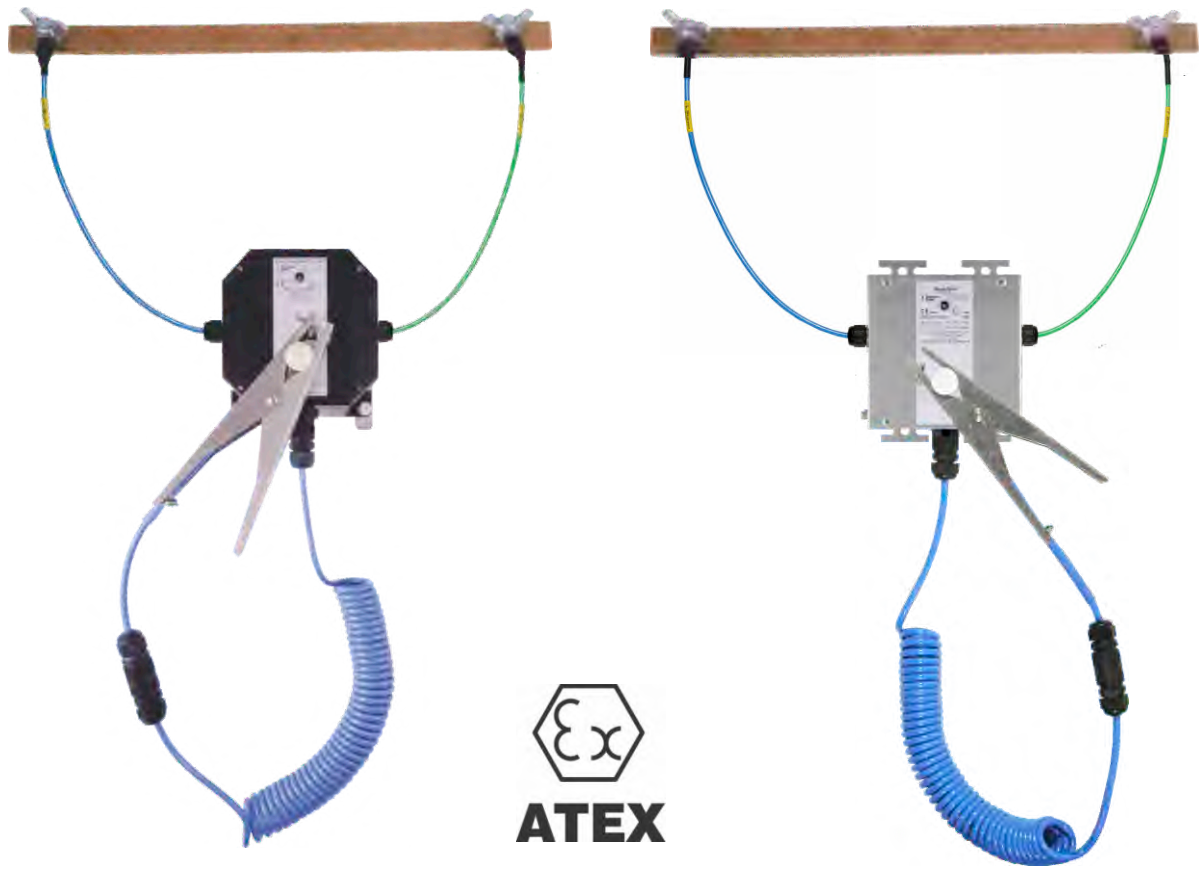


# Bond-Rite® REMOTE II

## Installation and Operating Instructions



ATEX & IECEx Version



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® REMOTE II

With regard to the relevant Essential Health & Safety Requirements (EHSRs) of the ATEX Directive 94/9/EC, the following declarations are made with respect to the Bond-Rite REMOTE II:

## 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 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.

## Operation

Attach the Dual Circuit clamp to the item to be grounded (drum, IBC, bucket etc).

