


# B100 Voltage Optimisation Unit



# Installation Manual

V1.1 February 2016





## **B100 Voltage Optimisation Unit**

### **PRODUCT ADVISORY NOTICE**

This product must be installed by a competent person in accordance with the IEE Wiring Regulations, BS7671 (17th Edition or later) and current Building Regulations.

Ensure the electrical supply is disconnected before installation or removing the cover of the B100 VO unit.

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## B100 Voltage Optimisation Unit

### Product Description

The single phase matte B100 Voltage Optimisation unit is designed for use in Large Domestic and Light Commercial / Retail Applications.

Installed between the electricity meter and main consumer unit, the matte offers 15 volt subtractive performance. The unit is not intended for any purpose other than that defined within this document.

### Warnings

Please read and observe the following notices carefully. These warnings must be observed when installing and operating the B100 Voltage Optimisation unit. All relevant supplies must be isolated or disconnected before commencing any work. This product must be installed by a competent person in accordance with the IEE Wiring Regulations, BS7671 (17th Edition or later) and any current Building Regulations.



Once installed, the unit has a Live Mains Supply (230v or higher) within the enclosure. The cover must not be removed until the supply to the unit has been isolated or disconnected.

### Safety Advice

The unit must be installed in a dry ventilated location, it must never be covered or have restricted ventilation.

The matte B100 Voltage Optimisation unit is rated for a maximum 100A load. For any information not contained within this document, please contact our technical support team on 01827 61231.

## **B100 Voltage Optimisation Unit**

### **Introduction**

The matt:e B100 is a single phase Voltage Optimisation unit.

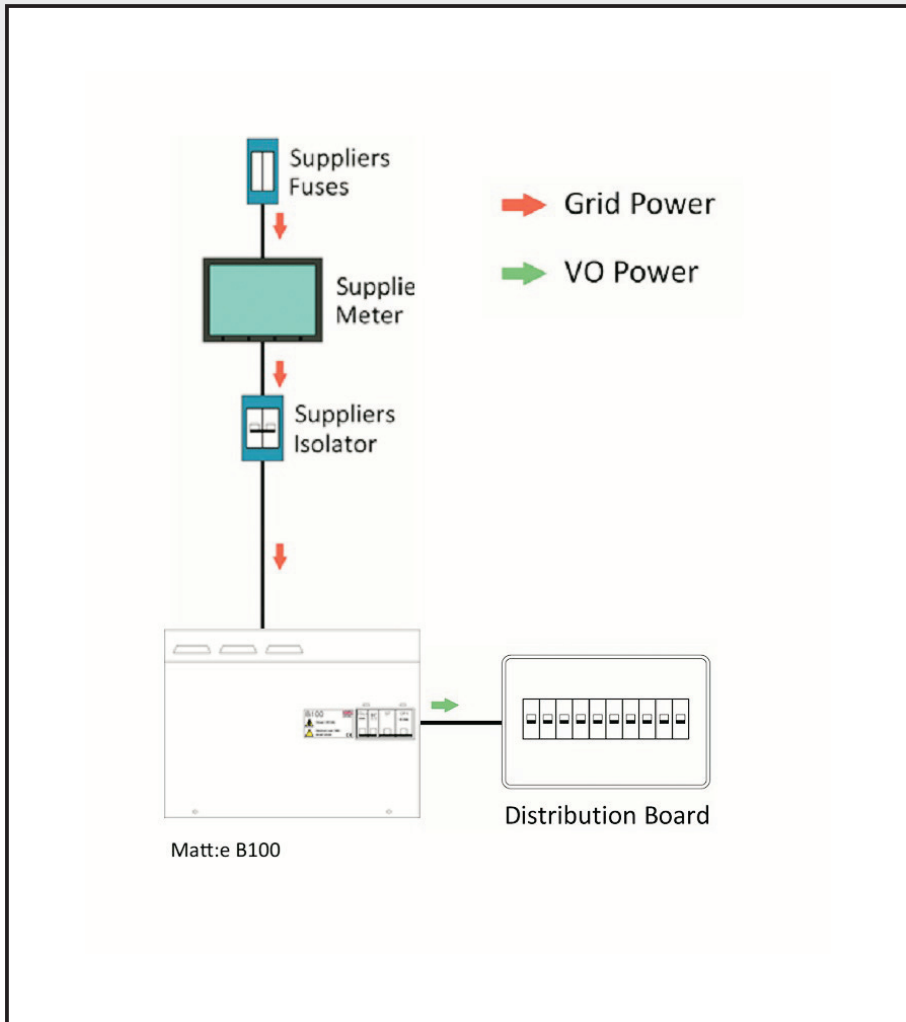
The unit reduces the incoming supply voltage by 15v (i.e.: a 240v supply would be reduced to 225v). It is designed to be connected in series with the incoming supply installed between the main electricity meter and the consumer unit.

The matt:e B100 has short circuit, overload and thermal protection built in.

