Operating Manual

Meech

HYPERION™
A Meech Innovation

IonCharge50 (75W)

Static Generator

Contents

Document version: 4 Software Version: HV PCB = 1,02,00 / LCD = 03.01.00

1.0 Preface

This operating manual provides information necessary for the installation and operation of the IonCharge50 static generator and also includes technical characteristics and troubleshooting.

It applies to the IonCharge50 models which are detailed in section 1.1 on page 5.

The operating manual must be read and understood before operating the IonCharge50 and should remain accessible to operators. This is important for safety and correct operation and also for warranty cover.

This manual can also be downloaded from the Meech website.

1.1 IonCharge50 Product Codes

IonCharge50 Model / Product Code	Description
AIC50-75DC-N-00	IonCharge50 Static Generator; 50kV Neg.; 75W. 24VDC
AIC50-75DC-P-00	IonCharge50 Static Generator; 50kV Pos.; 75W. 24VDC
AIC50-75AC-N-00	IonCharge50 Static Generator; 50kV; Neg; 75W. 240VAC
AIC50-75AC-P-00	IonCharge50 Static Generator; 50kV; Pos; 75W. 240VAC

2.0 Safety

The safety information below must be followed to prevent physical injury and damage to the IonCharge50 or connected parts and nearby objects.

SAFETY WARNINGS

2.1 This Operator manual must be read before operation of the IonCharge50.

2.2 Installation and connection must be completed by a qualified electrical engineer, according to the applicable local regulations.

2.3 This equipment must be grounded / earthed via the mains plug and by direct connection to the ground / earth post on the connection endplate of the IonCharge50.

2.4 Only use IonCharge50 in combination with compatible Meech static generator bars and pinning heads.

2.5 Disconnect the power supply before performing any installation and maintenance work on the IonCharge50 or static generator bars or pinning heads.

2.6 Before connecting any product to the IonCharge50 switch off or disconnect the power to avoid sparking and possible injury due to electric shock.

2.7 Keep the IonCharge50 free of dirt, dust and moisture and do not expose to vibrations and knocks.

2.8 Always use the blanking plugs provided to block off any unused HV output sockets

2.9 Repairs to IonCharge50 must only be carried out by Meech.

3.0 Introduction

The IonCharge50 is a high voltage generator that is used to provide a high voltage to Meech charging bars and pinning heads and is for use in applications where temporary bonding of materials is required.

The IonCharge50 is available in either positive or negative variants and also with either 24VDC or 110/240VAC power supply.

The generator has a touchscreen interface. Settings include controlling both voltage and current outputs and status information. The IonCharge50 is also available with optional industrial network connectivity.

The IonCharge50 generates a stabilised high voltage up to 50kV at 1.5mA. Both the output voltage and current can be controlled via the touchscreen or remotely. The values and status are clearly displayed on the touchscreen. The high voltage output is available from both ports on the connections end plate.

FRONT

3.0 Introduction

CONNECTIONS END PLATE

1. On/Off LED – Solid Green = Power connected and operational
   Solid Red = Error.
   NOTE: When in perforation detection mode, the LED will be Red as long as flashover is present (subject to 50ms minimum).
2. On/Off Rocker Switch – The switch turns the IonCharge On and Off, the same as any other conventional switch.
3. Power – The power connector will either be a 4 pole M8 24V connection or a 240V IEC connector.
4. Earth Stud – When the unit is electrically connected this stud must also be connected to a nearby ground connection.
5. Serial No. /Bar Code – This holds all product information and will be required for any warranty claims or assistance with the IonCharge50.
6. HT Outputs – the Meech ancillary products can be connected through these cable connections.
7. Comms - M8 4 pole connector for control and monitoring.
8. Control - M12 4 pole connector for 4 - 20 mA voltage and current control and ground, remote On/Off, HT OK/Perforation Detected.
9. Fan and Filter Housing .

4.0 Contents of the Box

The IonCharge50 is carefully packed at our factory in a container designed to protect it from accidental damage. Nevertheless, we recommend careful examination of the carton and contents for any damage. If damage is evident, do not destroy the carton or packing material and immediately notify the carrier of a possible damage claim. Shipping claims must be made by the consignee to the delivering carrier. In addition, please also notify Meech International of any damage claims that may be made against the delivery carrier.

Contents of Box:

- IonCharge50
- Manual
- IEC Cable (applicable when ordering 240V AC model)
- 4 x Mounting Brackets with 8x M3 mounting screws (pre-screwed on underside)
- Earth cable

Optional Equipment:

24V DC switch mode and mains cable (for use with IonCharge50 24V DC model)

NOTE: If using own 24V DC power supply, the requirement is 96W.

5.0 Installation

5.1 Electrical

5.1.1 INSTALLATIONS AND CONNECTIONS MUST BE COMPLETED BY A QUALIFIED ELECTRICAL ENGINEER.

5.1.2 THIS EQUIPMENT MUST BE GROUNDED / EARTHED VIA THE MAINS PLUG AND BY DIRECT CONNECTION TO THE GROUND / EARTH POST ON THE CONNECTION ENDPLATE OF THE IONCHARGE50.

5.1.3 Depending on the model of the IonCharge50 the unit needs to be connected to either:

a. 110/240V supply with a possible max current draw of 110V and 240V. This is connected via the IEC cable into the socket on the unit.

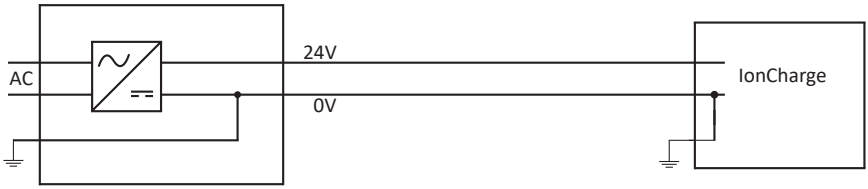
b. 24VDC power supply. The maximum power consumption for the 24V powered IonCharge50 is 96W, connected via M8 4 pole connector.

NOTE: If connected to a 24V power supply, please read points 5.1.4 and 5.1.5.

5.0 Installation (Continued)

5.1.4 Connection using a **Grounded** 24V DC power supply. E.g. Meech part number A900IPS-SM2MS-96W.

- Meech 24V DC supplies are grounded internally. They are supplied with a three wire IEC C5 cable.
- The ground connection must be correctly connected at the mains connection.
- Other grounded power supplies may be used, as long as there is electrical continuity from the mains ground connection to the 0V line of the DC output.

