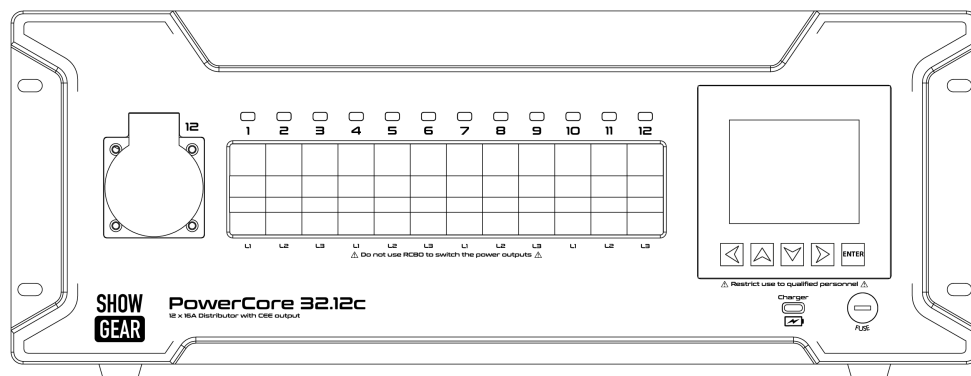




PowerCore 32.12c

Product code: E623013

1+11x CEE 16A

Preface

Thank you for purchasing this Showgear product.

The purpose of this user manual is to provide instructions for the correct and safe use of this product.

Keep the user manual for future reference as it is an integral part of the product. The user manual shall be stored at an easily accessible location.

This user manual contains information concerning:

- Safety instructions
- Intended and non-intended use of the device
- Installation and operation of the device
- Maintenance procedures
- Troubleshooting
- Transport, storage and disposal of the device

Non-observance of the instructions in this user manual may result in serious injuries and damage of property.

©2025 Showgear. All rights reserved.

No part of this document may be copied, published or otherwise reproduced without the prior written consent of Highlite International.

Design and product specifications are subject to change without prior notice.

For the latest version of this document or other language versions, please visit our website www.highlite.com or contact us at service@highlite.com.

Highlite International and its authorized service providers are not liable for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss arising from the use of, or inability to use or reliance on the information contained in this document.

Highlite International B.V. – Vestastraat 2 – 6468 EX Kerkrade – the Netherlands

Table of contents

1. Introduction.....	3
1.1. Before Using the Product.....	3
1.2. Intended Use.....	3
1.3. Text Conventions.....	3
1.4. Symbols and Signal Words.....	4
1.5. Symbols on the Information Label.....	4
2. Safety.....	5
2.1. Warnings and Safety Instructions.....	5
2.2. Requirements for the User.....	7
2.3. Personal Protective Equipment.....	7
3. Description of the Device.....	8
3.1. Front View.....	8
3.2. Back View.....	8
3.3. Product Specifications.....	9
3.4. Dimensions.....	10
3.5. Optional Accessories.....	10
4. Installation.....	11
4.1. Safety Instructions for Installation.....	11
4.2. Personal Protective Equipment.....	11
4.3. Installation Site Requirements.....	11
4.4. Rack Mounting.....	11
4.5. Grounding Cable.....	11
4.6. Connecting to Power Supply.....	12
5. Setup and Operation.....	13
5.1. Safety Instructions for Operation.....	13
5.2. Setup.....	13
5.3. USB Port.....	13
5.4. RCBOs.....	13
5.5. Control Panel.....	14
5.6. Main Menu Options.....	14
5.6.1. Meter.....	15
5.6.1.1. Real-time Measurement Data.....	15
5.6.1.2. Electric Energy and Time Data.....	17
5.6.2. Power Quality Monitoring.....	21
5.6.2.1. Voltage and Current Harmonics.....	21
5.6.3. History.....	22
5.6.4. Parameter Setting.....	22
5.6.4.1. Available Settings.....	23
5.6.4.2. Required Settings.....	25
5.7. LED Statuses.....	26
5.8. MdbuS Connection.....	26
5.8.1. MdbuS Protocol.....	26
5.8.2. MdbuS Linking.....	26
6. Wire Diagram.....	27
7. Troubleshooting.....	28
8. Maintenance.....	29
8.1. Safety Instructions for Maintenance.....	29
8.2. Preventive Maintenance.....	29
8.2.1. Basic Cleaning Instructions.....	29
8.3. Corrective Maintenance.....	29
8.3.1. Replacing the Fuse.....	30
9. Deinstallation, Transportation and Storage.....	31
10. Disposal.....	31
11. Approval.....	31

1. Introduction

1.1. Before Using the Product

**Important**

Read and follow the instructions in this user manual before installing, operating or servicing this product.

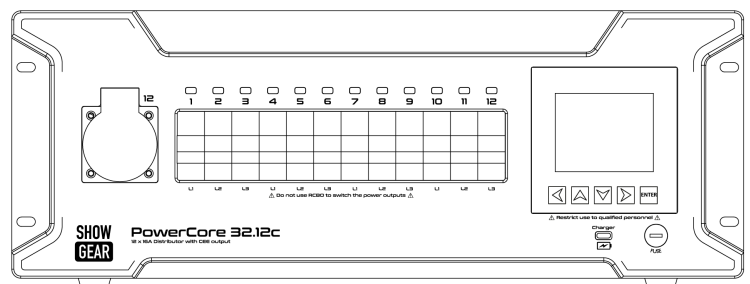
The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

After unpacking, check the contents of the box. If any parts are missing or damaged, contact your Highlite International dealer.