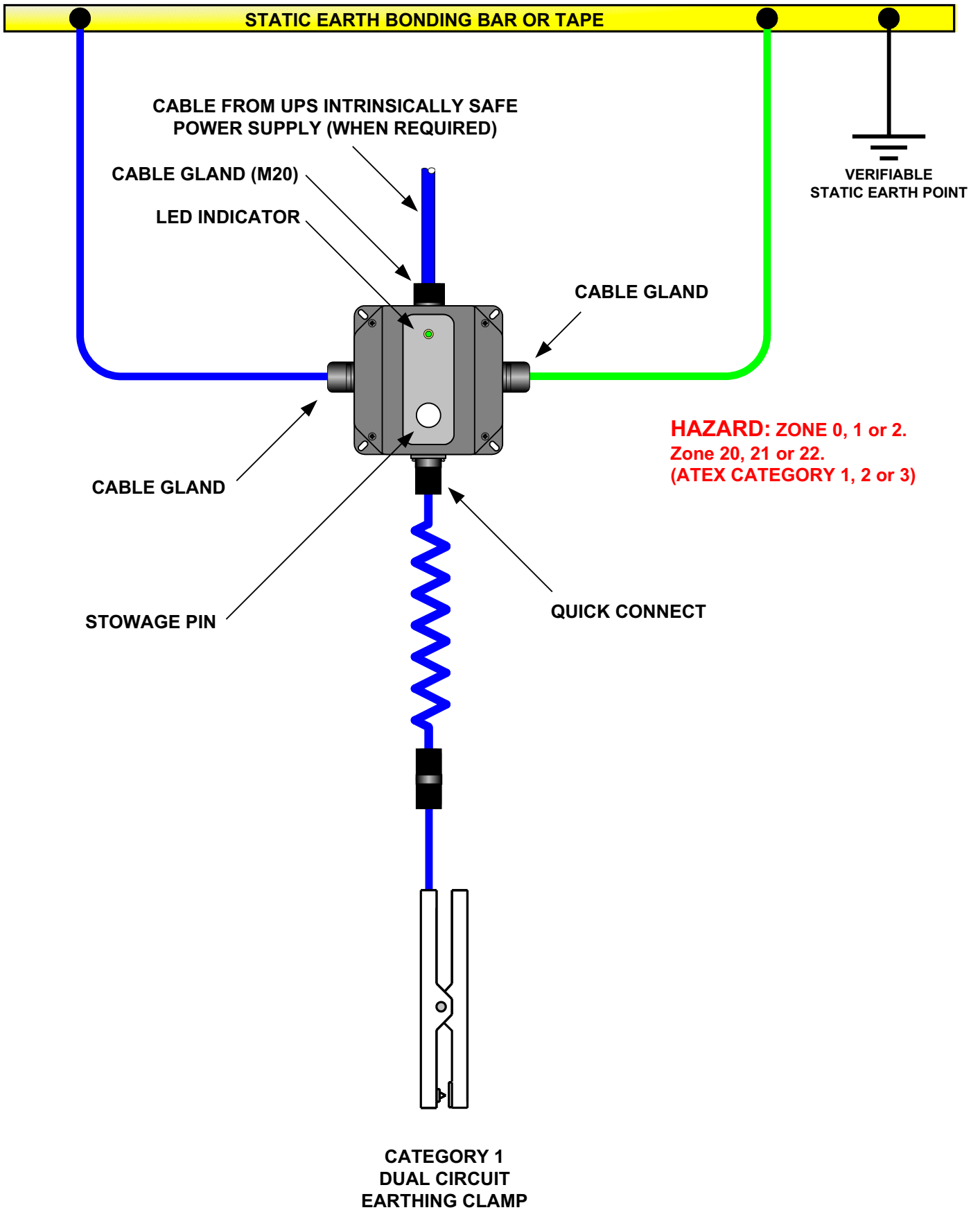
If the connection is good (less than 10 Ohms loop resistance) then the green LED lamp should flash at a rate of about 1 flash per second.

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 REMOTE 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.