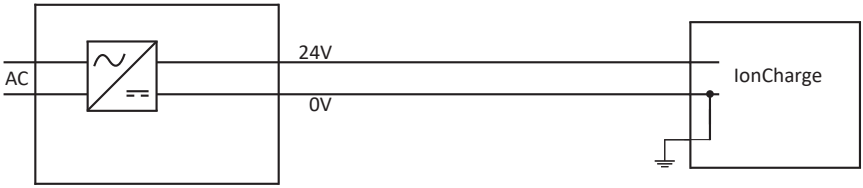


Grounded 24V supply
e.g. Meech A900IPS-SM2MS-96W

IonCharge grounded by power supply and ground on IonCharge.

5.1.5 Connection using an **Ungrounded** 24V DC power supply.

- The output of many 24V power supplies are not grounded.
- If this type of power supply is used, it is vital that the system is grounded using the grounding post on the IonCharge50.



Ungrounded 24V supply

IonCharge grounded by ground post.

5.0 Installation (Continued)

5.1.6 Any product connected to the IonCharge50 should be done whilst the power is off to avoid sparking and possible injury due to electric shock.

5.1.7 The Meech products are connected through the HV output in the bottom left of the connection end plate. If the connector does not look and screw in as shown in the picture below, it must not be used with the IonCharge50.

5.1.8 The warranty will be void if the product connected to the IonCharge50 is not done so correctly and/or is not a Meech product.

5.0 Installation (Continued)

5.2 Physical Mounting

5.2.1 The IonCharge50 comes with 4 adjustable mounting brackets; for installation to any flat surface.

5.0 Installation (Continued)

5.2.2 The mounting brackets can be moved as shown below by loosening the two retaining screws.

5.2.3 It is suggested that when mounting the IonCharge50 at least 2 holes per bracket are attached to what the IonCharge50 is placed on.

5.2.4 The IonCharge50 weighs 3.75 kg, this will need to be taken into account if mounting on a weak structure or surface.

5.2.5 If the IonCharge50 is sat on a flat surface, we would advise that it is always secured down to prevent accidental damage from occuring.

6.0 Operation

6.1 Pre Checks

Check the following before switching the generator on:

- The generator is securely mounted
- Power input and case are correctly grounded
- Charging electrodes are correctly connected to the HV output sockets.

6.2 Operation - Introduction

The IonCharge50 generates a stabilised high voltage up to 50kV at 1.5mA, or 30kV at 2.5mA. Both the output voltage and current can be controlled via the touchscreen or remotely. The values and status are clearly displayed on the touchscreen. The high voltage output is available from both ports on the connections endplate.

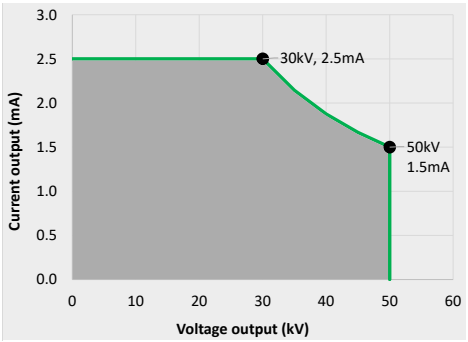


Fig 1: IonCharge50 - 75W Power Output Distribution

In *Fig 1,* the green line shows the maximum voltage and current for the IonCharge50 (75W).

For example, at the maximum voltage setting of 50kV the maximum current is 1.5mA and for voltage settings up to 30kV the maximum output current is 2.5mA.

The IonCharge50 is designed to automatically adjust either voltage or current depending on the Setpoints selected for each on the power adjustment screen (see 6.4.4) and the operating conditions (e.g. length of static bar and distance of static bar from ground source). The touch screen display continuously indicates which value is being automatically adjusted and which is set. This is indicated by the **SET** and **AUTO** indicators against either voltage or current output.

6.0 Operation (Continued)

6.3 Operating Screens Overview

The following 3 pages are an overview of the screen layouts and operations of the IonCharge50; for more in-depth information on the functions of the IonCharge, please see page 17 onwards.

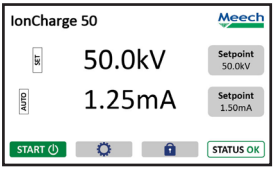
IonCharge50 can be operated using the touchscreen or remotely.

6.3.1 Start Functionality

Starting Of IonCharge50

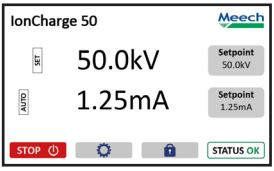
START

When the unit is powered on and Voltage/ Current has been set, the start button can then be pressed. Until these parameters have been set the start/stop button will not be active.

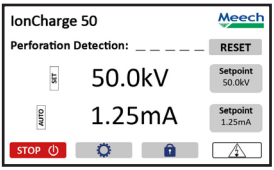


Operation Running Well

Once the start button is pressed, the IonCharge50 will then begin to run. You will then be greeted by the standard operations screen (right). This screen will display the settings which have been selected within the adjustment screens of the IonCharge50, and a stop button to cease operation.



NOTE: When in perforation detection mode, the screen will be displayed as in the image on the right hand side.

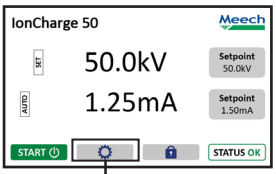


Error When In Operation

Once the start button is pressed, if an error occurs, the screen (right) will be shown. This alerts users to an 'error' of the IonCharge50, allowing the generator to be reset.

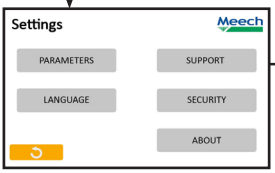
6.0 Operation (Continued)

6.3.2 Settings Functionality



Settings Of IonCharge50

The settings button on the home screen provides access to the different settings and adjustments of the IonCharge50.

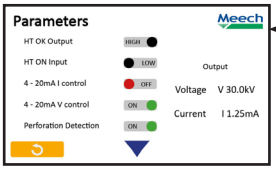


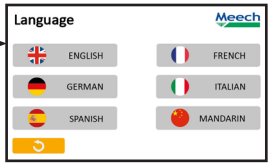
Settings Home Page

This is the main navigation area to all options and adjustments which can be altered.

