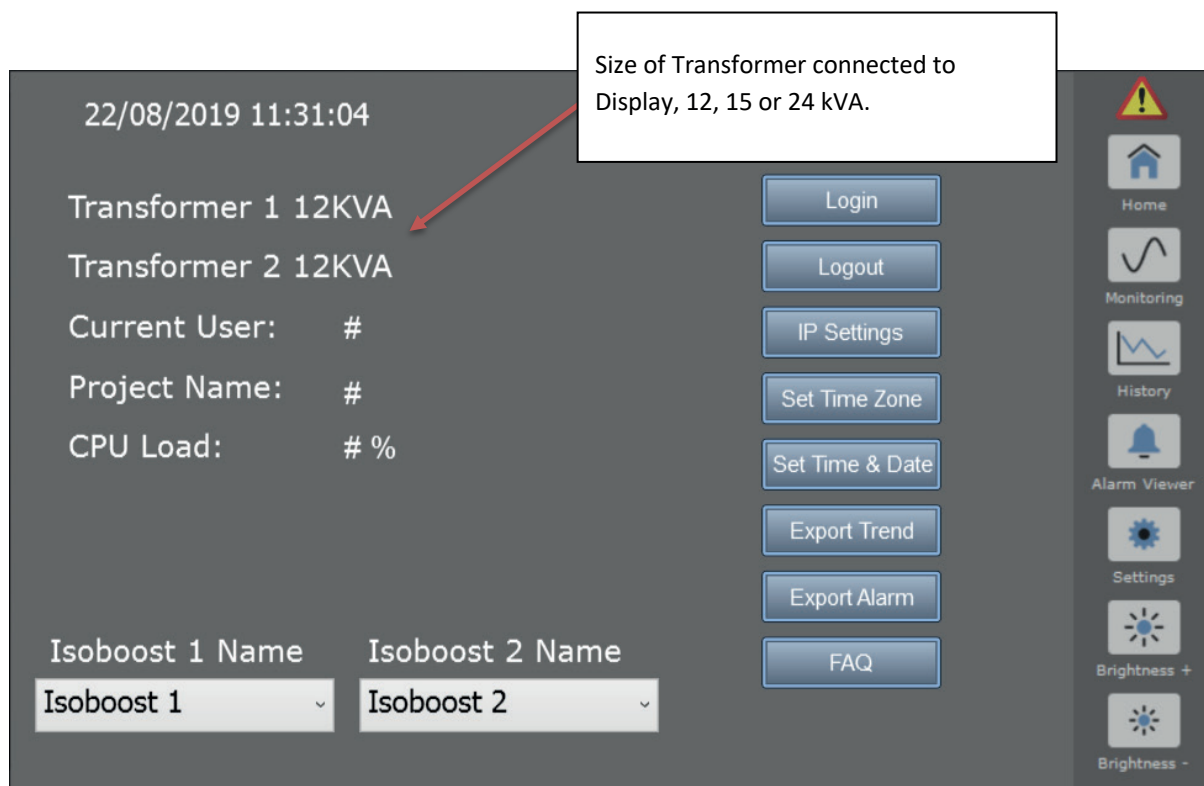
- Acknowledge - Marks a new alarm as Acknowledged.
 Clear - Removes Inactive Acknowledged alarm messages from page.
 Info - Gives detail on a highlighted alarm message from the list, press on the message to highlight it before pressing 'Info'.

Message colours

Active Unacknowledged
Active Acknowledged
Inactive Unacknowledged
Inactive Acknowledged

Any active alarm will display the warning triangle on all pages.

SETTINGS PAGE



Buttons

Login -	Administrator Login to gain access to sensitive configuration – only required by service.
Logout -	Returns display to standard operating mode after service login.
IP Settings -	Ethernet settings, only required by service, not required in normal use. Login required to access.
Set Time Zone -	Set geographical region and if daylight saving is required.
Set Time & Date -	Adjust current time.

Drop down boxes

IsoBoost 1 Name –	Allows the user to assign the IsoBoost a more relevant name, this name will then be displayed at the top of the Home page.
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The name choices are;
IsoBoost 1(2), Port, Stbd, Fwd, Aft, Shore 1 & Shore 2.

Note: 'IsoBoost 2' information will only be visible if a second IsoBoost transformer is connected to the display.

WARRANTY

Warranty Information

This product is warranted for a period of 12 months from date of purchase and applies only to the original purchaser.

The warranty only applies to defects arising from defective materials and faulty workmanship that become evident during the warranty period and does not include consumable items.

This warranty covers replacement parts only and does include the cost of any labour. In addition, this will not apply if the IsoBoost is found to have been subjected to misuse, abuse, used for a purpose it was not intended for or tampered with in any way.

In the event of any failure the IsoBoost must be returned to the supplying dealer who will take the necessary action.

DECLARATION OF CONFORMITY



Energy Solutions UK Ltd declares that the following products:

IsoBoost Remote Display

EMC Directive 2014/30/EU with the following harmonized standards:

EN 55022: 2010 +AC:2011 Class A

EN55024: 2010

EN61000-6-4: 2007 +A1: 2011

EN61000-6-2: 2005 +AC: 2005

Signed: Paul Holland

A handwritten signature in black ink, consisting of a series of slanted, parallel lines followed by a horizontal line.

Authority: Managing Director
Date: August 2019

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