



Leading the way in hazardous area static control

READ MANUAL
BEFORE COMMENCING
WITH INSTALLATION

Bond-Rite[®] REMOTE - GRP



Installation and Operating Instructions

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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. Reference to ATEX 95, ATEX 137, EN 60079-14, CLC/TR 50404, 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 GRP

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 GRP:

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 +55°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

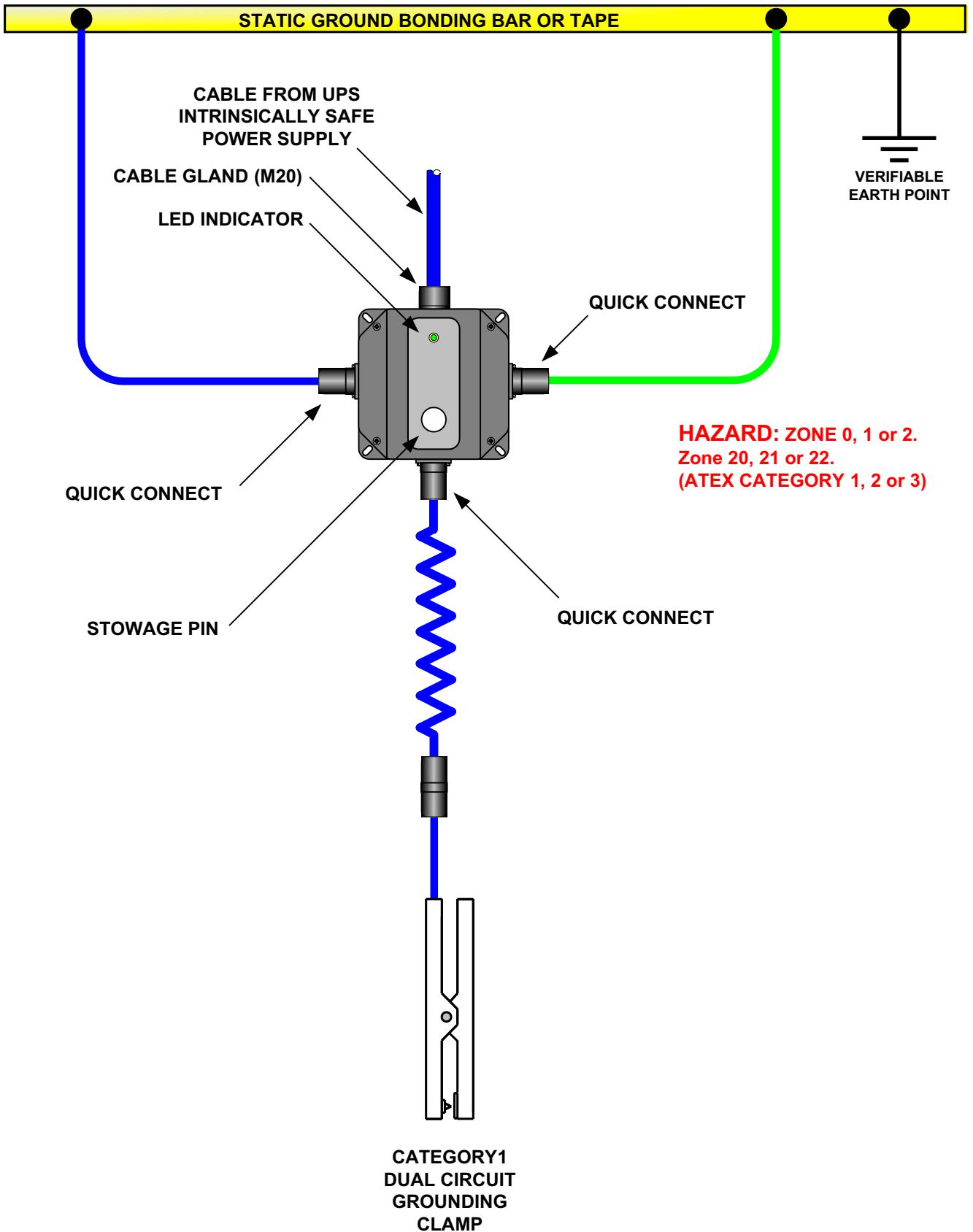
Attach the Dual Circuit clamp to the item to be grounded (drum, IBC, bucket etc).

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.