Parameters

The parameters screen allows users to make adjustments to the operating parameters of the generator such as 4 - 20mA control, screen brightness etc.



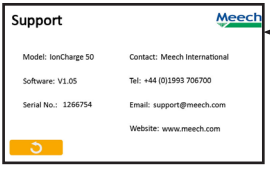


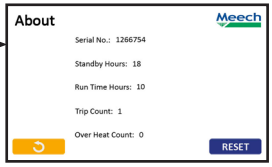
Language

Information can be displayed in multiple languages; the desired language can be selected through this screen.

Support

Further information such as contact details for Meech International in addition to the serial number and software version can be viewed in the support tab.





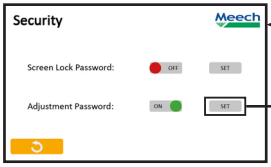
About

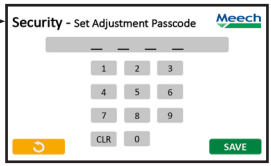
The key system information can be viewed in the 'About' tab.

Information such as the serial number, standby hours, run-time hours, trip count and over heat count are displayed here.

Security

The 'Security' section allows users to turn on/ off passcode protection for protected operations and set the passcode if required.





Setting Security Passcode

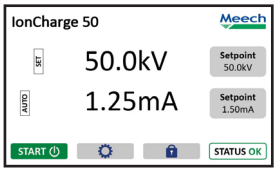
In this area a 4-digit passcode can be set.

6.0 Operation (Continued)

6.3.3 Security Functionality

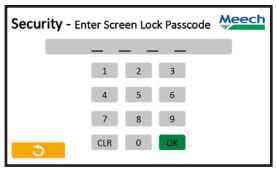
Screen Lock For IonCharge50

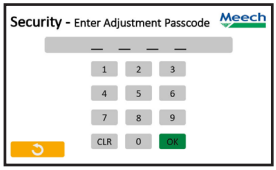
The screen of the IonCharge can be locked and unlocked via the 'lock' button which is located on the home screen. When enabled the entire screen other than the unlock button is disabled.



Entering Screen Lock/Power Adjustment Passcode

If the option to enable a passcode for the screen lock and/or power adjustment is enabled, a passcode screen (as shown on the left) will be shown. This feature can be enabled/disabled, in addition to setting of the passcode via the security screen which is located in the settings menu.



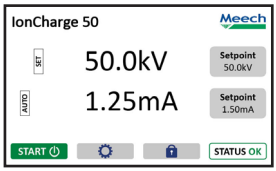


6.3.4 Power Adjustment Functionality

IonCharge50 Power Adjustment

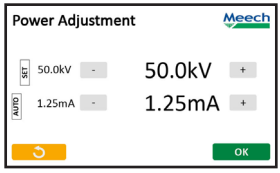
Setpoint kV Setpoint mA

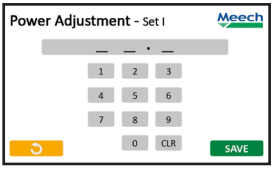
The power output of the IonCharge50 can be adjusted via the 'Setpoint' buttons located on the home screen.



Entering Values For Power Adjustment

Users can adjust the power output from the IonCharge50 through tapping either the '+' or '-' buttons located above and below the values shown on the screen. By tapping on these values, a second power adjustment screen will be shown which allows users to manually enter their desired output.





6.0 Operation (Continued)

6.4 Commissioning and Operation

6.4.1 Switching On and Starting IonCharge50

a. Ensure the power cable is connected to the rear of the IonCharge (either IEC cable or MURR Connector for 24V DC)
b. Switch the unit on using the switch on the rear panel.
c. The unit will then boot up.
d. To start the static generator, press the START button.

IMPORTANT: THIS EQUIPMENT MUST BE GROUNDED/EARTHED EITHER VIA THE MAINS PLUG AND BY DIRECT CONNECTION TO THE GROUND/EARTH POST ON THE REAR OF THE IONCHARGE50.

6.4.2 Stopping and Switching Off IonCharge50

a. To stop the IonCharge, press the STOP button on the screen.
b. To switch off the power supply to the IonCharge50, press the switch on the rear panel.

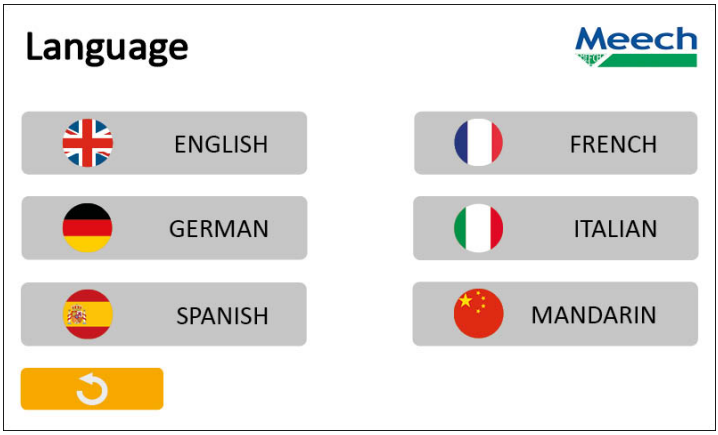
6.0 Operation (Continued)

6.4.3 Selecting User Language

The information which is shown on the touchscreen can be displayed in 6 different languages.

To change the language

a. Press the settings button on the main screen
b. Press the button which shows the flags.
c. Select the desired language (the language which is currently in use will be displayed with a black border)
d. Press the return button to go back to the main/home page.



6.0 Operation (Continued)

6.4 Commissioning and Operation

6.4.4 Changing the Voltage and Current Setpoint

In the centre of the main screen the real-time output for voltage and current is displayed. The setpoint for voltage and current is displayed inside the two buttons on the right of the main screen. The setpoint displays the maximum level for voltage and current that has been chosen. The setpoint is set to the level required for the application.

The main screen also displays SET and AUTO indicators next to either the voltage or current value. SET means that the value has reached the SETPOINT value and AUTO indicated that the value is automatically adjusting to the conditions.

To Adjust Setpoint:

a. Press either the Setpoint button for voltage or current.

b. The power adjustment screen will then be displayed. Adjust the setpoint using the + and - buttons as required. Voltage adjustment is in increments of 0.1kV, and current adjustments in increments of 0.01mA. The value can also be inputted by pressing on the number which is displayed, which then shows an overwrite screen where the value can be input using the numerical buttons.

c. Once the values for the Setpoints have been entered, return to the main screen by pressing the ↺ button.