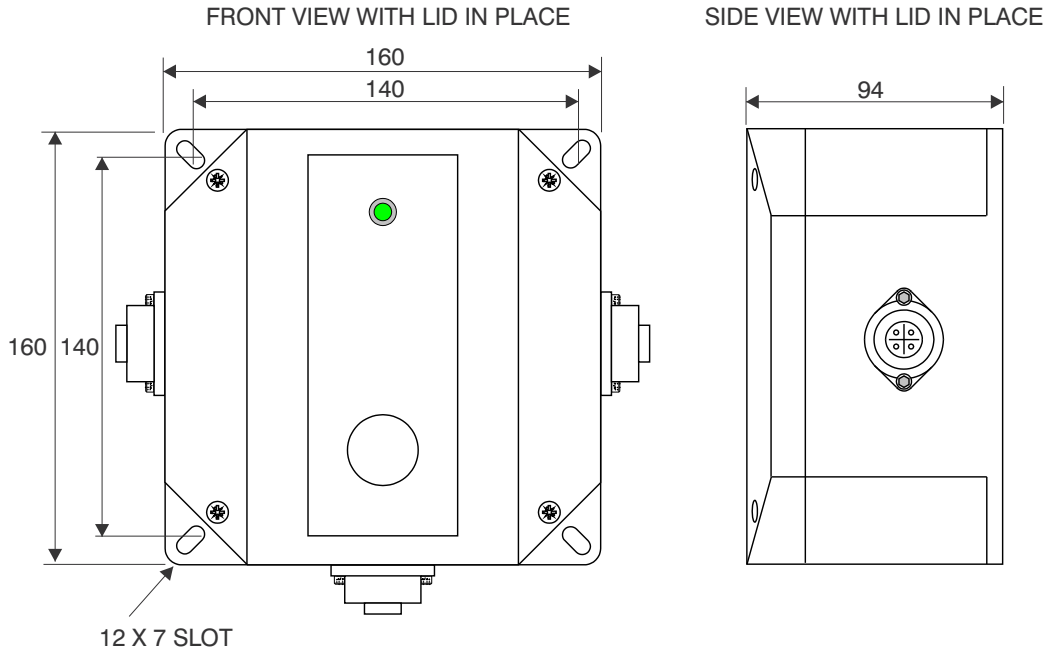
# Bond-Rite REMOTE II Installation



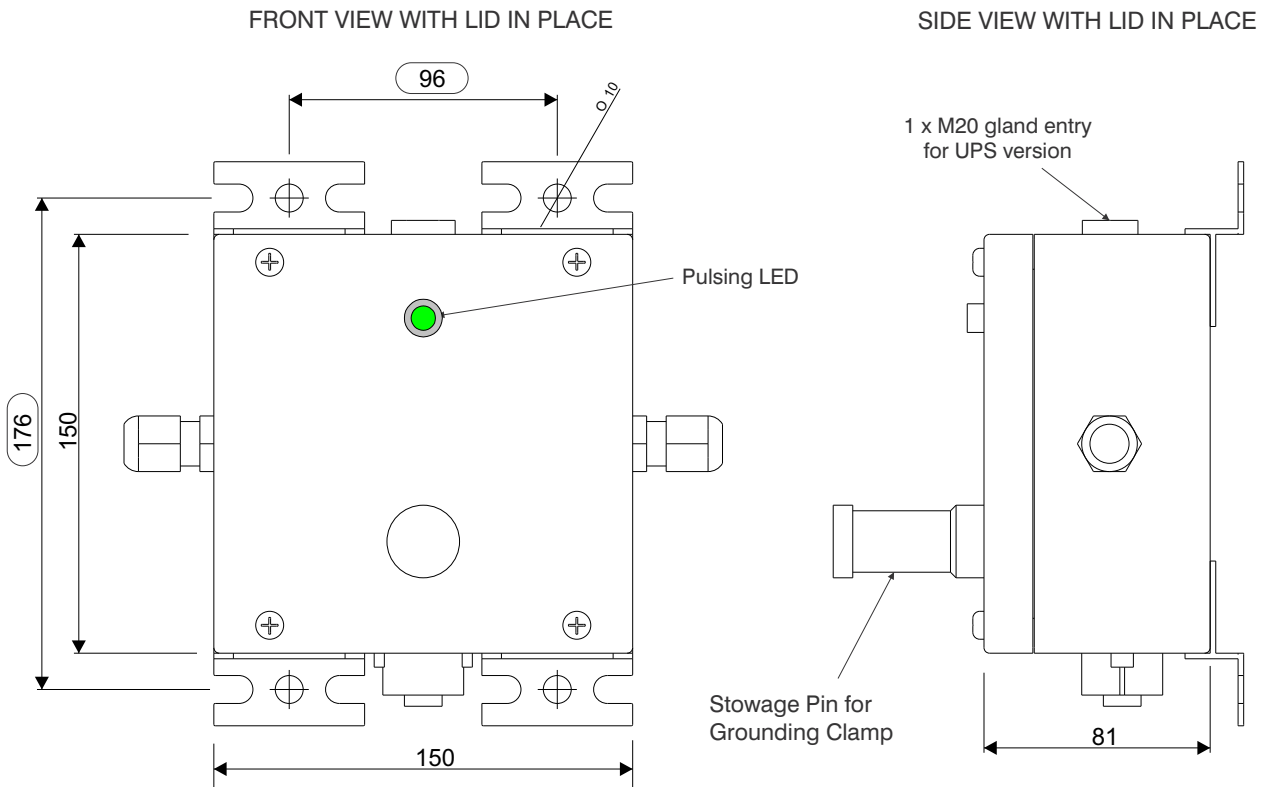
# Bond-Rite **REMOTE II**

## Enclosure Mounting Dimensions Including Wall-Mounted Brackets

### Static Dissipative Polyester Version



### Stainless Steel Version



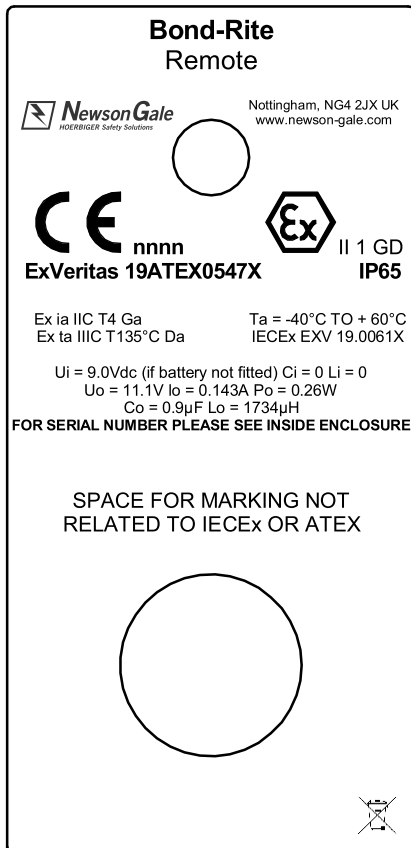
NOT TO SCALE  
DIMENSIONS IN mm

## Bond-Rite REMOTE II

User instructions in compliance with IEC 60079-0 clause 30.

The following instructions apply to the Bond-Rite Remote Earth Monitoring Unit, Ex ia IIC T4, covered by certificate numbers IECEx EXV 19.0061X and ExVeritas 19ATEX0547X.

### Certification Label



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

The equipment may be used in zones 0, 1, 2, 20, 21 and 22 with flammable gases and dusts.

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 may be used in the presence of flammable dusts, powders and flyings, conductive or nonconductive, the only limitation being the maximum external surface temperature of 135°C.

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).

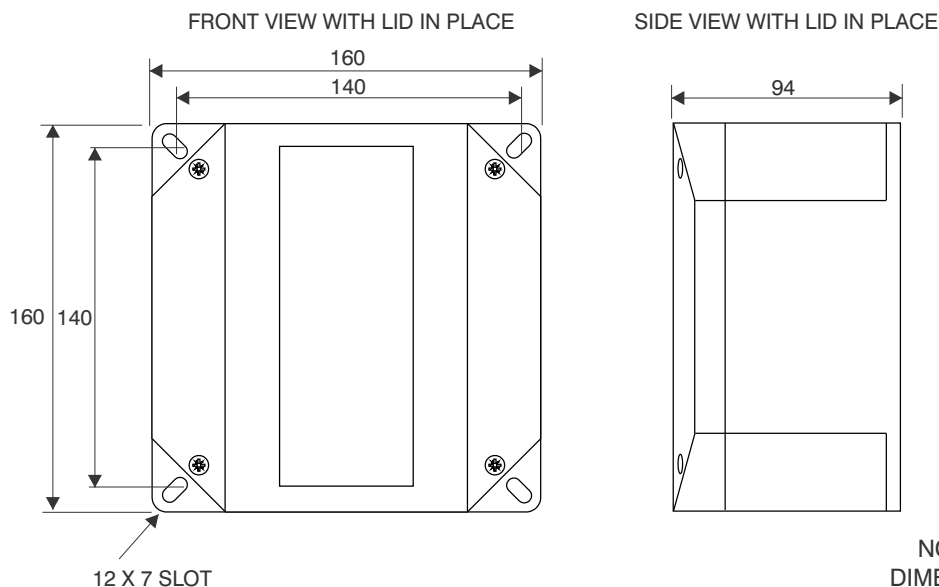
No user adjustment is required.

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.