Your shipment includes:

- Showgear PowerCore 32.12c
- User manual

Figure 1



1.2. Intended Use

This device is intended for professional use as a power distributor in the entertainment industry. It can be installed only indoors. This device is not suitable for households.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

1.3. Text Conventions

Throughout the user manual the following text conventions are used:

- Buttons: All buttons are in bold lettering, for example "Press the **UP/DOWN** buttons"
- References: References to parts of the device are in bold lettering, for example: "turn the **adjustment handle (05)**". References to chapters are hyperlinked
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

1.4. Symbols and Signal Words

Safety notes and warnings are indicated throughout the user manual by safety signs.

Always follow the instructions provided in this user manual.

**DANGER**

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION**

Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.

**Attention**

Indicates important information for the correct operation and use of the product.

**Important**

Read and observe the instructions in this document.

**Electrical hazard**

Provides important information about the disposal of this product.

1.5. Symbols on the Information Label

This product is provided with an information label. The information label is located on the back side of the device.

The information label contains the following symbols:



This device is designed for indoor use.



This device shall not be treated as household waste.



Read and follow the instructions in the user manual before installing, operating or servicing the device.



This device falls under IEC protection class I.



Warning: Risk of electric shock. Do not open.



This device has a protective earth conductor.

2. Safety



Important
Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

2.1. Warnings and Safety Instructions



DANGER
Danger for children

For adult use only. The device must be installed beyond the reach of children.

- Do not leave any parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within the reach of children. Packaging material is a potential source of danger for children.



DANGER
Electric shock caused by dangerous voltage inside

There are areas inside the device where dangerous touch voltage may be present.

- Do not open the device or remove any covers.
- Do not operate the device if the covers or the housing are open. Before operation, check if the housing is firmly closed and all screws are tightly fastened.
- Disconnect the device from the electrical power supply before service and maintenance, and when the device is not in use.



DANGER
Electric shock caused by short-circuit

This device falls under IEC protection Class I.

- Make sure that the device is electrically connected to ground (earth). Connect the device only to a socket-outlet with a ground (earth) connection.
- Do not cover the ground (earth) connection.
- Do not bypass the thermostatic switch or fuses.
- Replace fuses only with the same type and rating.
- Do not let the power cable come into contact with other cables. Handle the power cable and all connections with the mains with caution.
- Do not modify, bend, mechanically strain, put pressure on, pull or heat up the power cable.
- Make sure that the power cable is not crimped or damaged. Examine the power cable periodically for any defects.
- Do not immerse the device in water or other liquids. Do not install the device in a location where flooding may occur.



Attention
Power supply

- Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.

- Make sure that the cross-sectional area of the extension cords and power cables is sufficient for the required power consumption of the device.



Attention
General safety

- Do not block the ventilation openings. Without proper heat dissipation and air circulation, the internal components may overheat. This can result in product damage.
- Do not shake the device. Avoid brute force when installing or operating the device.
- If the device is dropped or struck, disconnect the device from the electrical power supply immediately.
- If the device is exposed to extreme temperature variations (e.g. after transportation), do not switch it on immediately. Let the device reach room temperature before switching it on, otherwise it may be damaged by the formed condensation.
- If the device fails to work properly, discontinue use immediately.



Attention
For professional use only
This device must be used only for the purposes it is designed for.

This device is designed to be used as a power distributor in the entertainment industry. Any incorrect use may lead to hazardous situations and result in injuries and material damage.

- This device is not suitable for households.
- This device does not contain user-serviceable parts. Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.



Attention
Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- There are no deformations on housings, fixings and installation points.
- The power cables are not damaged and do not show any material fatigue.



Attention
Possible radio interference

This device is compliant with Class A of CISPR 32/EN 55032. Operation of this device in a residential environment could cause radio interference.



Attention
Do not expose the device to conditions that exceed the rated IP class conditions.

This device is IP20 rated. IP (Ingress Protection) 20 class provides protection against solid objects greater than 12 mm, such as fingers, and no protection against harmful ingress of water.

2.2. Requirements for the User

This product may be used by ordinary persons. Maintenance may be carried out by ordinary persons. Installation and service shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

Instructed persons have been instructed and trained by a skilled person, or are supervised by a skilled person, for specific tasks and work activities associated with the installation, service and maintenance of this product, so that they can identify risks and take precautions to avoid them.

Skilled persons have training or experience, which enables them to recognize risks and avoid hazards associated with the installation, service and maintenance of this product.

Ordinary persons are all persons other than instructed persons and skilled persons. Ordinary persons include not only users of the product but also any other persons that may have access to the device or who may be in the vicinity of the device.

2.3. Personal Protective Equipment

During installation, deinstallation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

3. Description of the Device

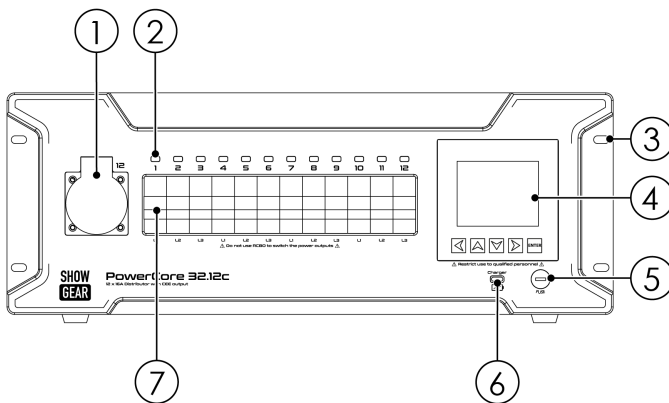
The Showgear PowerCore 32.12c provides reliable power and optimal protection for your valuable equipment. Each output is armed with its own RCBO to detect earth faults and overcurrents. In the event that a problem is detected, it will automatically shut down the affected circuit, keeping the rest of the system active.

