

Bond-Rite® CLAMP II

The self testing static grounding clamp

Installation and Operating Instructions



IECEx



The safety of any system incorporating the equipment referred to in this manual is the responsibility of the installer of the system.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Any warranty is made void if the equipment is not installed, or used, in accordance with the manufacturers instructions.

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The words “Earth” and “Ground” have the same meaning when used within this manual.

Verification of the Static Earthing Point

The system monitors the static dissipation path, from the object to which the Static Earthing Clamp or lead is connected to, as far as the Static Earthing Point. It is the responsibility of the end user to provide the Static Earthing Point and ensure that it is suitable for dissipating electrostatic charges. This Earthing Point should be close to the working area. Reference to ATEX 2014/34/EU, ATEX 137, EN 60079-14, IEC TS 60079-32-1, CLC/TR: 60079-32-1, or other equivalent international standard, will give guidance on the installation of a suitable Static Earthing Point.

The above does not apply to any system used to monitor a bond connection only.

**IF YOU HAVE ANY QUERIES REGARDING THE ABOVE POINTS THEN PLEASE
CONTACT NEWSON GALE WITHOUT DELAY.**

Bond-Rite® CLAMP

The self testing static grounding clamp

Operating Instructions

With regard to the relevant Essential Health & Safety Requirements (EHSRs) of the ATEX Directive 2014/34/EU, the following declarations are made with respect to the Bond-Rite Self Testing Clamp:

EHSR 1.0.3:

The following special checking or maintenance conditions are required for the safe operation of the equipment:

The LED flashes when the clamp is operating correctly and is monitoring a good bonding connection.

If the LED does not flash when the clamp is attached to a conductive item then it should be checked as follows:-

Check the condition of all associated cable terminations. Adjust as necessary.

Connect the clamp onto a clean piece of metal. The LED should now flash.

If the LED does not flash replace the battery in accordance with the instructions.

Again connect the clamp onto a clean piece of metal. The LED should now flash.

If the LED still fails to show please contact Newson Gale for further advice.

EHSR 1.1.2:

The constructional materials of the equipment are deemed to be suitable for the intended use.

The following adverse service conditions have been identified and have been considered in the design and manufacture of the equipment:

Ambient temperature range -40°C to +60°C.

EHSR 1.2.2:

Components to be incorporated into or used as replacements in equipment have been so designed and constructed that they function safely for their intended purpose of explosion protection when they are installed in accordance with the manufacturer's instructions.

Battery Replacement

Due to the design of the Ultralife U9VL-J battery and the VARTA 6122 E-Block battery, it can be replaced in the hazardous area.

Use the correct tool to remove the screws which retain the pcb housing lid.

Carefully remove the battery and replace with an identical new battery (Ultralife U9VL-J or VARTA 6122 E-Block).

Replace the housing lid and replace the screws.

The Bond-Rite is not designed to be permanently connected.

The battery life is approximately 1 year with a duty cycle of 3 hours per day.

For battery information please contact Newson Gale.

Installation and Maintenance

Installation of this equipment shall be carried out by suitably trained personnel in accordance with the applicable code of practice (EN 60079-14 within Europe).

The system should be connected as per the relevant installation drawings.

Operation

Attach the Bond-Rite clamp to the item to be grounded (drum, IBC, bucket etc).

If the connection is good (less than 10 Ohms loop resistance) then the green LED lamp should flash at a rate of about 1 flash per second.

If the LED does not flash then the connection resistance is too high. Check the placement of the clamp to ensure a good, positive connection.

The Bond-Rite must have a connection to ground in order to dissipate static electricity.

The earthing clamp should be fitted prior to any other operation as per the recommendations of ATEX 2014/34/EU, ATEX 137, EN 60079-14, IEC TS 60079-32-1 and CLC/TR: 60079-32-1.

Once the process is complete and any interconnecting pipework has been removed, to avoid damage/injury, the clamp should be carefully removed and placed on the appropriate stowage point.

Spare Parts


Replacement Bond-Rite Clamp	Code BRC
LED Assembly	Code VESI02
Ultralife Battery U9VL-J	Code VESB50
VARTA Battery 6122 E-Block	Code BR2/BATT

Repair of this equipment shall be carried out by the manufacturer.

NB: Use only genuine replacement parts. Contact your distributor for all spare parts.