NOTE: The current that is drawn by IonCharge50 is dependent on:

- **Setpoints selected for current and voltage**
- **The number and length of static charge bars and also number of pinning heads.**
- **The environmental conditions (temperature and humidity)**
- **The charge bars proximity to electrically grounded parts of the machine to which it has been fitted.**

6.0 Operation (Continued)

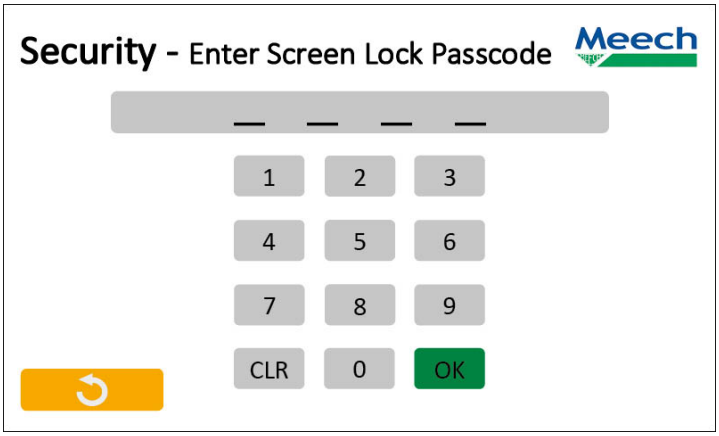
6.4.5 Locking/Unlocking the Touchscreen and Password Protecting

The IonCharge50 touchscreen can be locked in order to prevent unwanted changes from occuring; additionally access for the use of the touchscreen can also be password protected. The generator can be setup to require a password to unlock the access to the generator and/or a password for making adjustments

a) Locking/Unlocking Touchscreen

1. To lock the touchscreen, press the lock button on the main screen. The symbol will change to a locked padlock to show you when functions are accessible or not.
2. To unlock, press the locked symbol and the touchscreen is unlocked. The lock symbol on the home screen will then change to showing as unlocked.

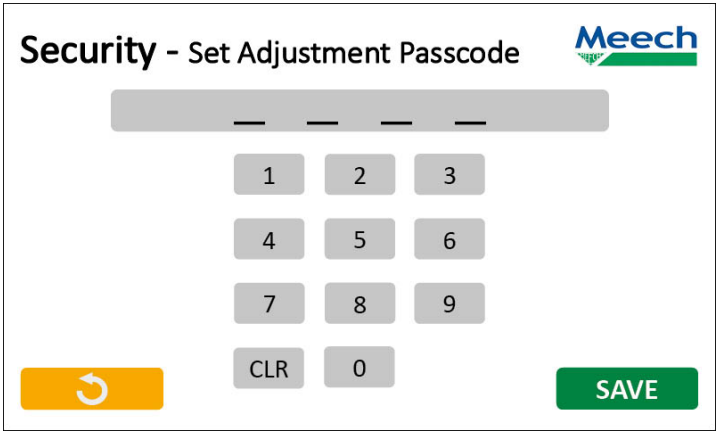
NOTE: If password protection function is enabled, you will need to enter the password in order to unlock the touchscreen.



6.0 Operation (Continued)

b) Password Protection For Lock

1. Press the button on the main screen
2. Select SECURITY
3. Tap on the slider next to 'Password For Lock' to turn it ON
4. To set the password, select SET and enter the password you would like to use for the password protection using the numerical keypad. Once you have entered the password, tap on the SAVE button to save your chosen password.
5. Press the return button to go back to the Settings page; press return again to go back to the main screen.
6. To remove the password protection, press the symbol on the main screen. Enter the correct password for lock. Once the screen is unlocked tap on the to go to the settings page, then select Security and tap the button next to 'Password for Lock' to turn OFF the password lock.



6.0 Operation (Continued)

c) Password Protection For Adjustment

1. Press the  button on the main screen
2. Select SECURITY
3. Tap on the slider next to 'Password For Adjustment' to turn it ON
4. To set the password, select SET and enter the password you would like to use for the password protection using the numerical keypad. Once you have entered the password, tap on the SAVE button to save your chosen password.
5. Press the return button to go back to the Settings page; press return again to to back to the main screen.
6. To remove the password protection, press the  symbol on the main screen. Enter the correct password for lock. Once the screen is unlocked tap on the  to go to the settings page, then select Security and tap the button next to 'Password for Lock' to turn OFF the password lock.

NOTE: The same passcode can not be used for both Screen Lock and Adjustment Lock. Each passcode must be different.

6.4.6 Remote Control of the Current and Voltage Setpoints via 4 - 20mA input signal

Setpoints for voltage and current can also be made remotely via a 4 - 20mA input signal. Signal input is via the 4 pin M8 Control connector on the rear of the IonCharge.

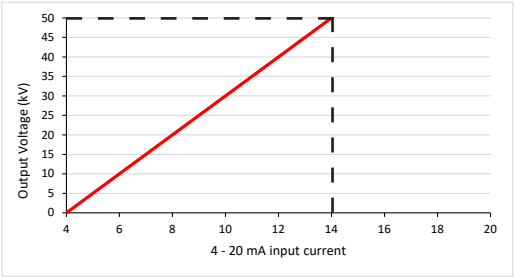
How To Set:

1. Click setting icon on the main screen
2. Click on the PARAMETERS button
3. Select ON for 4 - 20mA and or 4 - 20mA V control

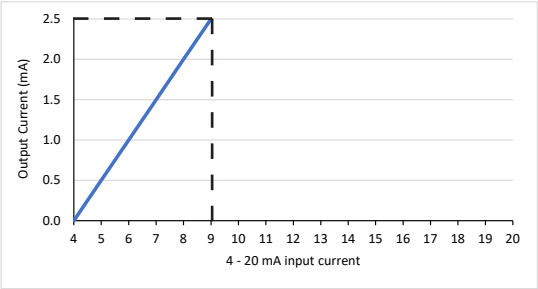
If set to ON, the SETPOINT for voltage and or current will set by the 4 - 20mA input.

See diagram below for further information.

4 - 20mA Control of Output Voltage



4 - 20mA Control of Output Current



6.0 Operation (Continued)

6.4.7 HT OK Output

This setting is used when you want to remotely monitor that the IonCharge50 is outputting the correct high voltage . First you need to connect the IonCharge50 to external monitoring equipment such as a PLC either via pin 5 of the M12 connector labelled ‘Control' on the back panel or pin 2 of the M8 connector labelled 'Power' (24V DC model only).