With an LED for each output, it's also easy to check statuses, while a 3-inch display makes it possible to view various settings, including voltage, power and phase information. A power meter with the Mdbus communication protocol makes it possible to monitor performance remotely too.

A robust CNC-milled aluminum front panel and sturdy mounting connectors by PCE make the PowerCore range suitable for demanding applications.

3.1. Front View

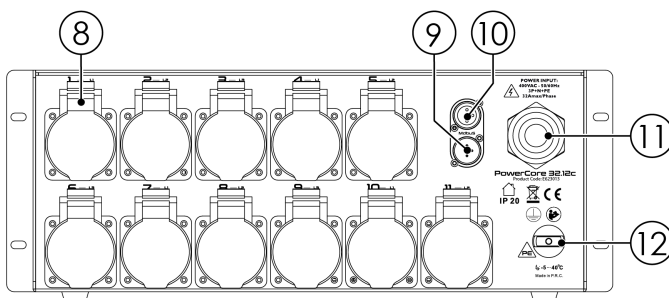
Figure 2



- 01) Schuko F-type power connector OUT with cover
- 02) 12 x status LED indicators (see [5.7. LED Statuses](#) on page 26)
- 03) 4 x mounting openings (for installation in a 19-inch rack)
- 04) Control panel: LCD display and control buttons
- 05) Fuse (T 1 A, 250 V)
- 06) 5 V USB-C power connector OUT
- 07) 12 x 2-pole RCBO (residual-current circuit breaker with integrated overcurrent protection) (see [5.4. RCBOs](#) on page 13)

3.2. Back View

Figure 3

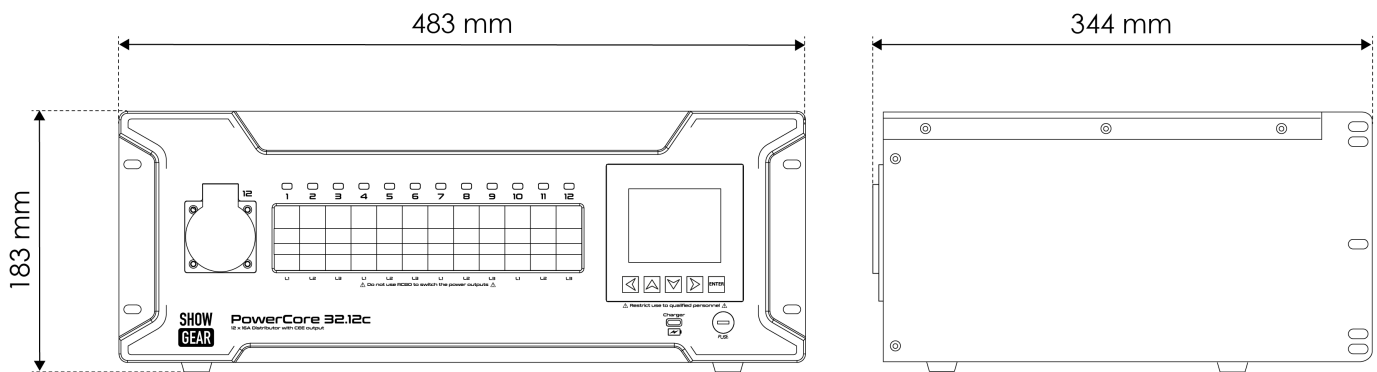


- 08) 11 x CEE3P 16 A power connector OUT
- 09) 3-pin XLR connector IN for Mdbus communication
- 10) 3-pin XLR connector OUT for Mdbus communication
- 11) Fixed power cable with a CEE5P 32 A plug
- 12) Ground lug (see [4.5. Grounding Cable](#) on page 11)

3.3. Product Specifications

Model:	PowerCore 32.12c
Control and Programming:	
Display	LCD
Protocols	MdbuS
Display size	3,14 "
Mechanical Specifications:	
Length	344 mm
Height	183 mm
Width	483 mm
Weight	13,8 kg
Rack units	4 U
IP rating	IP20 (indoor use only)
Housing	Aluminum / metal
Color	Black
Product Properties:	
LED indicators	Power
Ground lug position	6H
Thermal Specifications:	
Maximum ambient temperature	40 °C
Minimum ambient temperature	-5 °C
Electrical Specifications and Connections:	
Rated voltage	400 V
Power consumption	7,5 W
Nature of the supply voltage (multi-phase)	AC 3-Phase+N+PE
Rated current (A)	32 A
Rated frequency	50 Hz
Fuse	1 A
Data connector IN	XLR 3P
Data connector OUT	XLR 3P
Power connector IN	CEE5P 32 A
Power connector OUT	CEE3P 16 A
Cable length	1 m
RCBO rated current	16 A
RCBO poles	2
RCBO sensitivity	30 mA

3.4. Dimensions

Figure 4

3.5. Optional Accessories

You can additionally purchase the following accessories:

- [E623050](#) PowerCore Server
- [E623051](#) Grounding cable, 0,5m for PowerCore (25mm², M10 eyelet)
- [E623052](#) Grounding cable, 2,5m for PowerCore (25mm², M10 eyelet)
- [E623053](#) Grounding cable, 5m for PowerCore (25mm², M10 eyelet)

4. Installation

4.1. Safety Instructions for Installation

**Attention**

Make sure that there is enough space for ventilation around the device.

- Do not block the ventilation openings. Without proper heat dissipation and air circulation, the internal components may overheat. This can result in product damage.
- Do not install near equipment that produces heat, for example amplifiers.