## Universal Power Supply Enclosure Mounting Dimensions




# Universal Power Supply

User instructions in compliance with IEC 60079-0 clause 30.

The following instructions apply to the Earth-Rite Universal Power Supply, Ex ec [ia] IIC T4 Gc(Ga) Ex tb IIIC T70°C Db IP66, covered by certificate numbers IECEx EXV 19.0063 and ExVeritas 19ATEX0551.


## Certification Label


Earth-Rite Universal Power Supply



Newson Gale Ltd Nottingham, UK  
Tel: +44 (0) 115 940 7500  
www.newson-gale.com

Ex ec [ia] IIC T4 Gc(Ga)  
Ex tb IIIC T70°C Db IP66  
IECEX EXV 19.0063  
Ta = -40°C to +55°C



 nnnn Ex Veritas 19ATEX0551

Um = 125Vac/250Vac Uo = 8.61V, Io = 0.152A,  
Po = 0.715W, Co = 5.9µF, Lo = 1.5mH

HAZARDOUS LIVE PARTS -  
DO NOT OPEN THE ENCLOSURE  
WHILE ENERGISED

SEE INTERNAL LABEL FOR SERIAL  
NUMBER AND YEAR OF MANUFACTURE

SPACE RESERVED FOR OTHER  
APPROVAL DETAILS

## Internal Label

Earth-Rite Universal Power Supply  
Serial No. YY/xxxxx

**CAUTION:**  
Bonding between conduit connections is not automatic and must be provided as part of the installation

### NOTE:

YY = Year of manufacture  
XXXXX = Specific Serial Number

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

The equipment may be located in Zone 2 with flammable gases and Zones 21 and 22 with flammable dusts.