The output connector has two settings of either HIGH or LOW . To access this setting select ‘Settings’ from the home screen . Then select Parameters and then toggle HT OK OUTPUT . HIGH will output a 24V signal and LOW will output 0V to indicate that the high voltage output is correct . You are able to select either HIGH or LOW depending on your requirements.

Using the white wire from the M8 4 pole cable from the Meech supplied power supply or from grey wire from M12 5 pole cable. You can see the signal using an oscilloscope or Multimeter. This is what is to be used with a PLC for remote monitoring of the HT Output status. This line is also used for the Perforation Detection counter when Perforation Detection Mode is selected (See section 6.4.9).

6.0 Operation (Continued)

6.4.8 HT ON Input

Remote ON/OFF control of the IC50 output is provided via pin 4 of the M12 Control connection (110/240VAC and 24VDC versions) and pin 4 of the M8 'Power' connector .

The connections are pulled up HIGH internally to 24V via 10 kΩ.

Input settings:

24VDC versions.

Pin 4 M8 Power connection: The ON command can be set to High (24V) or LOW (0V). See Settings 6.3.2
Pin 4 M12 Control connection: The ON command is a HIGH input (24V), 0V is OFF.

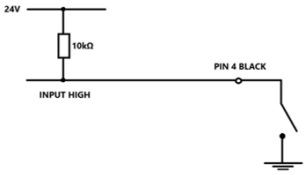
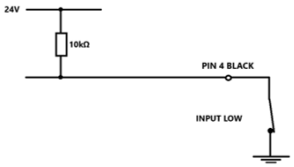
110/240VAC versions

Pin 4 M12 Control connection: The ON command is a HIGH input (24V), 0V is OFF.

An external input which is turning the IonCharge50 off will be indicated on the screen by the START/STOP button changing amber and displaying the

button.

ON/OFF Control Logic

Input Connection	**Power Connector** 24VDC Versions Only		**Comms Connector** 24VDC & 110/240V AC Version
	HT ON = **LO**	HT ON = **HIGH**	
	**OFF**	**ON**	**ON**
	**ON**	**OFF**	**OFF**

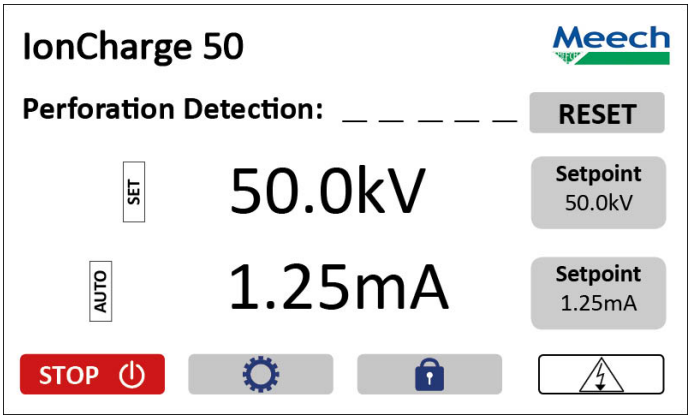
6.0 Operation (Continued)

6.4.9 Perforation Detection Mode

IonCharge50 includes a perforation detection mode. How to set:

1. Click  button on the main screen
2. Click on Parameters
3. Click ON for Perforation detection

When used with a Meech high voltage electrode (hot bar), flashover from perforations in the material are detected and output as a pulse signal to a PLC for counting and activating other machine functions. The IonCharge50 main screen will show a counter that shows the number of perforations with a RESET button. The symbol in the bottom right corner will also indicate a flashover symbol as shown in the image below. Also, when a perforation is detected the LED on the rear panel will show RED for the duration of the flashover (subject to 15ms minimum).



6.0 Operation (Continued)

6.4.10 Adjusting Dim Timer

The touchscreen features a timer for the dimming of the display, which can be adjusted in 5 second increments; with the minimum time that can be set for the unit to dim being 5 seconds. To adjust the timer, select the button on the main screen and then select the PARAMETERS button. You can then adjust the time for the unit to dim using the + and - buttons next to the 'Display Dim Timer' option to increase or decrease the timer in increments of 5 seconds.

6.4.11 Adjusting Dim Level

The touchscreen's dim level can be adjusted from a low of 5% (darkest) to 95% (brightest). To adjust the dim level select the button on the main screen and then select the PARAMETERS button. You can then adjust the dim level for the unit using the + and - buttons next to the 'Display Dim Level' option to increase or decrease the dim level in increments of 5%.

6.4.12 Display Bright Level

The touchscreen's brightness level can be adjusted through the settings of the IonCharge. Once in the settings page, tap on the PARAMETERS button. You can then adjust the brightness levels of the touchscreen by tapping the + and - next to the 'Display Bright Level' to increase or decrease the brightness level from 20% to 100% in increments of 5% .

6.0 Operation (Continued)

6.5 Flashover and Error Indicator

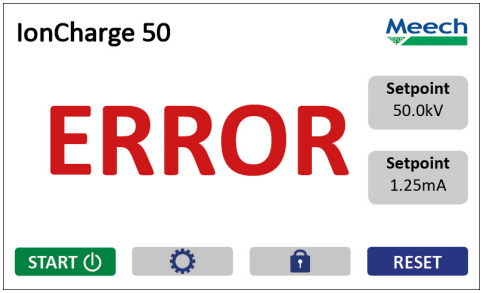
6.5.1 Flashover Indicator

In the event of a flashover, the IonCharge50 main screen will show a flashover symbol in the bottom right corner. The flashover symbol will remain whilst a flashover occurs. A flashover can occur in situations where there is a sudden increase in load on the output for example a short to ground from a damaged HT cable. The system installation should be inspected to verify high voltage cable integrity.

NOTE: When in perforation mode (see 6.4.9) it is normal for the flashover symbol to appear in the bottom right hand corner of the main screen when detecting perforations.