If you are in any doubt regarding the installation please contact Newson Gale without delay.

Bond-Rite CLAMP Technical Specification

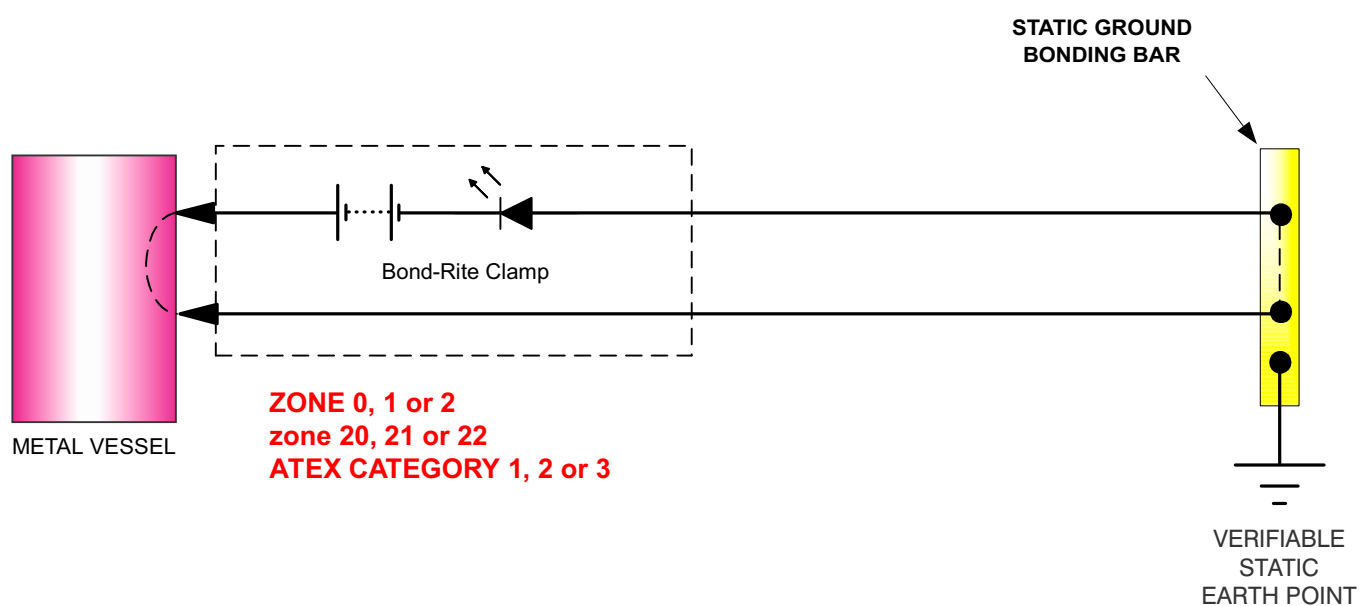
Ingress Protection	IP64
Maximum Ambient Temperature	60° C
ATEX & UKEX Certification	 II 1 G Ex ia IIC T4 Ga II 1 D Ex ia IIIC T135°C Da
IECEx & CCC Certification	Ex ia IIC T4 Ga Ex ia IIIC T135 C Da
Certificate No.	ExVeritas 19ATEX0543, IECEx EXV 19.0058, ExVeritas 21UKEX0834 KCs (Gas) 22-AV4BO-0296X, KCs (Dust) 22-AV4BO-0297X CCC 2021312309000480
Monitored Loop Resistance	10 Ω maximum
Indicator Lamp	LED: 1 green (earth connection healthy)

NB: In line with our policy of continual product development, we reserve the right to alter specifications at any time.