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 may be used in the presence of flammable dusts, powders and flyings, conductive or non-conductive, the only limitation being the maximum external surface temperature of 70°C.

The equipment is certified for use in ambient temperatures in the range of -40°C to +55°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).

The chassis plate must be connected to a protective earth (PE) using the earth terminal provided.

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.

## Installation

All cables entering enclosures must be connected through suitable cable glands.

The glands should be fitted in such a way as to maintain the ingress protection / Ex rating of the enclosure.

The system should be connected as per the relevant installation drawings

The Power Supply Unit should be powered from 230V ac. or 120V ac. The supply terminal voltage and usage is indicated on the PCB in front of each terminal.

The Power Supply Unit should be protected using a 2A fuse or miniature circuit breaker mounted in the distribution board / fuse box.

The Bond-Rite Remote II units should be mounted, with the indicators facing away from direct sunlight, at a convenient location, visible to the operator.

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.

## Customer Supplied Cable Specification

Recommended Specification

### Cable from Power Supply Unit to Junction Box

1.5mm<sup>2</sup> 2 core cable with blue sheath or identifier (IS Circuit).

### Cable from Junction Box to Bond-Rite REMOTE II Unit

1.5mm<sup>2</sup> 2 core cable with blue sheath or identifier (IS Circuit).

### Cable from Supply to the Power Supply Unit

1.0mm<sup>2</sup> 2 core cable + PE (LV circuit).

## Special Conditions (denoted by X after the certificate number)

The replacement battery shall be an Ultralife U9VL-J or Varta 6122 E-Block battery only. This battery is intrinsically safe and may be replaced when the equipment is in a hazardous area. The battery must be removed when the equipment is externally powered. Always keep the terminal cover cap fitted until the battery is fitted into the Bond-Rite REMOTE II.

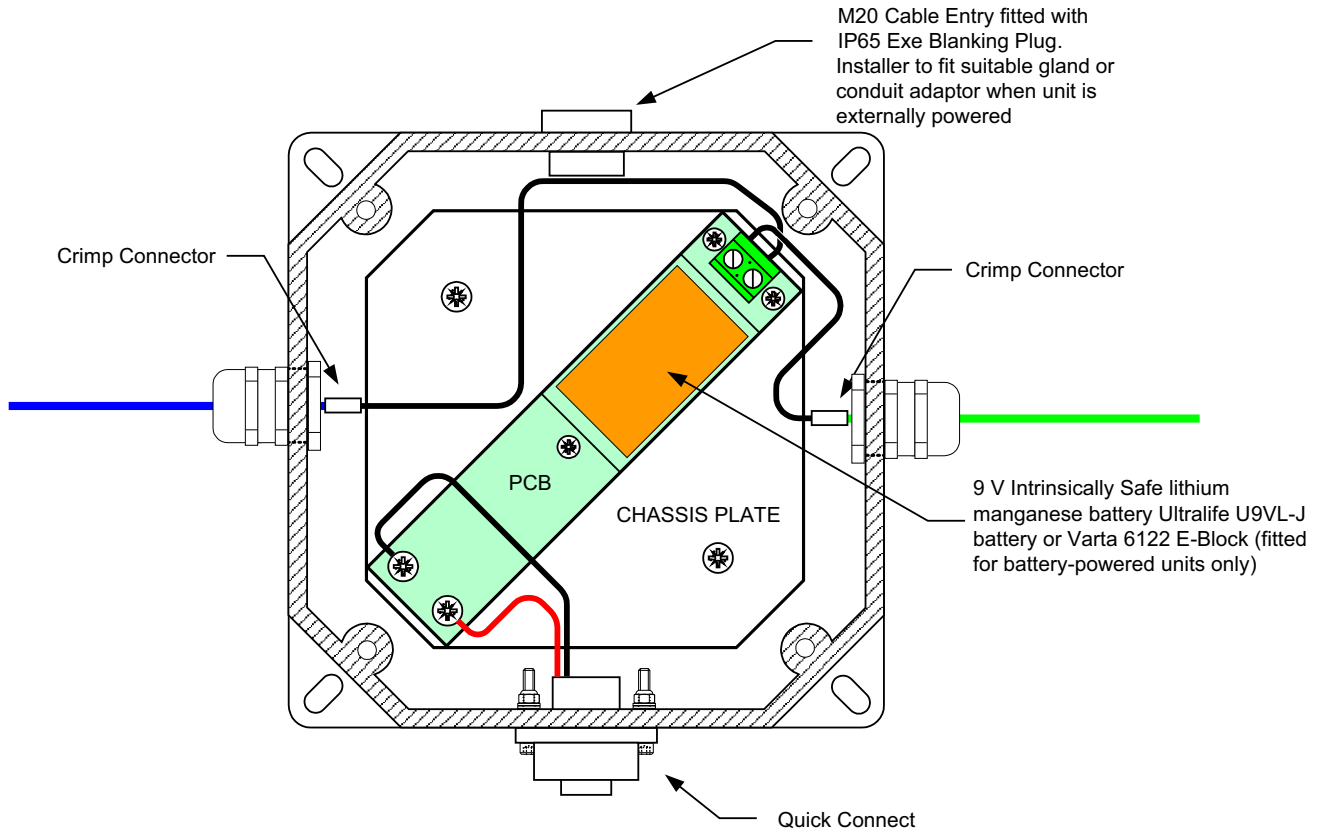
The number of Bond-Rite REMOTE units that can be connected to the power supply with an output voltage (U<sub>0</sub>) not exceeding 9.0 V depends on the following:

- ! External capacitance of the power supply,  $C_{o(P/S)}$
- ! External inductance of the power supply,  $L_{o(P/S)}$
- ! Total capacitance of all the cables between the power supply and the connected Bond-Rite REMOTE units,  $C_{cable}$
- ! Total inductance of all the cables between the power supply and the connected Bond-Rite REMOTE units  $L_{cable}$

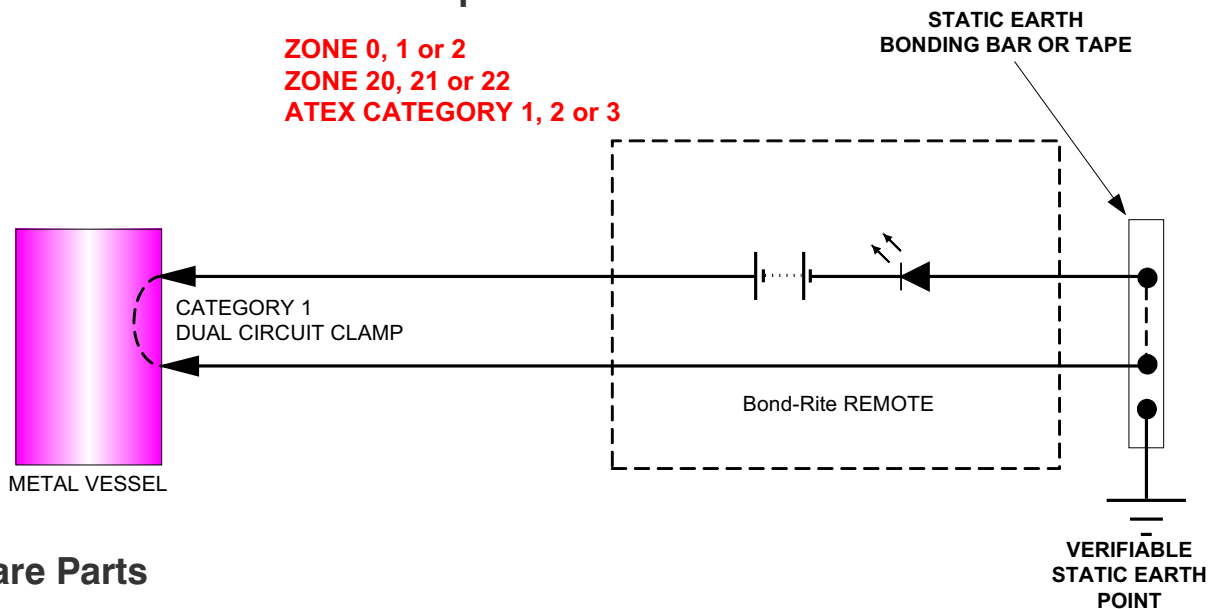
In the system comprising a single power supply and multiple Bond-Rite REMOTE units,  $C_{cable}$  must not exceed  $C_{o(P/S)}$  and  $L_{cable}$  must not exceed  $L_{o(P/S)}$

**IF YOU ARE IN ANY DOUBT REGARDING THE INSTALLATION THEN PLEASE CONTACT NEWSON GALE WITHOUT DELAY**

## Front View with Lid Removed



## Bond-Rite REMOTE II Equivalent Circuit



## Spare Parts

LED Assembly	Code VESI02
Ultralife Battery U9VL-J	Code VESB50
Varta Battery 6122 E-Block	Code BR2/BATT