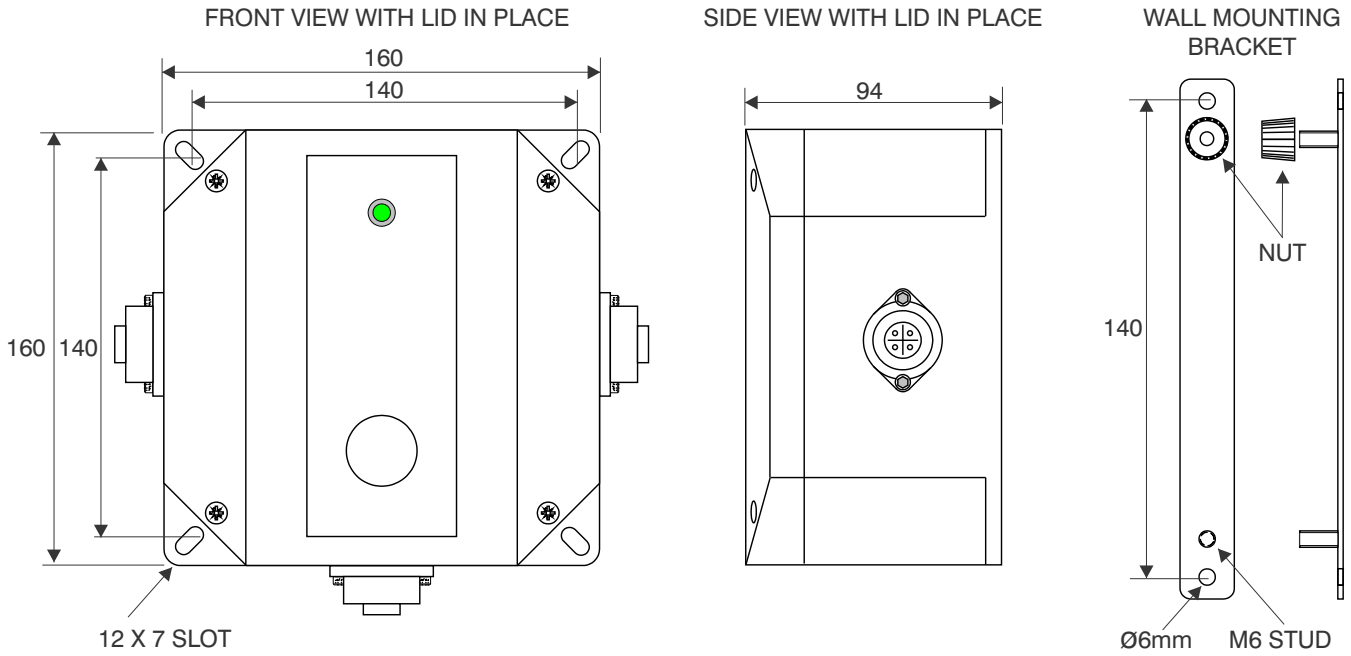
If the LED does not flash then the connection resistance is too high. Check the placement of the clamp to ensure a good, positive connection.