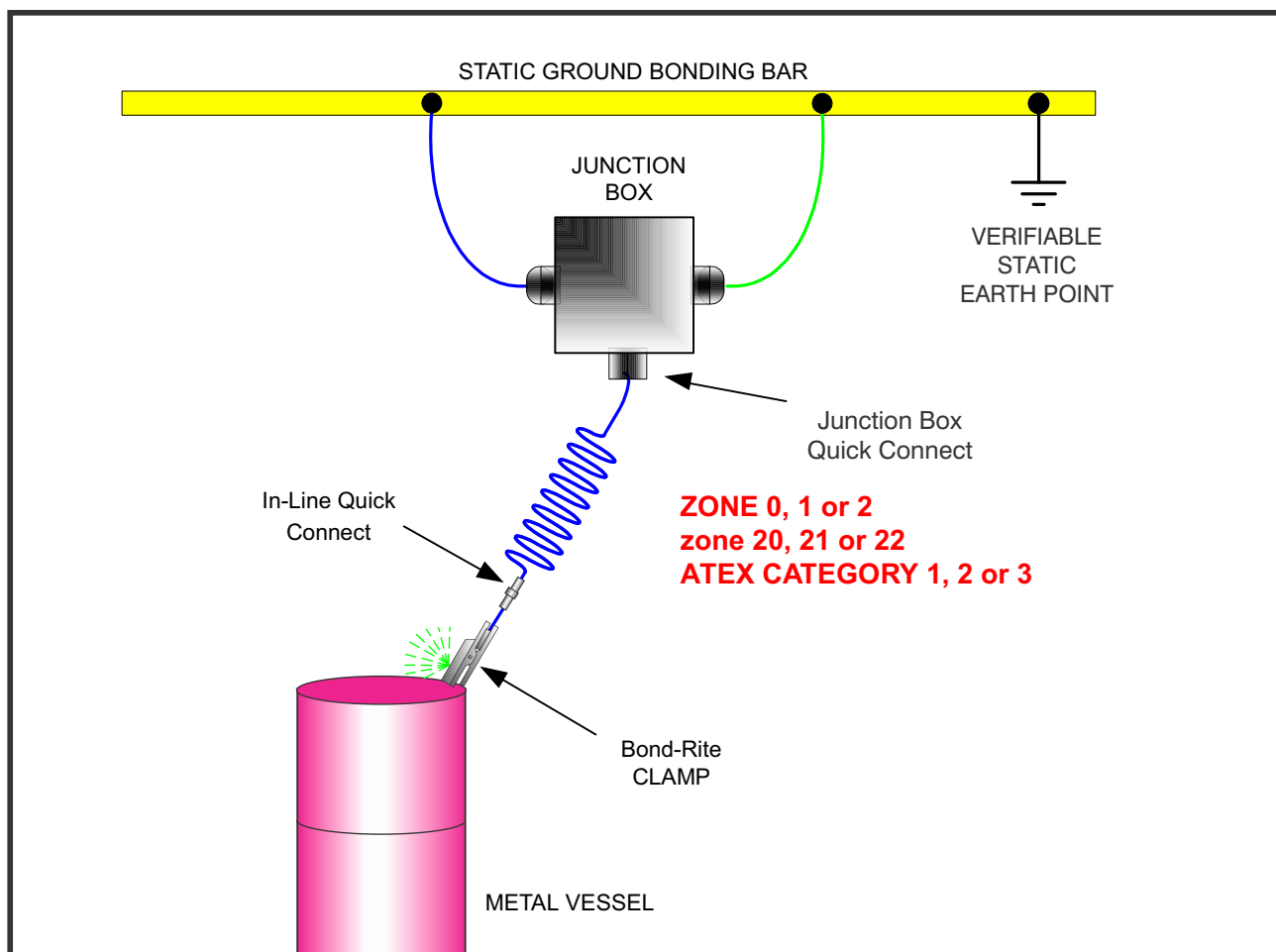
Bond-Rite CLAMP

EQUIVALENT CIRCUITS

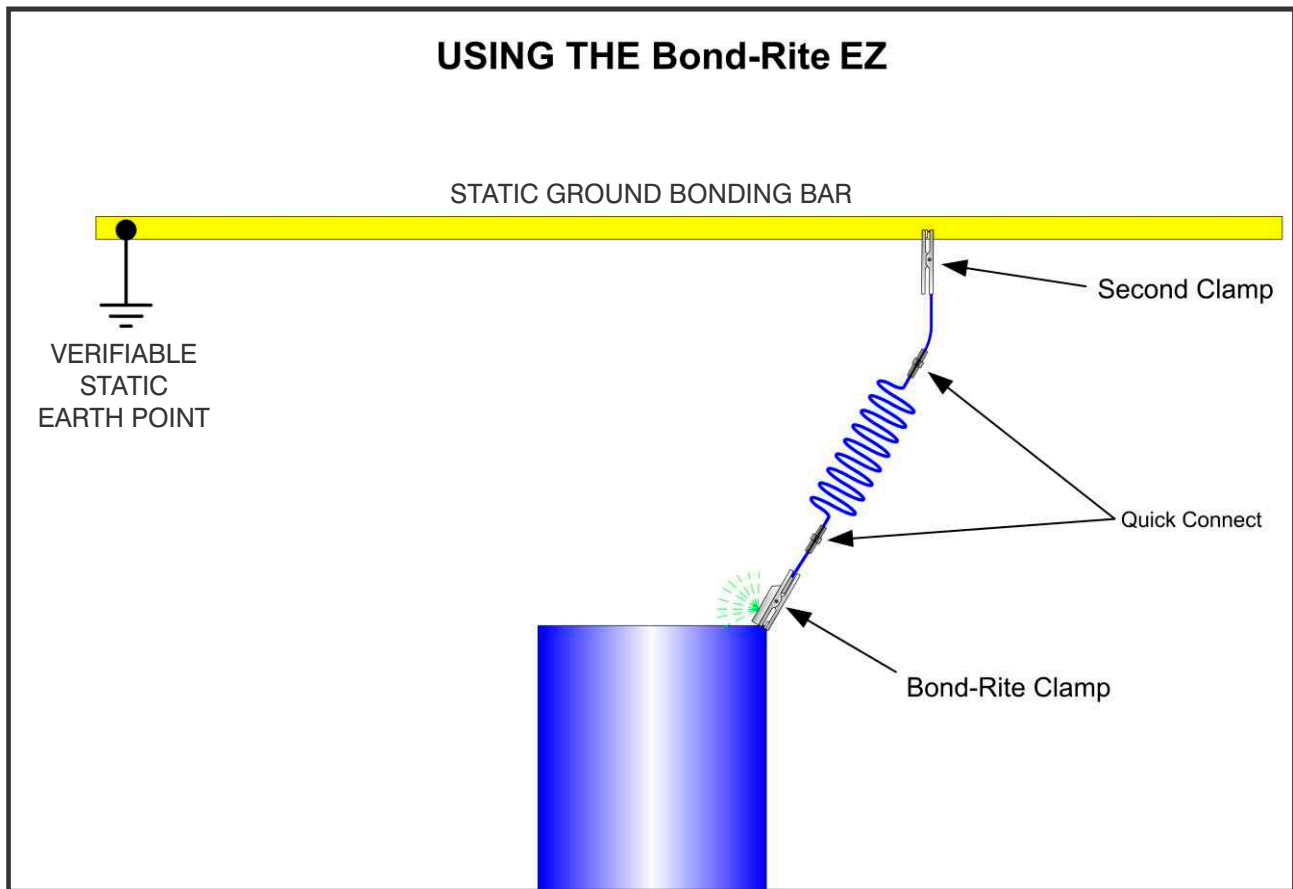
GROUND-LOOP MONITORING (G.L.M.) ARRANGEMENT



INSTALLATION OF GROUND LOOP MONITORING **Bond-Rite**



Bond-Rite EZ



Operation

Attach the Bond-Rite clamp to the item to be earthed (drum, IBC, bucket etc).
Attach the dual circuit clamp to a verifiable earth conductor such as the static ground bonding bar.

Note: The Bond-Rite is designed to mitigate the build up of an incendive electrostatic charge during a mixing or transfer operation. Care should be taken to ensure that there is no static charge built up on the item before attaching the clamp.

If the connection is good (less than 10 Ohms loop resistance) then the green LED lamp should flash at a rate of about 1 flash per second.

If the LED does not flash, although the battery is in good condition, then the connection resistance is too high. Check the placement of the Bond-Rite clamp to ensure a good, positive connection.

The Bond-Rite lead must have a connection to earth in order to dissipate static electricity.