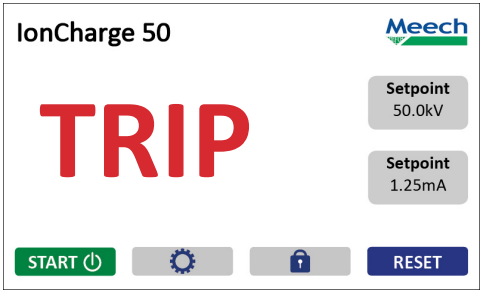
6.5.2 Error Indicator

In the event of a power supply failure or over-temperature the word ERROR will appear on the screen. The HV output will remain off until the IonCharge50 is switched off and on again, or the START button is pressed again. In the event of a power supply failure contact your local Meech office or Meech representative.



6.5.3 Trip Indicator

In the event of a low resistance load being detected the unit will shut off the HV output and display the word TRIP on the screen. The HV output will remain off until the START button is pressed again on the screen.



6.6 Industrial Ethernet Network Connectivity (Optional)

Industrial Network enabled models of the IonCharge50 are available as an option when ordering. Meech has selected a universal and flexible approach for Industrial connectivity which facilitates the integration of the IonCharge50 to Industrial Ethernet based networks.

The Meech multi-network connectivity solution includes the following Industrial networks:

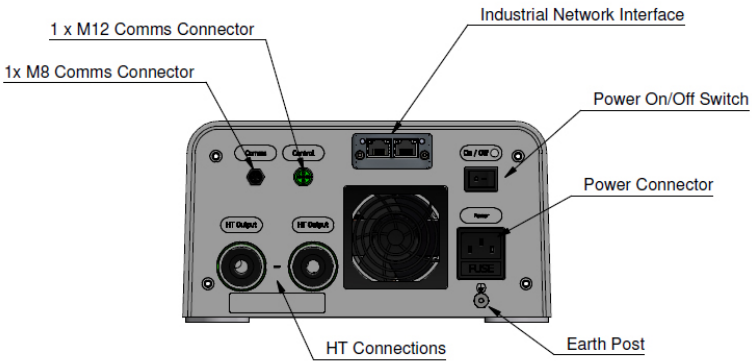
- Profinet-IRT
- Modbus TCP
- EtherNet/IP

6.0 Operation (Continued)

For example, for the connection to a Profinet network, the IonCharge50 comes equipped with the Profinet-IRT module for simple integration as well as with the GSD file which contains all the basic capabilities of the device so it can be programmed into PLCs.

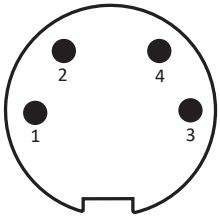
The integrated optional communication module is located at the rear of the IonCharge50 as shown below; and allows connectivity to industrial networks via its RJ45 connector.

IonCharge50 Back Panel

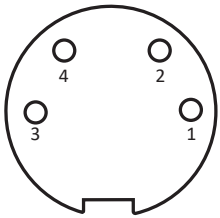


6.0 Operation (Continued)

6.7 Connection Panel Input/Outputs



Male connector on IonCharge



Female connector on cable

4 Pin M8 Connector

IonCharge50 (75W) 24V DC Variant

Power Connector (4 pin M8)

No.	Colour	Function	Specification
1	Brown	Input	24VDC (22...26V)
2	White	Output	HT OK/Perforation Detected 0/24V Output resistance 10kΩ
3	Blue	Input	0V
4	Black	Input	Remote HT ON/OFF 0/24V

Comms Connector (4 pin M8)

No.	Colour	Function	Specification
1	Brown	Output	24V
2	White	Communications	Meech2PLC network module connectivity SmartControl Touch connectivity (not yet available)
3	Blue	Input	0V and ground
4	Black	Communications	Meech2PLC network module connectivity SmartControl Touch connectivity (not yet available)

Control Connector (5 pin M12)

No.	Colour	Function	Specification
1	Brown	Input	4 - 20mA voltage (V) control
2	White	Input	4 - 20mA current (I) control
3	Blue	Input	0V and ground
4	Black	Input	Remote HT ON/OFF 0/24V
5	Grey	Output	HT OK/Perforation Detected 0/24V Output resistance 10kΩ

6.0 Operation (Continued)

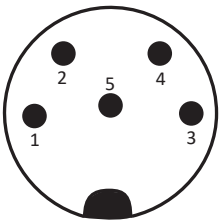
IonCharge50 (75W & 150W) 240V AC Variant

Comms Connector (4 pin M8)

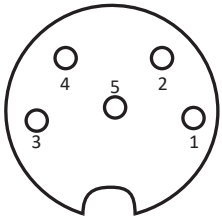
No.	Colour	Function	Specification
1	Brown	Output	24VDC
2	White	Communications	Meech2PLC network module connectivity SmartControl Touch connectivity (not yet available)
3	Blue	Input	0V and ground
4	Black	Communications	Meech2PLC network module connectivity SmartControl Touch connectivity (not yet available)

Control Connector (5 pin M12)

No.	Colour	Function	Specification
1	Brown	Input	4 - 20mA voltage (V) control
2	White	Input	4 - 20mA current (I) control
3	Blue	Input	0V and ground
4	Black	Input	Remote HT ON/OFF



Male connector on IonCharge



Female connector on cable

5 Pin M12 Connector

7.0 Maintainance

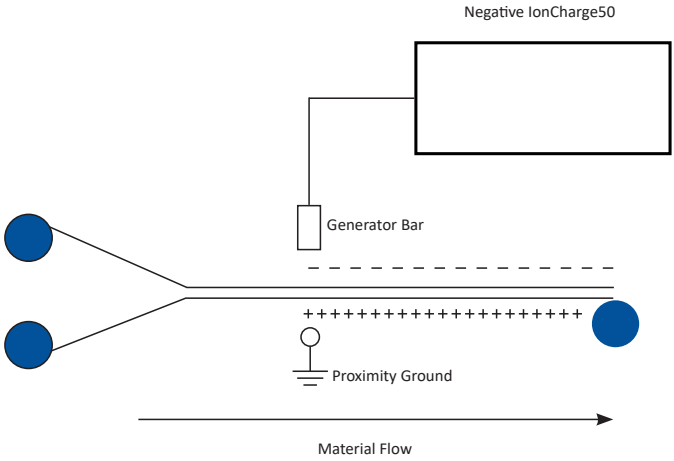
The exterior of the IonCharge Static Generator should be cleaned regularly with a dry cloth to keep it free from dust and other contaminants.

It is important to clean the fan filter periodically to allow a free flow of air for cooling purposes. This will allow the system to work at its full efficiency. To access the filter, remove the filter cover gently using a flat headed screw driver. Brush or blow the filter to clean. Then reposition both filter and cover before use.