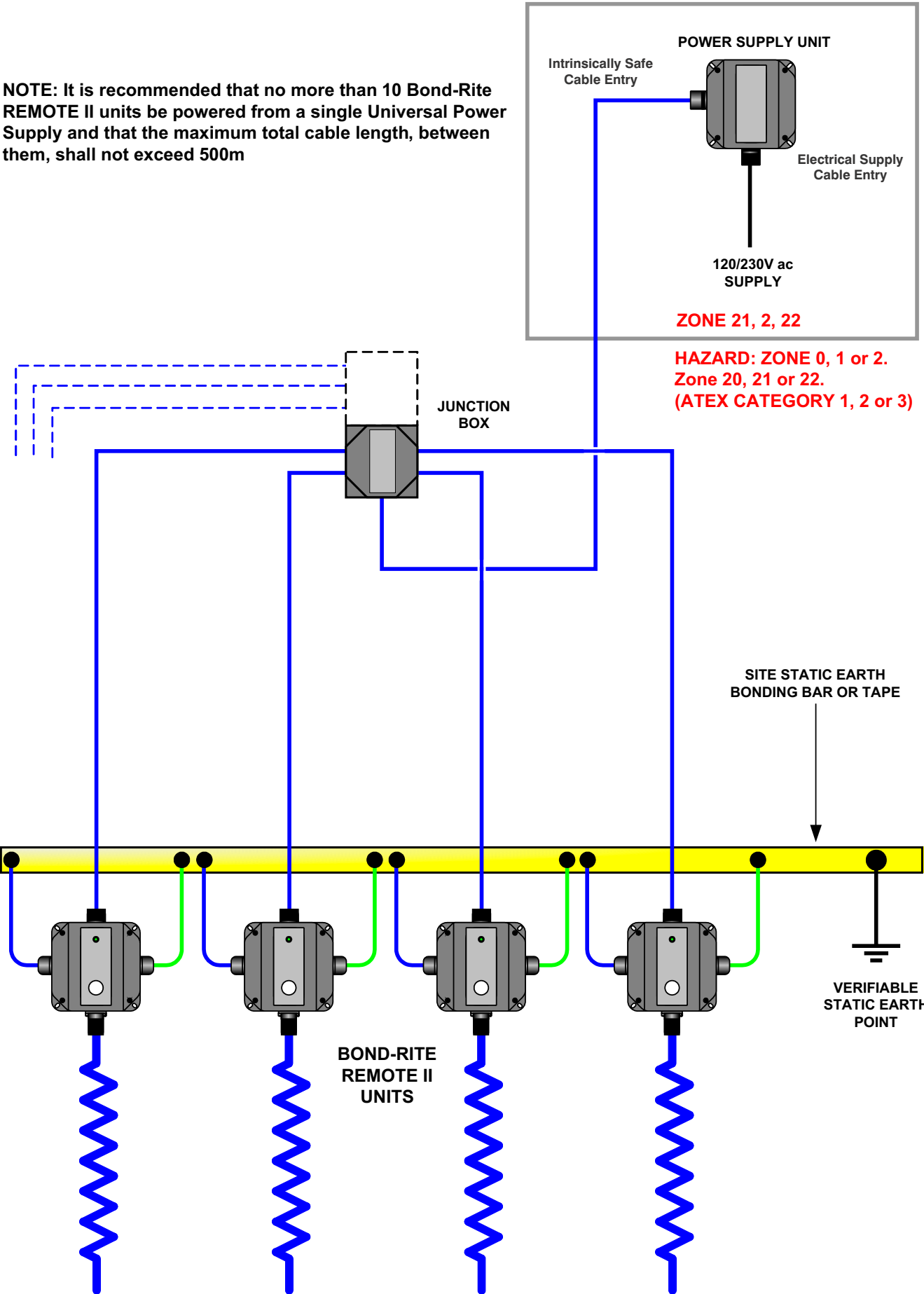
Repair of this equipment shall be carried out by the manufacturer.