4.2. Personal Protective Equipment

During installation, deinstallation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

4.3. Installation Site Requirements

- The device can be used only indoors.
- The maximum ambient temperature $t_a = 40\text{ °C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40 °C.

4.4. Rack Mounting

The device can be mounted in a standard 19-inch rack. The device requires 3 rack units (RU) of space.

Make sure that the rack is sufficiently secured to prevent it from becoming unstable or falling over.

To mount the device in a two-post rack, follow the steps below:

- 01) Insert 4 cage nuts in the openings on the rack posts where you want to mount the device.
- 02) Position the device in front of the rack posts so that the 4 **mounting openings (03)** on the flanges face the openings on the rack posts with cage nuts.
- 03) Use a screwdriver to mount the device to the rack posts with 4 screws.

4.5. Grounding Cable

The PowerCore 32.12c is fitted with a **ground lug (12)** to ground the device with a grounding cable (see [3.5. Optional Accessories](#) on page 10). A grounding cable is important to provide grounding and potential equalization between a power input and event, stage and trussing equipment.

To install a grounding cable, follow the steps below:

- 01) Turn the **ground lug (12)** counterclockwise to remove it.
- 02) Place the eyelet of the grounding cable on the ground connector of the PowerCore 32.12c.
- 03) Place the **ground lug (12)** back and turn it clockwise to tighten it.
- 04) Install the other side of the grounding cable to a suitable item such as a metal clamp.

4.6. Connecting to Power Supply



DANGER
Electric shock caused by short-circuit

The device accepts AC mains power at 400 V and 50/60 Hz. Do not supply power at any other voltage or frequency to the device.

This device falls under IEC protection class I. Make sure that the device is always electrically connected to the ground (earth).

Before connecting the device to the socket-outlet:

- Make sure that the power supply matches the input voltage specified on the information label on the device.
- Make sure that the socket-outlet has ground (earth) connection.
- Make sure that the power source is equipped with a residual-current device.

Connect the device to the socket-outlet with the power plug.

5. Setup and Operation

5.1. Safety Instructions for Operation

**Attention**

This device must be used only for the purposes it is designed for.

This device is intended for professional use as a power distributor in the entertainment industry. It can be used only indoors. This device is not suitable for households.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

**Attention**

Power supply

Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.

5.2. Setup

The PowerCore 32.12c can be used to power 12 devices, with a separate circuit and RCBO for each output device. The device on the 12th circuit can be connected to the **Schuko F-type power connector OUT with cover (01)** on the front of the device.

The device can optionally be connected to the Showgear PowerCore Server (see [3.5. Optional Accessories](#) on page 10) for remote monitoring. Refer to the manual of the Showgear PowerCore Server for more information on remote monitoring.

Note:

Before use, adjust the required settings of the device (see [5.6.4.2. Required Settings](#) on page 25).

5.3. USB Port

The PowerCore 32.12c is fitted with a **5 V USB-C power connector OUT (06)**. This connector can be used to charge a device such as a tablet or smartphone.

It is also possible to power the Showgear PowerCore Server with the **5 V USB-C power connector OUT (06)** of this device. Refer to the manual for the [PowerCore Server](#) for more information.

5.4. RCBOs

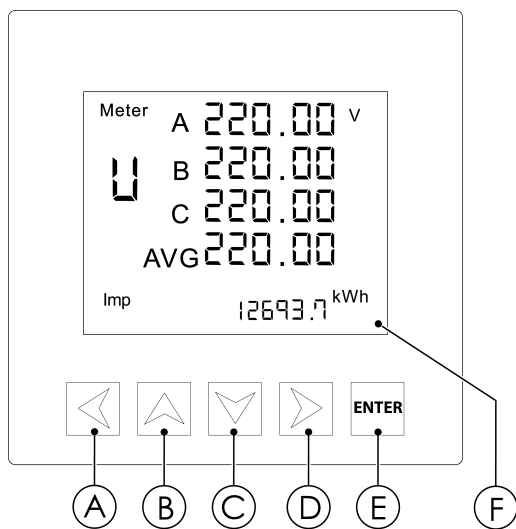
**Attention**

Do not use an **RCBO (07)** as a load switch for the output circuit. To remove a load, always turn off the output device and remove the power cable from the output of the PowerCore 32.12c.

The device is fitted with 12 **RCBOs (07)**, or residual-current circuit breakers with integrated overcurrent protection. Each RCBO functions as a circuit breaker and as an overcurrent protection for the corresponding output circuit.

5.5. Control Panel

Figure 5



- A) LEFT touch button
- B) UP touch button
- C) DOWN touch button
- D) RIGHT touch button
- E) ENTER touch button
- F) LCD display

- Use the **LEFT** button to cycle through the main menu options and return to the main menu options from the Parameter settings menu.
- Use the **UP/DOWN** buttons to cycle through parameters and adjust settings.
- Use the **RIGHT** button to cycle through the screens in the main menu options.
- Use the **ENTER** button to enter the setting mode and confirm a setting.

5.6. Main Menu Options

The main menu has the following options:

Menu Name	Menu Screen
Meter (see 5.6.1. Meter)	
Power Quality Monitoring (see 5.6.2. Power Quality Monitoring)	
History (see 5.6.3. History)	

Parameter Setting (see [5.6.4. Parameter Setting](#))

SEt01

5455
3L n3Ct

- Press the **LEFT** button to cycle through the Meter menu, Power Quality Monitoring menu and History menu.
- Press the **ENTER** button to open to the Parameter Setting menu.

5.6.1. Meter

In this menu you can view real-time measurement data, electric energy data and time data.