8.0 Fault Finding

8.1 Constant Voltage Mode - Typical Application

Reel To Reel



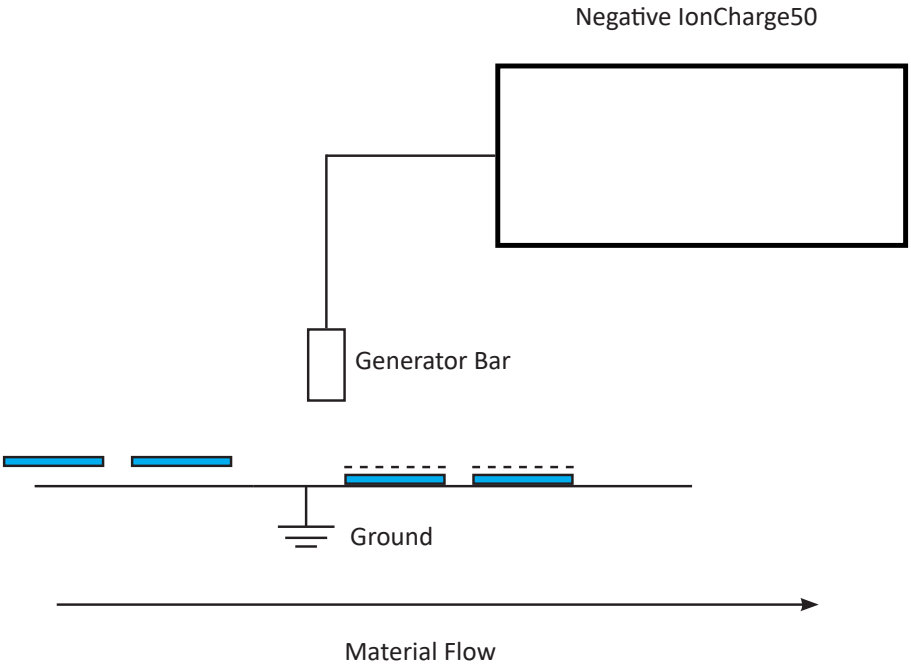
Fault Finding - Constant Voltage Mode

Required voltage cannot be achieved	Increase current setpoint
Required voltage cannot be achieved with current limit set at maximum	Contact Meech International for support
Unit has no output	Check unit has not been switched on. Press the 'START' button to reactivate outputs. Check ERROR is not displayed on main screen. If ERROR displayed, press reset button ro reactivate outputs having checked installations or switch unit off and on. If still no output, contact Meech International.
Screen unlocked and buttons not working	Check that 4-20mA control is off. If buttons are still not working, contact Meech International.

8.0 Fault Finding

8.2 Constant Voltage Mode - Typical Application

Sheets pinned to a conveyor



Fault Finding - Constant Current Mode

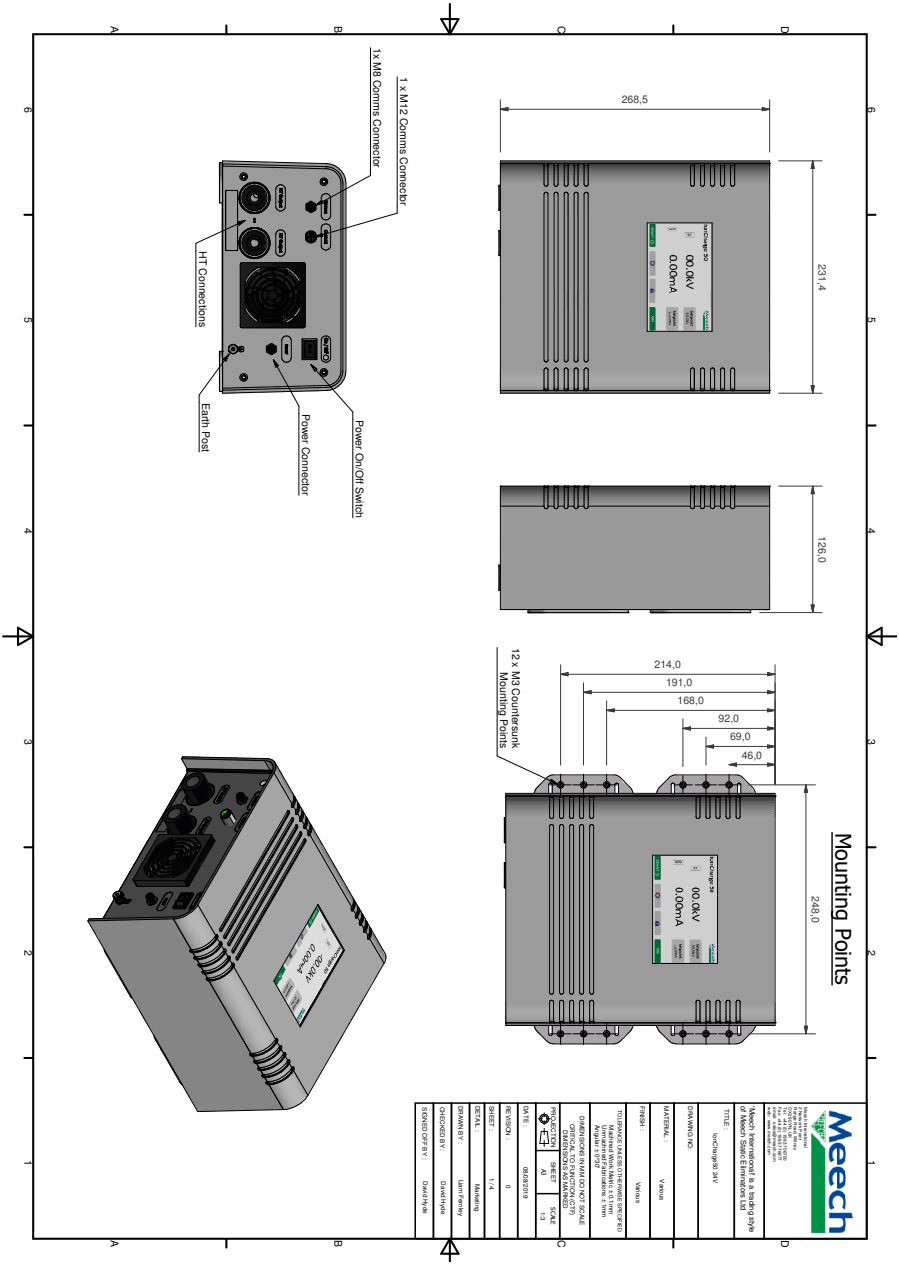
Required operating current cannot be achieved	Increase current limit
Required current cannot be achieved with voltage set at maximum	Move generator bar closer