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

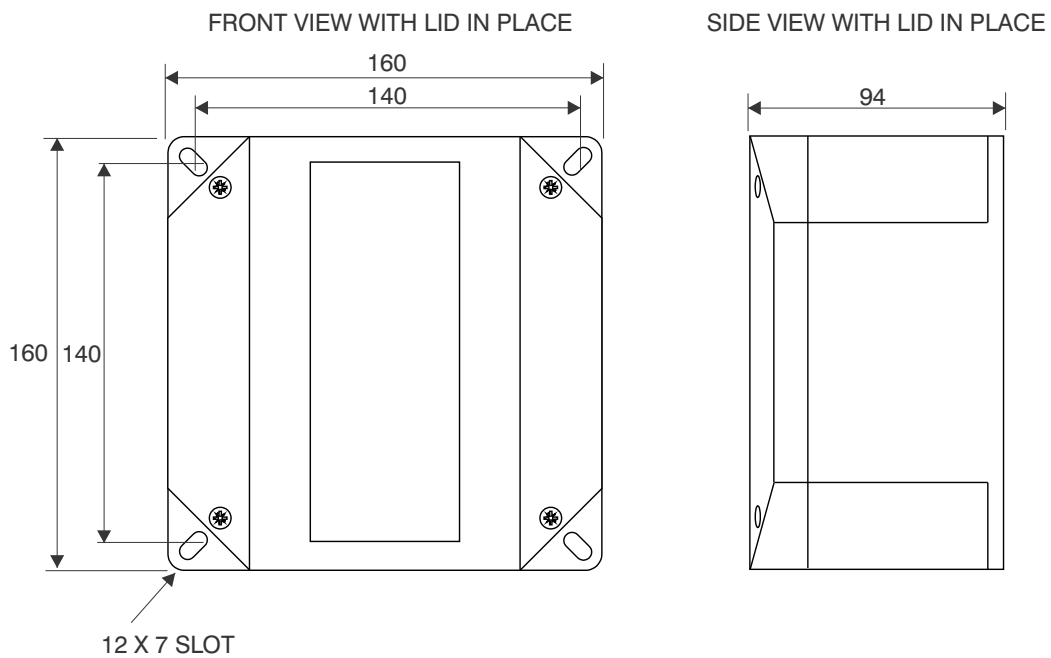
Bond-Rite REMOTE GRP Installation



Bond-Rite REMOTE GRP Enclosure Mounting Dimensions Including Wall-Mounted Brackets



Universal Power Supply Enclosure Mounting Dimensions



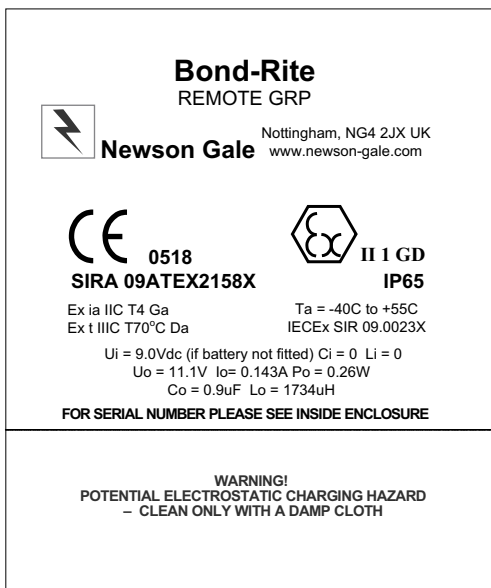
NOT TO SCALE
DIMENSIONS IN mm

Bond-Rite REMOTE GRP

User instructions in compliance with IEC 60079-0:2007 clause 30.

The following instructions apply to the Bond-Rite Remote Earth Monitoring Unit, Ex ia IIC T4, covered by certificate numbers IECEx SIR 09.0023X and Sira 09ATEX2158X.

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 or T5 or T6.

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 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).

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.

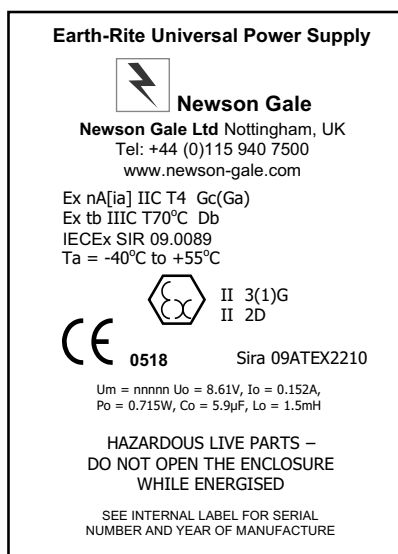
The equipment contains no user-replaceable parts.

Universal Power Supply

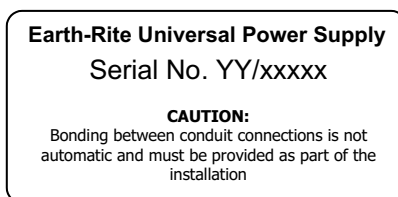
User instructions in compliance with
IEC 60079-0:2007 clause 30.

The following instructions apply to the Earth-Rite Universal Power Supply, Ex nA[ia] IIC T4 Gc(Ga) Ex tb IIIC T70°C Db, covered by certificate numbers IECEx SIR 09.0089 and Sira 09ATEX2210.

Certification Label



Internal Label



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 1A fuse or circuit breaker mounted in the distribution board / fuse box.

The Bond-Rite Remote GRP 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
1.5mm² core cable with blue sheath or identifier (IS Circuit).

Cable from Junction Box to Bond-Rite REMOTE GRP Unit
1.5mm² core cable with blue sheath or identifier (IS Circuit).

Cable from Supply to the Power Supply Unit
1.0mm² core cable + PE (LV circuit).