- Press the **UP/DOWN** buttons to cycle through the menus with real-time measurement data (see [5.6.1.1. Real-time Measurement Data](#)).
- Press the **RIGHT** button to cycle through the menus with electric energy data and time data (see [5.6.1.2. Electric Energy and Time Data](#)).
- Press the **LEFT** button to return to the main menu options (see [5.6. Main Menu Options](#) on page 14).

5.6.1.1. Real-time Measurement Data

In this menu you can view the real-time measurement data for the device.

Press the **UP/DOWN** buttons to cycle through the following options:

Function	Menu Screen
3-phase voltage and average voltage	
3-phase current and zero-line current	
Line-voltage and average voltage	

Function	Menu Screen
3-phase active power and total active power	Meter A 800.00 B 800.00 C 800.00^W Σ 2400.0 Imp 12693.7^{kWh} P
3-phase reactive power and total reactive power	Meter A 660.00 B 660.00^{var} C 660.00 Σ 1980.0 Imp 12693.7^{kWh} Q
3-phase apparent power and total apparent power	Meter A 1100.0 B 1100.0^{VA} C 1100.0 Σ 3300.0 Imp 12693.7^{kWh} S
3-phase power factor and total power factor	Meter A 0.8000 B 0.8000 PF C 0.8000 Σ 0.8000 Imp 12693.7^{kWh} PF
Frequency	Meter 50.000^{HZ} Imp 12693.7^{kWh} F
Temperature	Meter 20.2 16^{°C} Imp 12693.7^{kWh} T

5.6.1.2. Electric Energy and Time Data

In this menu you can view the electric energy data and time data for the device.

Press the **RIGHT** button to cycle through the following options:

Function	Menu Screen
Import active energy	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Imp 12693.7 kWh
Export active energy	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Exp 0.0 kWh
Absolute active energy	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Total 12693.7 kWh
Net active energy	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Net 12693.7 kWh
Positive reactive energy	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Imp 9520.20 kvarh
Negative reactive energy	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Exp 0.0 kvarh

Absolute reactive energy	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Total 9520.20 kvarh
Net reactive energy	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Net 9520.20 kvarh
Import active energy for phase A	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Imp A 12693.7 kWh
Export active energy for phase A	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Exp A 12693.7 kWh
Import reactive energy for phase A	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Imp A 12693.7 kvarh
Export reactive energy for phase A	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Exp A 12693.7 kvarh
Import active energy for phase B	Meter A 220.00 V U B 220.00 C 220.00 AVG 220.00 Imp B 12693.7 kWh

Export active energy for phase B

Meter A 220.00 V
 U B 220.00
 C 220.00
 AVG 220.00
 Exp_B 12693.7 kWh

Import reactive energy for phase B

Meter A 220.00 V
 U B 220.00
 C 220.00
 AVG 220.00
 Imp_B 12693.7 kvarh

Export reactive energy for phase B

Meter A 220.00 V
 U B 220.00
 C 220.00
 AVG 220.00
 Exp_B 12693.7 kvarh

Import active energy for phase C

Meter A 220.00 V
 U B 220.00
 C 220.00
 AVG 220.00
 Imp_C 12693.7 kWh

Export active energy for phase C

Meter A 220.00 V
 U B 220.00
 C 220.00
 AVG 220.00
 Exp_C 12693.7 kWh

Import reactive energy for phase C

Meter A 220.00 V
 U B 220.00
 C 220.00
 AVG 220.00
 Imp_C 12693.7 kvarh

Export reactive energy for phase C

Meter A 220.00 V
 U B 220.00
 C 220.00
 AVG 220.00
 Exp_C 12693.7 kvarh

Current time

Meter A 220.00 V
U B 220.00
C 220.00
AVG 220.00
14:52:32

Current date

Meter A 220.00 V
U B 220.00
C 220.00
AVG 220.00
20.10.23

Current runtime

Meter A 220.00 V
U B 220.00
Rtime C 220.00
AVG 220.00
46:52

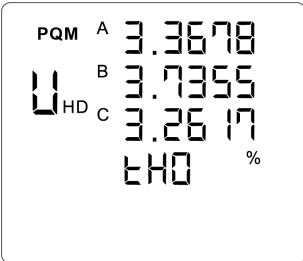
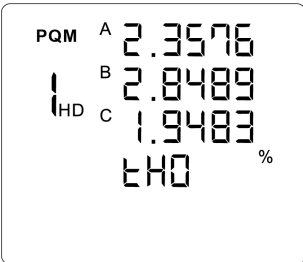
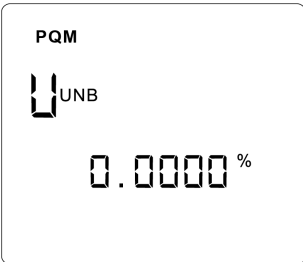
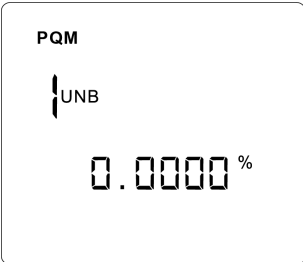
Current load time

Meter A 220.00 V
U B 220.00
Ltime C 220.00
AVG 220.00
25:25

5.6.2. Power Quality Monitoring

In this menu you can view information about the voltage and current harmonics and the voltage and current imbalance.