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

**IF YOU ARE IN ANY DOUBT REGARDING THE INSTALLATION THEN PLEASE CONTACT NEWSON GALE WITHOUT DELAY.**

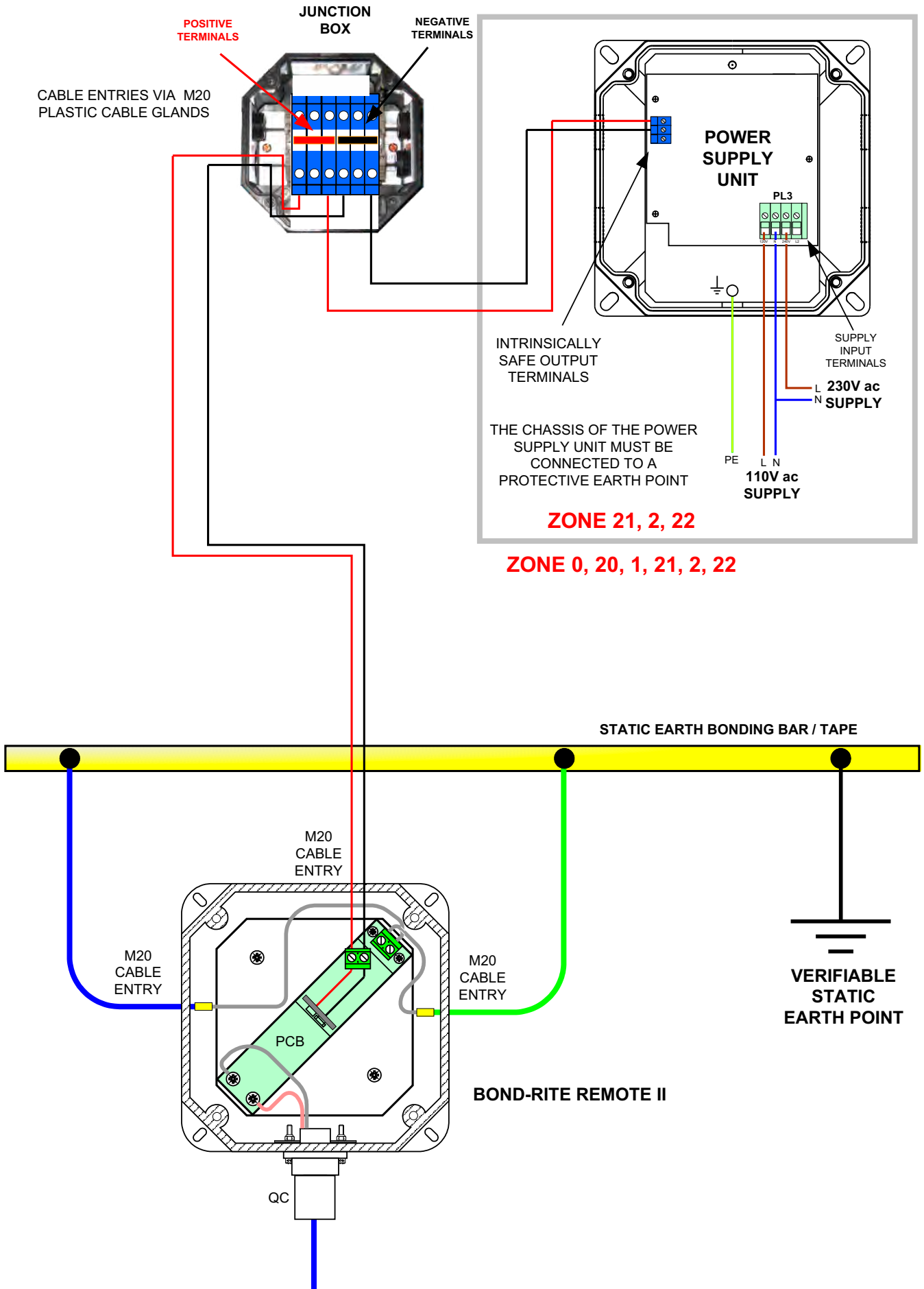
# Bond-Rite REMOTE II Cable Installation - Wiring

**NOTE:** It is recommended that no more than 10 Bond-Rite REMOTE II units be powered from a single Universal Power Supply and that the maximum total cable length, between them, shall not exceed 500m



# Bond-Rite REMOTE II

## Cable Installation - Terminations



# Bond-Rite REMOTE II Technical Specification

## Bond-Rite REMOTE II

Ingress protection	IP65
Ambient temperature range	-40°C to +60°C
ATEX Certification	Ex ia IIC T4 Ga Ex t IIIC T135°C Da
Certificate No.	ExVeritas 19ATEX0547X
IECEX Certification	Ex ia IIC T4 Ga Ex ia IIIC T135°C Da
Certificate No.	IECEX EXV 19.0061X
Approval authority	ExVeritas Test & Certification
Operational ground resistance	10 Ohm maximum.
Indicator Lamp	LED: 1 green (Ground / Earth connection healthy)

## Universal Power Supply

Electrical Supply	230 / 120V ac
Ingress protection	IP66
Ambient temperature range	-40°C to +55°C
ATEX Certification	Ex ec [ia] IIC T4 Gc(Ga) Ex tb IIIC T70°C Db
Certificate No.	ExVeritas 19ATEX0551
IECEX Certification	Ex ec[ia] IIC T4 Gc(Ga) Ex tb IIIC T70°C Db
Certificate No.	IECEX EXV 19.0063
Approval authority	ExVeritas Test & Certification

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

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