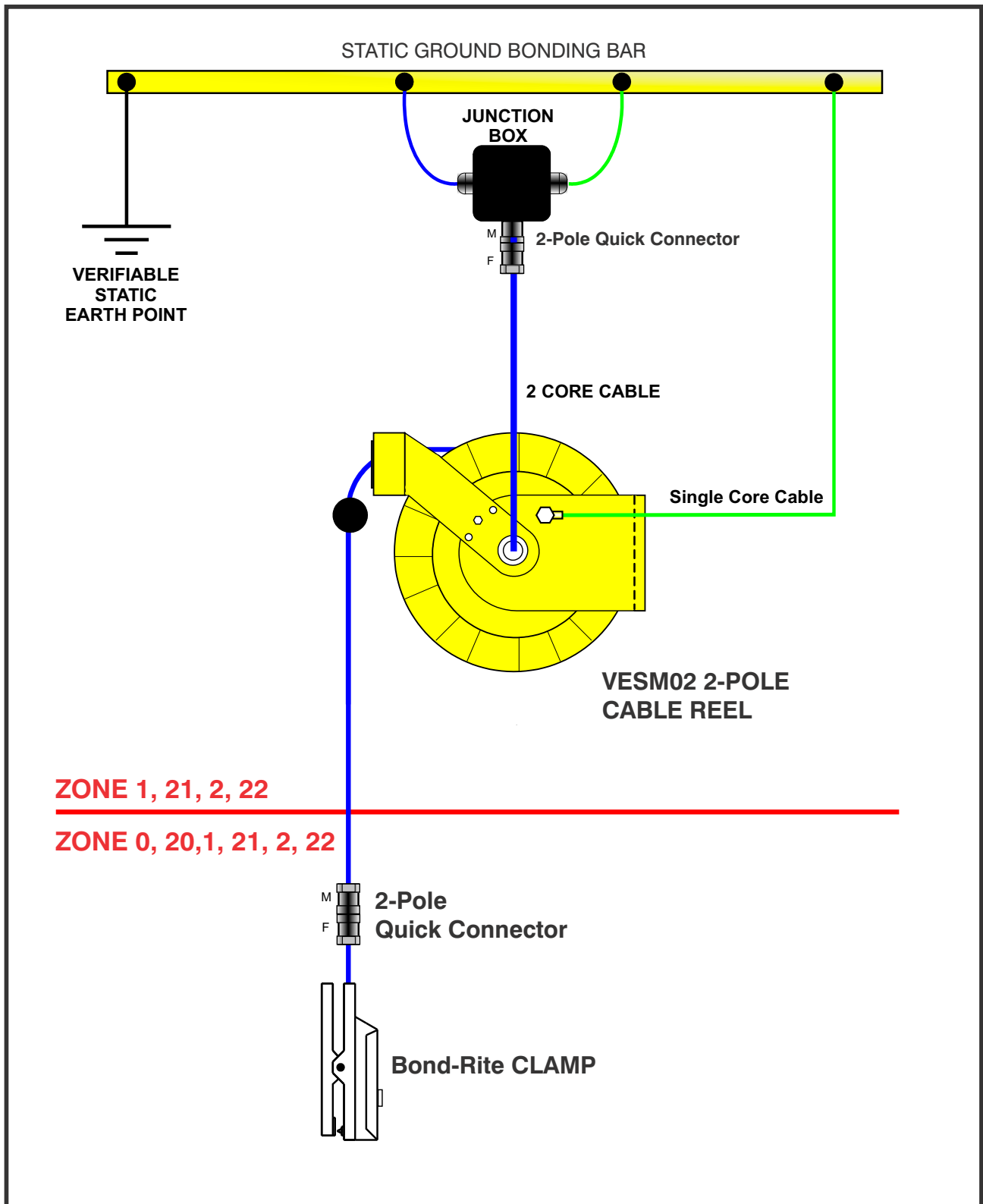
Battery Replacement

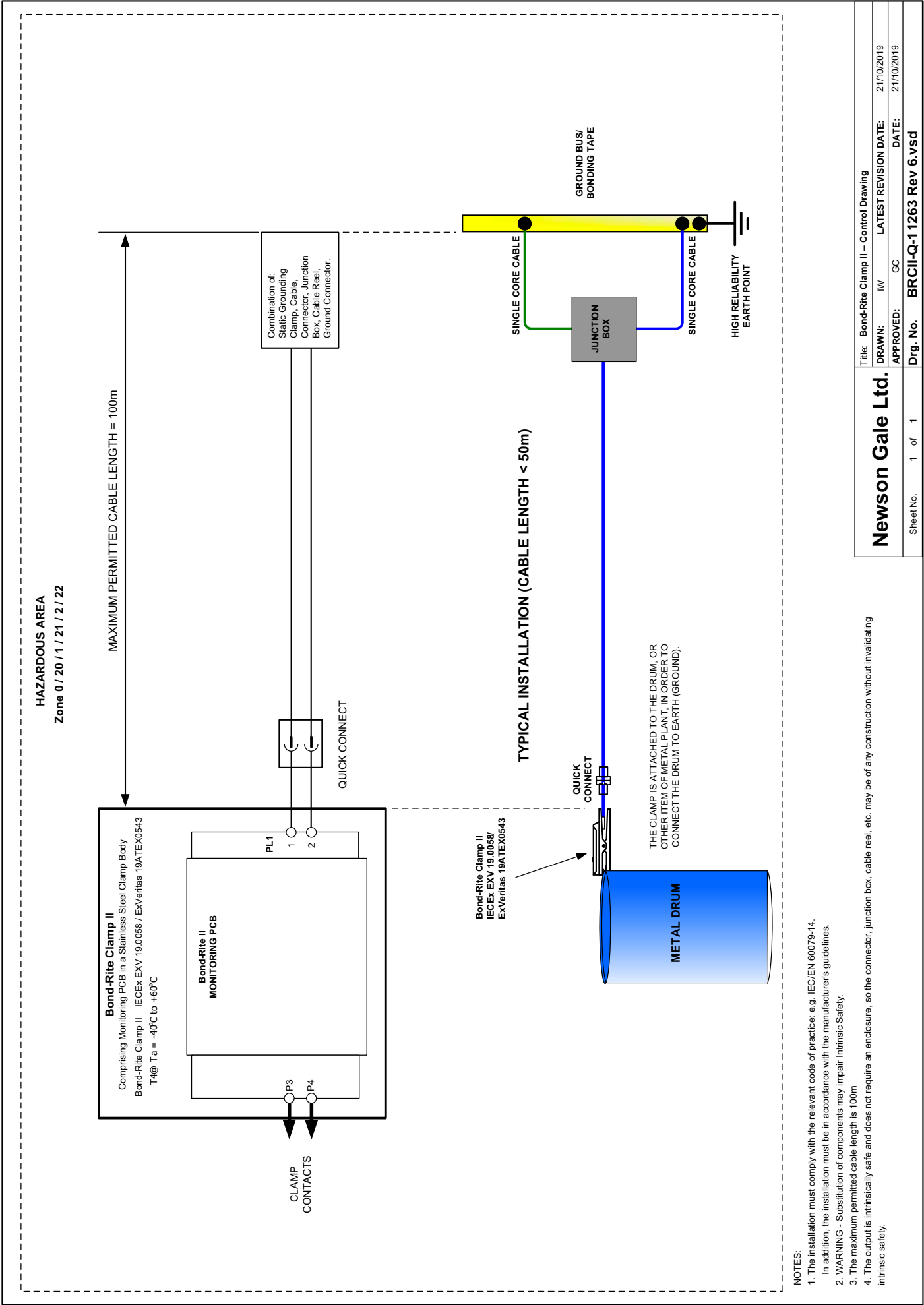
Use the correct tool to remove the screws which retain the pcb housing lid.

Carefully remove the battery and replace with an identical new battery (Ultralife U9VL-J or VARTA 6122 E-Block).

Replace the housing lid and replace the screws.

Bond-Rite CLAMP with VESM02 Reel
EU Version





Newson Gale Ltd.		Title: Bond-Rite Clamp II – Control Drawing	
DRAWN: IW		LATEST REVISION DATE: 21/10/2019	
APPROVED: GC		DATE: 21/10/2019	
Sheet No. 1 of 1	Drg. No. BRCII-Q-11263 Rev 6.vsd		

User instructions in compliance with IEC 60079-0

The following instructions apply to the **Bond-Rite Clamp II Self Monitoring Clamp, Ex [ia]**, covered by certificate numbered **IECEx EXV 19.0058, ExVeritas 19ATEX0543 and ExVeritas 21UKEX0834.**

Instructions for safe selection, installation, use, maintenance and repair

The equipment may be used in zones 20, 21 and 22 with flammable dusts, powders and flying, conductive or non-conductive, the only limitation being the layer ignition temperature shall be at least 210°C (i.e. 75K above the marked surface temperature).

The equipment may be used in the presence of flammable gases and vapours with apparatus groups IIC or IIB or IIA and with temperature classes T1 or T2 or T3 or T4.

The equipment is certified for use in ambient temperatures in the range of -40°C to +60°C and should not be used outside this range.