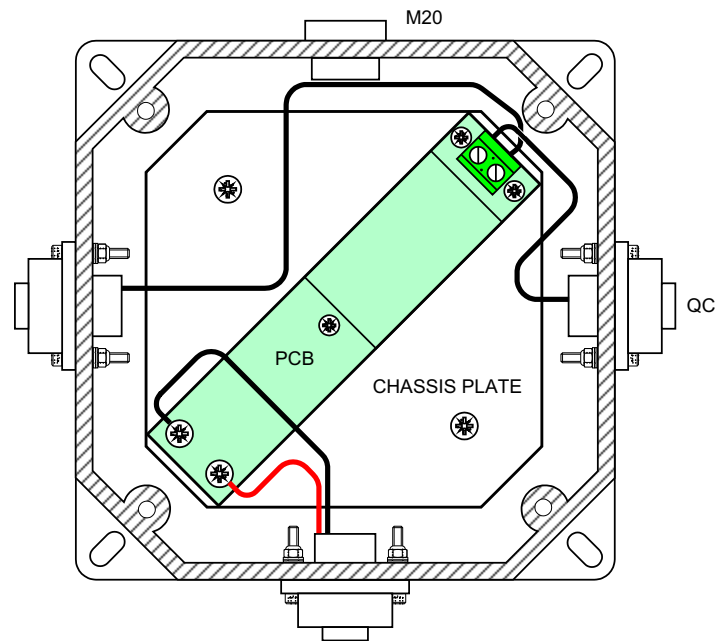
15. Special Conditions (denoted by X after the certificate number)

- 15.1 The replacement battery shall be an Ultralife type U9VL-J 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.
- 15.2 Under certain extreme conditions, the enclosure may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. This is particularly important if the equipment is installed in a zone 0 or zone 20 location. In addition, the equipment shall only be cleaned with a damp cloth.
- 15.3 The number of Bond-Rite REMOTE units that can be connected to the power supply with an output voltage (U₀) 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, L_{cable}
 - Total inductance of all the cables between the power supply and the connected Bond-Rite REMOTE units L_{cable}

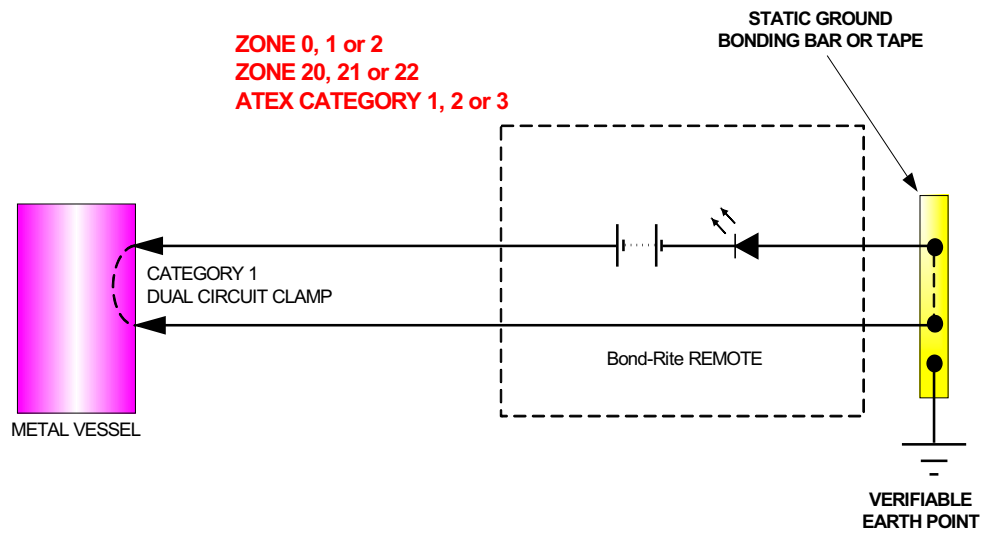
In the system comprising a single power supply and multiple Bond-Rite REMOTE units, C_{cable} must not exceed $C_{o(P/S)}$ and L_{cable} must not exceed $L_{o(P/S)}$