Press the **RIGHT** button to cycle through the following options:

Function	Menu Screen
Voltage harmonics (see 5.6.2.1. Voltage and Current Harmonics)	
Current harmonics (see 5.6.2.1. Voltage and Current Harmonics)	
Voltage imbalance rate	
Current imbalance rate	

5.6.2.1. Voltage and Current Harmonics

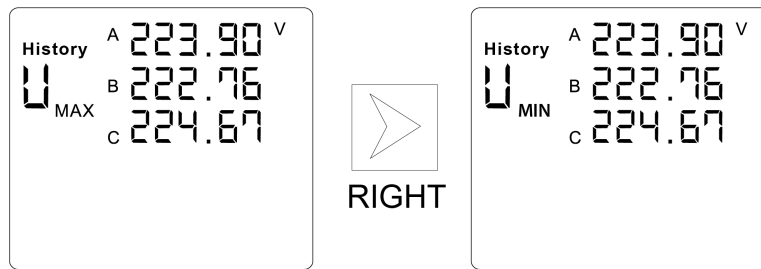
In the Voltage Harmonics and Current Harmonics menus you can view the total harmonic distortion and fractional harmonic content for the voltage and current.

- 01) Press the **RIGHT** button to go to the Voltage Harmonics menu or the Current Harmonics menu.
- 02) Press the **UP/DOWN** buttons to cycle through the following options:
 - tHD: View the total harmonic distortion
 - HR: View the fractional harmonic content for the 2nd–31st harmonic
- 03) Press the **LEFT** button to return to the main menu options (see [5.6. Main Menu Options](#) on page 14).

5.6.3. History

In this menu you can view the historical minimum and maximum voltage values of the device.

Press the **RIGHT** button to switch between the minimum (MIN) and maximum (MAX) values.



Note:

The saved minimum and maximum values can be cleared in the Parameter Setting menu (see [5.6.4. Parameter Setting](#) on page 22).

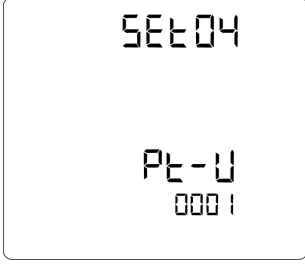
5.6.4. Parameter Setting

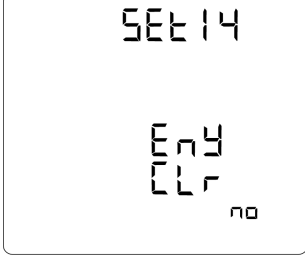
In this menu you can adjust the parameters and settings of the device.

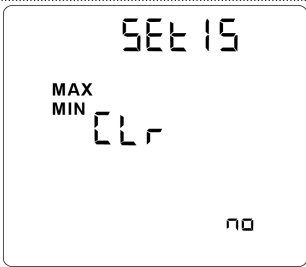
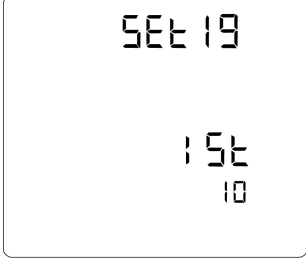
- 01) Press the **ENTER** button to open the password input interface.
- 02) Press the **UP/DOWN** buttons to enter the password. The default password is 6666.
- 03) Press the **ENTER** button to confirm the password. The Parameter Setting menu opens.
- 04) Press the **UP/DOWN** buttons to cycle through the settings (see [5.6.4.1. Available Settings](#)).
- 05) Press the **ENTER** button to edit a setting.
- 06) Press the **UP/DOWN** buttons to change a value.
- 07) Press the **ENTER** button to confirm a setting.
- 08) Press the **LEFT** button to close the Parameter Setting menu and return to the Meter menu.

5.6.4.1. Available Settings

The following settings can be adjusted:

Setting	Function	Menu Screen
Wiring Method	Set the wiring method for the system (3Ln3CT/2LL2CT/2LL3CT)	
Rated Voltage	Set the rated voltage of the device in volts (100/220/240). The default value is 220	
Rated Current	Set the rated current of the device in amperes (1/5/10). The default value is 5	
Voltage Transformer Ratio	Set the voltage transformer ratio (1–9999). The default value is 1	
Current Ratio	Set the current ratio (1–9999). The default value is 1	
Meter Address	Set the address of the meter for MdbuS communication (001–006). The default value is 1	

Baud Rate	Set the baud rate for communication (1200/2400/4800/9600/19200/38400). The default value is 9600	
Data Format	Set the data frame format (8 data bits/parity bit/1 stop bit)	
Backlight	Set a time delay in minutes for turning off the display (000–199). The display stays on when the delay is set to 0. The default value is 1	
Sliding Window Demand	Set the time window in minutes for the power demand calculation	
Date	Set the current date in YY.MM.DD format	
Time	Set the current time in hh:mm:ss format	
Energy Clear	Clear the currently stored energy parameters	

Min/Max Value Clear	Clear the stored historical minimum and maximum values (see 5.6.3. History on page 22)	
Password	Set the password for the device (0000–9999). The default password is 6666	
Firmware Version	View the currently installed firmware version	
Pulse Constant	Set the pulse constant (400–9999). The default value is 3200	
Startup Current Threshold	Set the threshold for the startup current in mA (1–9999). The default value is 10	

5.6.4.2. Required Settings

To make sure that the PowerCore 32.12c displays correct measurement results, several settings must be changed before use.

To configure the correct settings, follow the steps below:

- 01) Set the **Wiring method** to **3Ln3CT**.
- 02) Set the **Rated voltage** to **Un:220**.
- 03) Set the **Rated current** to **In:05**.
- 04) Set the **Voltage transformer ratio** to **Pt-U:0001**.
- 05) Set the **Current ratio** to **Ct-1:00xx**.
- 06) Set the **Meter address** to a unique address (**001–006**).
- 07) Set the **Baud rate** to **8_1_n**.

5.7. LED Statuses

There are 12 **status LED indicators (02)**, 1 for each output circuit. The **status LED indicators (02)** have the following functions:

- Green: Power is present on the corresponding output.
- Red: No power is present on the corresponding output.