The equipment is to be installed by suitably trained personnel in accordance with the applicable code of practice (typically IEC/EN 60079-14).

No user adjustment is required.







Regular periodic inspection of the equipment should be performed by suitably trained personnel in accordance with the applicable code of practice (typically IEC/EN 60079-17) to ensure it is maintained in a satisfactory condition.

The equipment is not intended to be repaired by the user. Repair of the equipment is to be carried out by the manufacturer, or their approved agents, in accordance with the applicable code of practice.

The equipment contains no user-replaceable parts, other than the battery.

Use only Ultralife U9VL-J battery or VARTA 6122 E-Block batteries. These batteries are intrinsically safe and may be replaced while the equipment is in a hazardous area.

Label Detail

 2021312309000480 Ex ia IIC T4 Ga Ex iaD 20 T135°C  ExVeritas 21UKEX0834 2585	 2804  II 1 G II 1 D ExVeritas 19ATEX0543 Ex ia IIC T4 Ga Ex ia IIC T135°C Da Ta = -40°C to +60°C IECEx EXV 19.0058 Use only Ultralife U9VL-J or VARTA 6122 E-Block battery This battery is intrinsically safe and may be replaced while the equipment is in a hazardous area.	Newson Gale Ltd Nottingham NG4 2JX UK BRC WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY 	INTRINSICALLY SAFE CL I Div 1 Group A, B, C, D CL II Div 1 Group E, F, G CL III Div 1 Exia  22-AV4BO-0296X 22-AV4BO-0297X WHEN USED IN S.KOREA DO NOT CHANGE BATTERY IN A HAZARDOUS AREA
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YY/XXXXX

NOTE:

YY = Year of Manufacture
XXXXX = Specific Serial Number



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e-mail: groundit@newson-gale.co.uk

EU Declaration of Conformity

In accordance with ISO/IEC 17050-1

This declaration of conformity is issued under the sole responsibility of Newson Gale Ltd of Omega House, Private Road 8, Colwick, Nottingham

Declare that:

The Newson Gale Bond-Rite Clamp II Static Grounding Device (Certificate: ExVeritas 19ATEX0543, IECEx EXV 19.0058 – ExVeritas Certification Service 2804)

- Are in accordance with the following directives:

2014/30/EU Electromagnetic Compatibility Directive & its amending directives
ATEX Directive and its amending directives: 2014/34/EU of 26/2/2014.

- Have been designed and manufactured to the following specifications:

IEC 60079-0: 2017 IEC 60079-11: 2011
EN 60079-0: 2018 EN 60079-11: 2012

Note: These have been checked against the latest standards (Technical Knowledge) and the requirements have been found to be no more onerous.

I hereby declare that the equipment named above, on the date the equipment accompanied by this declaration is manufactured and despatched, have been designed to comply with the relevant sections of the above referenced specifications. The equipment complies with the essential requirements of the Directives.

Signed by:

Name: G. Cawthorn

Position: Electrical & Electronic Engineer

Location: Colwick, Nottingham

Date: 4th January 2021

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Declaration of Conformity Bond-Rite Clamp II 20210104

UK Declaration of Conformity

This declaration of conformity is issued under the sole responsibility of Newson Gale Ltd of Omega House, Private Road 8, Colwick, Nottingham

Declare that:

The Newson Gale Bond-Rite Clamp II Static Grounding Device (Certificate: ExVeritas 21UKEX0834 – ExVeritas – Approved Body 2585)

- Are in accordance with the following regulations:

The UK Electromagnetic Compatibility Regulations 2016, UKSI 2016:1091 & it's amending regulations.

Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696)

- Have been designed and manufactured to the following specifications:

BS EN IEC 60079-0: 2018 BS EN 60079-11: 2012

Note: These have been checked against the latest standards (Technical Knowledge) and the requirements have been found to be no more onerous.

I hereby declare that the equipment named above, on the date the equipment accompanied by this declaration is manufactured and despatched, have been designed to comply with the relevant sections of the above referenced specifications. The equipment complies with the essential requirements of the Regulations.

Signed by:



Name: G. Cawthorn

Position: Electrical & Electronic Engineer

Location: Colwick, Nottingham

Date: 21st January 2022

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Declaration of Conformity Bond-Rite Clamp II 20220121

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