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

Front View with Lid Removed



Bond-Rite REMOTE GRP Equivalent Circuit



Spare Parts

LED Assembly

Code VESI02

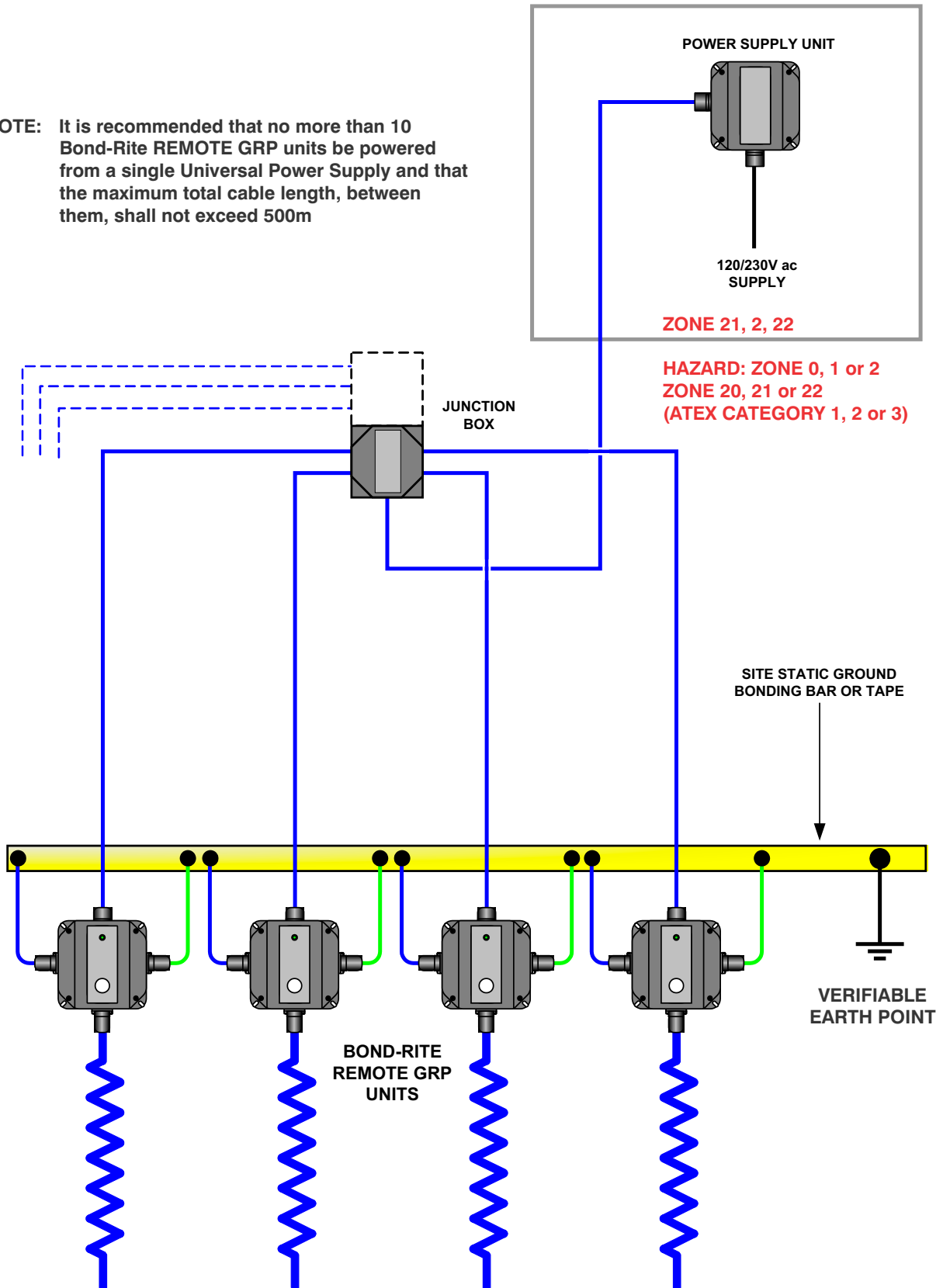
Repair of this equipment shall be carried out by the manufacturer.