Rated at 100 Amps, the unit is suitable for the majority of Large Domestic and Light Commercial / Retail Installations.

# B100 Voltage Optimisation Unit

## Typical Installations



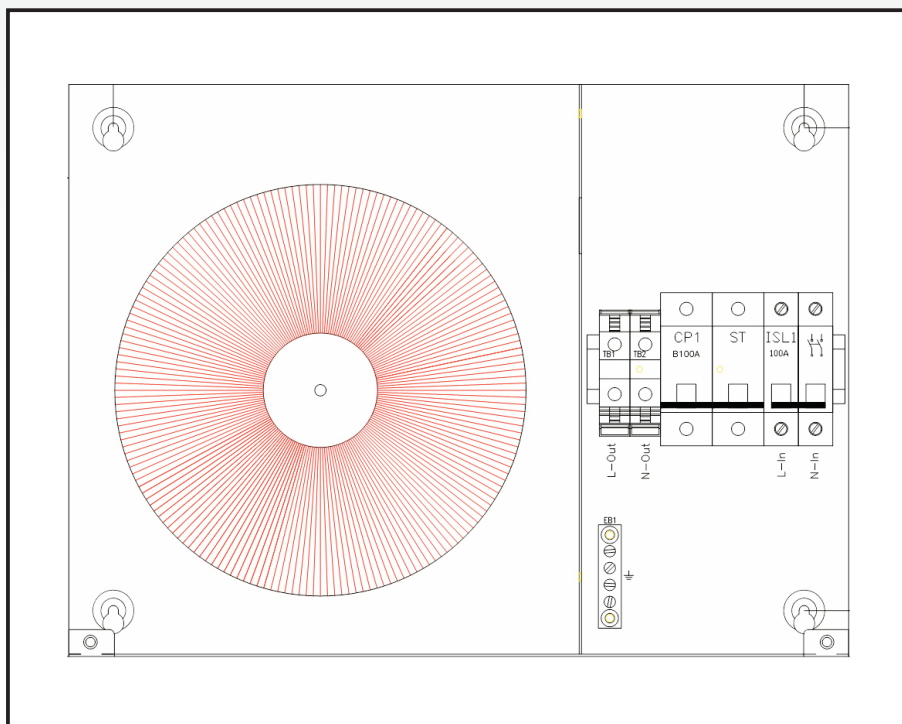


## B100 Voltage Optimisation Unit

### Electrical Connections

The unit is supplied with a 100Amp miniature circuit breaker that provides overload and short circuit protection for the unit.

The transformer is fitted with an embedded thermal switch. Should the temperature of the transformer increase beyond acceptable levels the thermal switch will operate and automatically shut off the supply to the transformer by 'tripping' the incoming MCB (CP1). Once the transformer temperature has returned to an acceptable level the thermal switch will reset and the MCB can be closed. The user wiring connections are indicated in the diagram below:





## B100 Voltage Optimisation Unit

### Specifications

<b>Description</b>	matt:e B100 Voltage Optimisation Unit
<b>Input (Volts)</b>	Nominal input voltage 232 – 253v, 50Hz, Single Phase AC
<b>Output (Volts)</b>	Nominal input voltage less 15v
<b>Current (Amps)</b>	100 Amps continuous
<b>Weight</b>	Approximately 18.0 kgs
<b>Operating Temperature</b>	-5°C to +40°C
<b>Terminal Capacity</b>	Incoming Live = 35.0mm <sup>2</sup> Outgoing Live = 35.0mm <sup>2</sup> Incoming Neutral = 35.0mm <sup>2</sup> Outgoing Neutral = 35.0mm <sup>2</sup>
<b>Miniature Circuit Breaker</b>	100 Amp 6kA Type B to BS EN 60898
<b>Enclosure</b>	Mild Steel Powder Coated
<b>Ingress Protection</b>	IP20
<b>Cable Entry Facility</b>	Bottom – 2 x 32mm Diameter
<b>Standards</b>	MCBs to BS EN 60898
<b>Document Revision</b>	V1.1 Jan 2016
<b>Warranty</b>	The B100 Voltage Optimisation Unit is guaranteed for a period of 12 months from the date of purchase. To extend this warranty to 5 years record the serial number of the unit on the enclosed Warranty Card and return it with proof of purchase to <a href="mailto:info@matt-e.co.uk">info@matt-e.co.uk</a>

This warranty is limited to the replacement of faulty components only.



# Warranty Card

**B100 Voltage  
Optimisation Unit**

**Model No:**

**Serial No:**

**Date of installation:**

**Installer Details:**

**Site Address:**

For further information, get in touch with matt:e

**t: 01827 61231**

**e: [info@matt-e.co.uk](mailto:info@matt-e.co.uk)**



Please return this Warranty Card  
along with proof of purchase to

**matt:e Ltd,  
Unit 1 c Neander  
Lichfield Road Industrial Estate  
Tamworth  
Staffordshire  
B79 7XA**

AFFIX  
STAMP