9.0 Technical Characteristics

Power Output	75W
Output Voltage	0 - 50kV
Output Current	0 - 2.5mA
Output Polarity	Negative or positive versions available
Adjustment Increments	Voltage (V) 0.1kV Currrent (I) 0.01mA
Supply Voltage	24V DC or 90 - 270V AC
Max. Power Consumption (24V Variant)	96W
Input Connection	M8 4 Pole (24VDC) or IEC Socket- Fused (90- 270VAC)
Perforation and Hole Detection	Up to 1200 counting pulses per minute (20Hz). Minimum output pulse duration 15ms (e.g. to PLC).
Output Ports	2x Meech 50kV connections
Meech2PLC	Optional for integration of IonCharge50 to Industrial Ethernet based networks including Profinet-IRT, Modbus TCP and Ethernet/IP
User Interface	5” Touch Screen
Password Protection	Yes
4-20mA Control	Yes
Output Rise Time	50ms
Operating Environment	Industrial
Protection Class	IP20
Dimensions (mm) (W x H x D)	231.4 x 126 x 268.5
Weight	3.75 kg
Housing Material	ABS, Powder Coated Steel

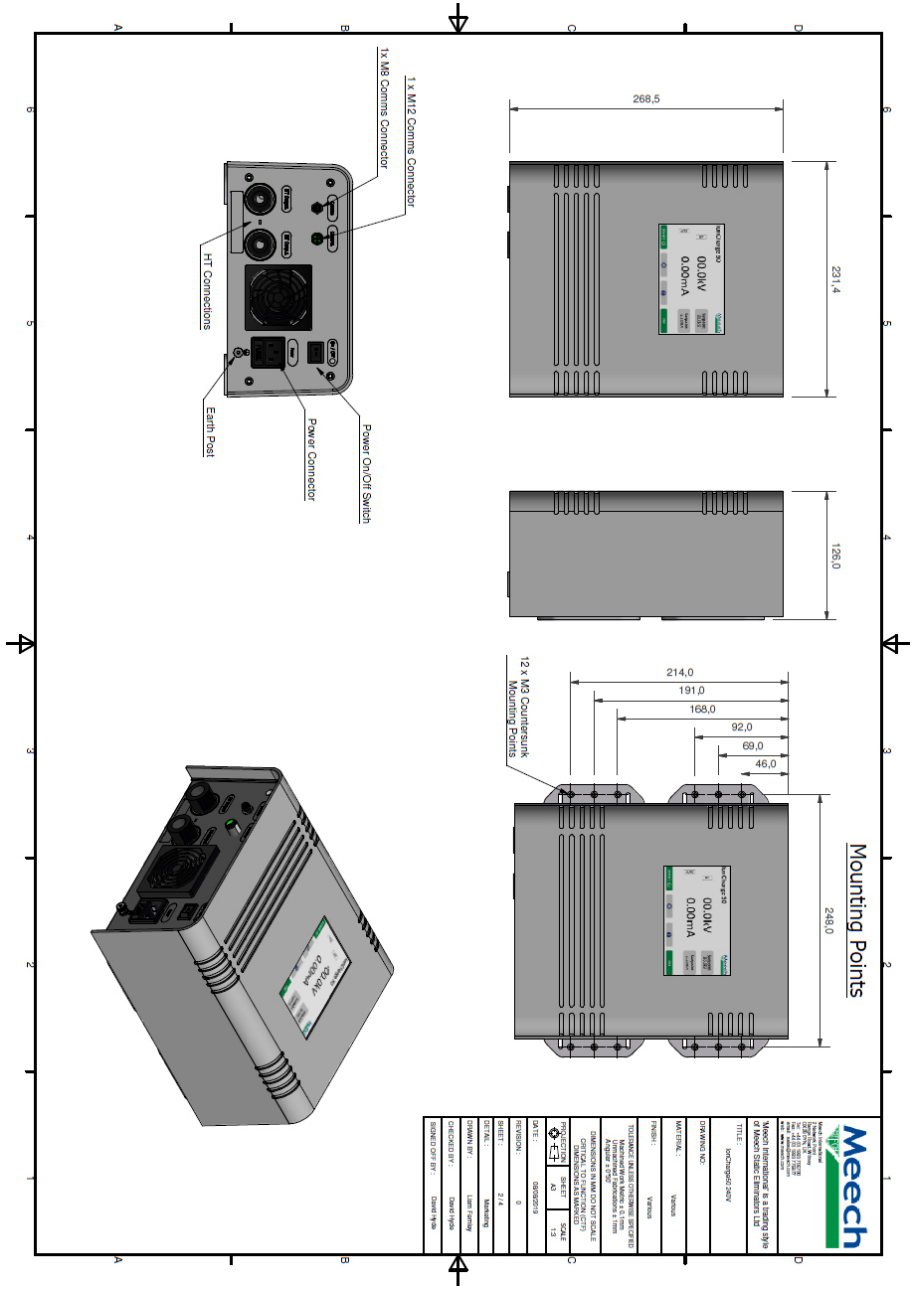
9.0 Technical Characteristics

IonCharge50 (75W) 24V DC Variant



9.0 Technical Characteristics

IonCharge50 (75W) 240V AC Variant



10.0 Repairs and Warranty

The IonCharge50 Static Generator is warranted by Meech Static Eliminators Ltd to the original purchaser against defects in material and workmanship for one year after purchase. Should any malfunction occur, please return the generator directly to Meech Static Eliminators or your local distributor. All products returned to the factory MUST be accompanied by a return authorisation number and must be shipped prepaid. For prompt service, ship the unit to the factory with the return authorisation number shown clearly on the label. Be sure it is well packed in a sturdy carton with shock absorbing material.

Include a note stating the nature of the problem as specifically as possible, and also include instructions for returning the generator to you. We will pay one-way return surface shipping costs on any repairs covered under the warranty.

Field repairs should not be undertaken during the warranty period. Repair attempts by unqualified personnel will invalidate the warranty.

11.0 CE Approval

A CE Declaration of Conformity for this product exists in respect of the Electromagnetic Compatibility Directive 2014/30/EU.

CE

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