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

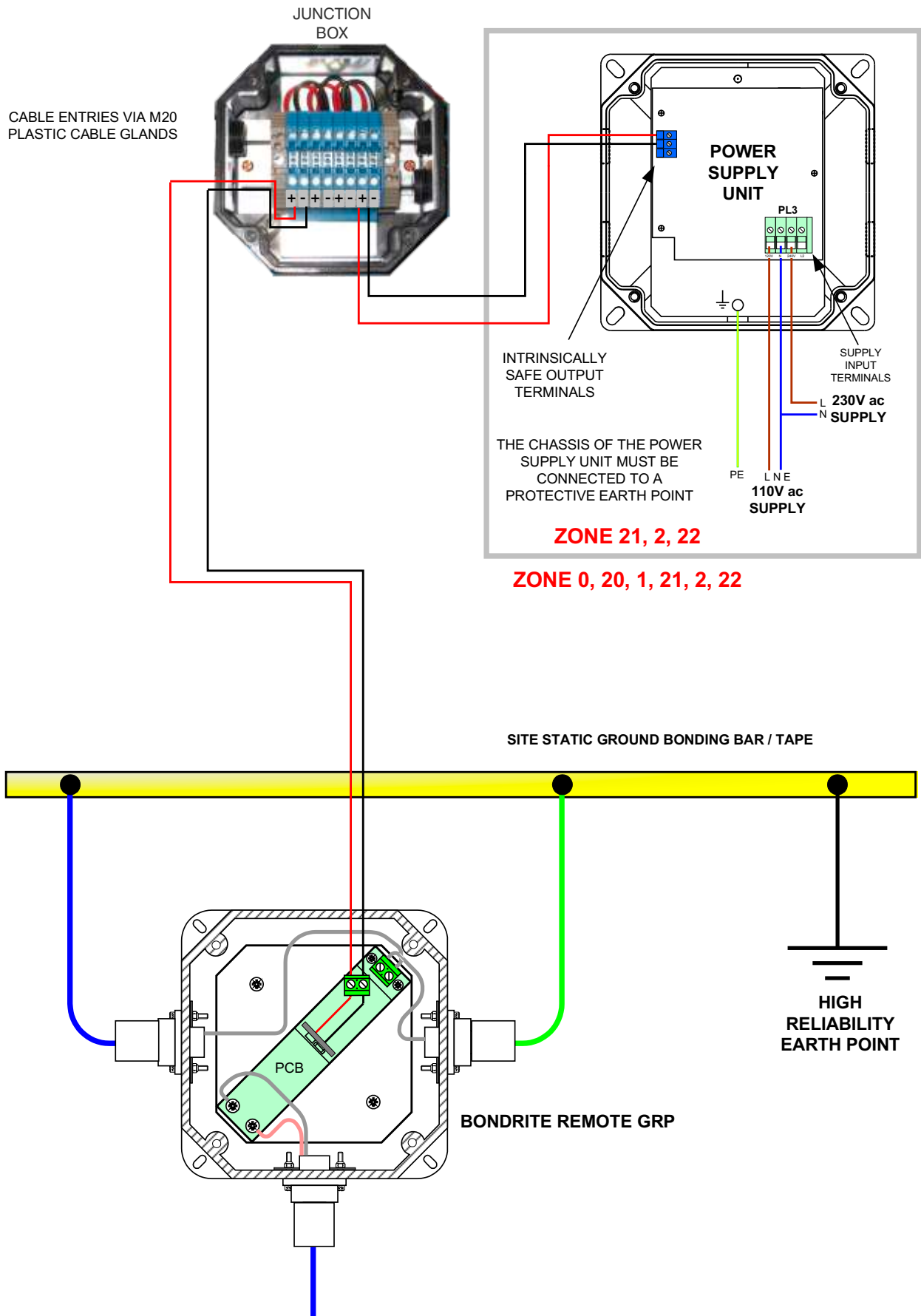
IF YOU ARE IN ANY DOUBT REGARDING THE INSTALLATION THEN PLEASE CONTACT NEWSON GALE WITHOUT DELAY.

Bond-Rite REMOTE GRP Cable Installation - Wiring

NOTE: It is recommended that no more than 10 Bond-Rite REMOTE GRP 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 GRP Cable Installation - Terminations



Bond-Rite REMOTE GRP Technical Specification

Bond-Rite REMOTE GRP

Ingress protection	IP65
Ambient temperature range	-40°C to +55°C
ATEX Certification	Ex ia IIC T4 Ga Ex ia IIIC T70°C Da
Certificate No.	Sira 09ATEX2158X
IECEX Certification	Ex ia IIC T4 Ga Ex ia IIIC T70°C Da
Certificate No.	IECEX SIR 09.0023X
Approval authority	Sira 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	IP65
Ambient temperature range	-40°C to +55°C
ATEX Certification	Ex nA[ia] IIC T4 Gc(Ga) Ex tb IIIC T70°C Db
Certificate No.	Sira 09ATEX2210
IECEX Certification	Ex nA[ia] IIC T4 Gc(Ga) Ex tb IIIC T70°C Db
Certificate No.	IECEX SIR 09.0089
Approval authority	Sira 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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