5.8. MdbuS Connection

5.8.1. MdbuS Protocol

The PowerCore 32.12c has 3-pin XLR IN and OUT connectors for MdbuS communication with a PowerCore Server (see [3.5. Optional Accessories](#) on page 10).

Devices on a serial data link must be daisy-chained in a single line. The number of devices that you can monitor on one data link is limited by the number of addresses available in the network. The maximum number of devices that can be monitored by the PowerCore Server is 6.

Note:

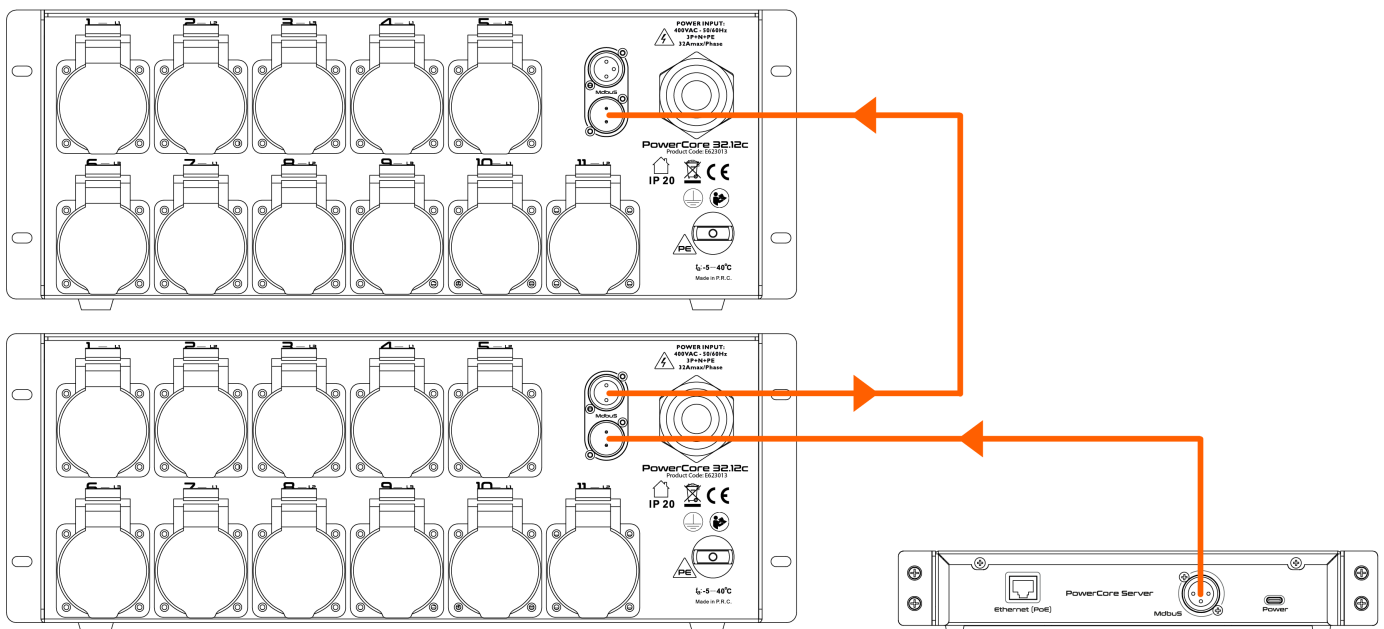
Each device in a network must have a unique meter address (see [5.6.4.1. Available Settings](#) on page 23).

5.8.2. MdbuS Linking

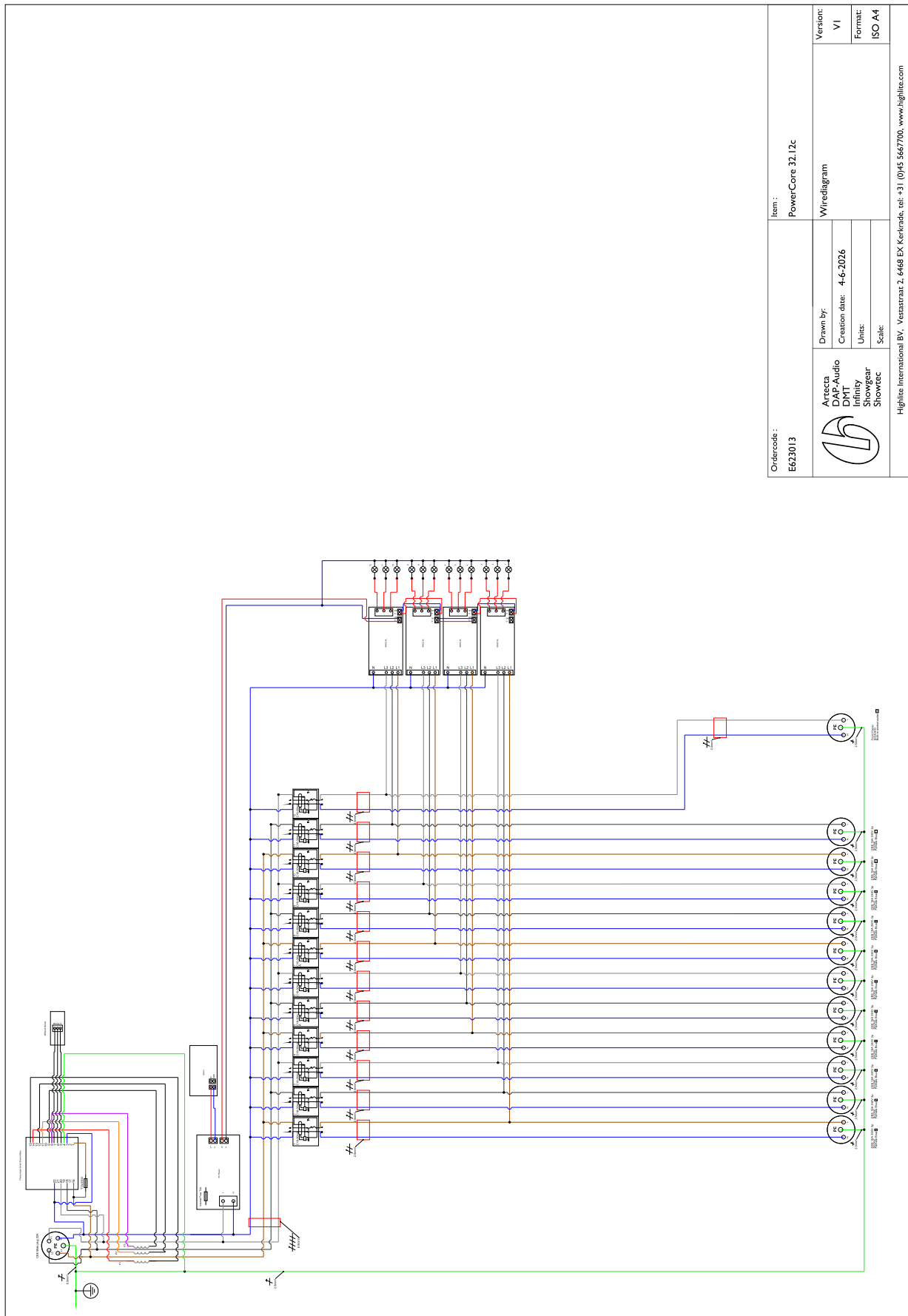
To connect multiple devices on one DMX data link, follow the steps below:

- 01) Use a 3-pin XLR cable to connect the XLR IN connector of the PowerCore Server to the XLR OUT connector of the 1st device.
- 02) Connect the XLR IN connector of the 1st device to the XLR OUT connector of the 2nd device with a 3-pin XLR cable.
- 03) Repeat step 2 to connect all devices in a daisy-chain.

Figure 6



6. Wire Diagram



7. Troubleshooting

This troubleshooting guide contains solutions to problems which can be carried out by an ordinary person. The device does not contain user-serviceable parts.

Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

Refer servicing to instructed or skilled persons. Contact your Highlite International dealer in case the solution is not described in the table.

Problem	Probable cause(s)	Solution
The device does not function at all	No power to the device	Make sure that the device is connected to power supply and the cables are plugged in
	Main fuse is blown	- Replace the fuse (see 8.3.1. Replacing the Fuse on page 30) - Check the total current load of the connected devices - Check if the external devices connected to the outputs are not damaged
	The RCBO (07) is in the OFF position	Move the RCBO (07) to the ON position
The measurement data seems incorrect	The settings of the device are incorrect	Make sure that the required settings have been configured (see 5.6.4.2. Required Settings on page 25)
The device does not communicate with the server	The MdbuS settings are incorrect	Make sure that the device is set to the correct MdbuS address (see 5.8. MdbuS Connection on page 26)

8. Maintenance

8.1. Safety Instructions for Maintenance

**DANGER**

Electric shock caused by dangerous voltage inside

Disconnect power supply before servicing or cleaning.

8.2. Preventive Maintenance

**Attention**

Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- The safety devices are not damaged.
- There are no deformations on housings, fixings and installation points.
- The power cables are not damaged and do not show any material fatigue.

8.2.1. Basic Cleaning Instructions

To clean the device, follow the steps below:

- 01) Disconnect the device from the electrical power supply.
- 02) Allow the device to cool down for at least 5 minutes.
- 03) Clean the device with a soft, lint-free cloth.

**Attention**

- Do not immerse the device in liquid.
- Do not use alcohol or solvents.

8.3. Corrective Maintenance

The device does not contain user-serviceable parts. Do not open the device and do not modify the device.

Refer repairs and servicing to instructed or skilled persons. Contact your Highlite International dealer for more information.

8.3.1. Replacing the Fuse



DANGER
Electric shock caused by short-circuit

- Do not bypass the thermostatic switch or fuses.
- Replace fuses only with the same type and rating.

Power surges, short-circuit or incorrect electrical power supply may cause a fuse to burn out. If the fuse burns out, the device will not function anymore. If this happens, follow the steps below:

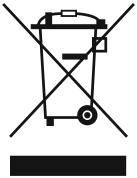
- 01) Disconnect the device from the electrical power supply.
- 02) Allow the device to cool down for at least 15 minutes.
- 03) Loosen the fuse cover with a screwdriver and remove the fuse holder.
- 04) If the fuse is brown or unclear, it is burned out. Remove the old fuse.
- 05) Insert a new fuse in the fuse holder. Make sure that the type and the rating of the replacement fuse are the same as the ones specified on the information label of the product.
- 06) Replace the fuse holder in the opening and tighten the fuse cover.

9. Deinstallation, Transportation and Storage

- Use the original packaging to transport the device, if possible.
- Clean the device before storing (see [8.2.1. Basic Cleaning Instructions](#) on page 29).
- Store the device in the original packaging, if possible.

10. Disposal

Correct disposal of this product



Waste Electrical and Electronic Equipment

This symbol on the product, its packaging or documents indicates that the product shall not be treated as household waste. Dispose of this product by handing it to the respective collection point for recycling of electrical and electronic equipment. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. For more detailed information about recycling of this product contact the local authorities or the authorized dealer.

11. Approval



Check the respective product page on the website of Highlite International (www.highlite.com) for an available declaration of conformity.

