

# Earth-Rite® MULTIPOINT II

## Static Grounding System



The **Earth-Rite® MULTIPOINT II** is a unique static grounding systems that can monitor the simultaneous grounding of up to eight (8) individual pieces of equipment at risk of discharging electrostatic sparks.

**Enquiry** > Click here to submit a product related query or a request for quotation.

To ground and monitor multiple items of equipment at points like multi drum loading stations and mixing stations, IBC loading stations and railcar loading gantries, a large number of conventional static grounding systems would be required to provide protection against incendive electrostatic sparks. In addition to flammable liquid and gas operations, powder processing equipment that typically includes interconnected pipes, fluid bed dryers, hoppers and micronizers would require multiple grounding systems. With the Earth-Rite MULTIPOINT II up to eight individual items of potentially isolated equipment can be ground monitored simultaneously with a single static grounding system.

The Earth-Rite MULTIPOINT II is an ATEX / IECEx / cCSAus certified static grounding system which identifies when equipment exceeds ground resistance levels outlined in codes of practice including CLC/TR 60079-32-1 and NFPA 77. The system consists of a hazardous area monitoring unit that contains eight pairs of red and green LED indicators that verify when the equipment at risk of static charge

accumulation has a resistance of 10 ohms or less to the plant's designated true earth grounding point.

For applications where ground monitoring indication is required at the point of operation (e.g. drum filling) local ground status indicator stations can be specified. The Intrinsically Safe indicator stations can be mounted in any EX/HAZLOC atmosphere, are more energy efficient than mains powered indicators and more cost effective than standard EX certified indicators.

Each monitoring channel interfaces with it an individual volt free contact as standard. In addition to the 8 individual volt free contacts a group relay is provided so that multiple ground monitoring channels can be setup to provide a permissive / non-permissive condition to external equipment (e.g. PLCs, pumps, valves, sounders). If a software or hardware error is detected by the Earth-Rite MULTIPOINT II's self-monitoring function, it activates a fault relay ensuring the system shuts down in a fail-safe condition.



**Earth-Rite MULTIPOINT II** Static Grounding System

### Earth-Rite MULTIPOINT II applications include:

- > multiple railcar loading points.
- > multiple drum / tote loading points.
- > liquid / powder mixing and blending.
- > powder conveying equipment.
- > fluid bed dryers.
- > silo / container filling and emptying.
- > hoppers and dust collectors.
- > powder micronizing, pulverising and grinding equipment.

## Earth-Rite® MULTIPOINT II Static Grounding System

The **Earth-Rite MULTIPOINT II** builds on the success of its predecessor offering equipment specifiers an advanced digitally embedded system that actively monitors the grounding of up to 8 separate items of plant equipment.

The incorporation of embedded digital technology enables the **Earth-Rite MULTIPOINT II** to:

- > offer unrivalled precision with which a grounding system can monitor EX/HAZLOC grounding and bonding circuits.
- > self-check the EX/HAZLOC monitored grounding circuits so that permissive conditions are only achieved when a resistance value of 10 ohms or less is seen by the micro-controller.
- > offer flexible, energy efficient Intrinsically Safe indicator stations that can be positioned in any Zone or Division around a plant.
- > provide an off the shelf system that incorporates an individual SP/DT relay contact for each monitored channel.
- > provide a group relay function that enables the grouping of any number of monitored channels via a set of SP/DT relay contacts.
- > incorporate software written to the leading industry standard MISRA-C protocol.
- > provide a self-monitoring watchdog emergency shutdown function that ensures a fail-safe condition is achieved if a circuit or software malfunction is detected.



The **Earth-Rite MULTIPOINT II's** monitoring unit contains 8 pairs of LED ground status indicators (red and green). The unit can be mounted in all ATEX / IECEx zones and all Class and Division rated hazardous locations.



The **Earth-Rite MULTIPOINT II's** 230 V/110 V AC power supply unit houses eleven (11) SP/DT volt free contacts. 8 of these interface with each monitored grounding channel, 2 provide the grouped channel function and 1 relay provides the fail-safe redundancy output function. The power supply can be installed in Zone 2/21 and Class I, Div.2, Class II, Div.1, Class III, Div.1 areas. The power supply can be housed in GRP or stainless steel enclosures.



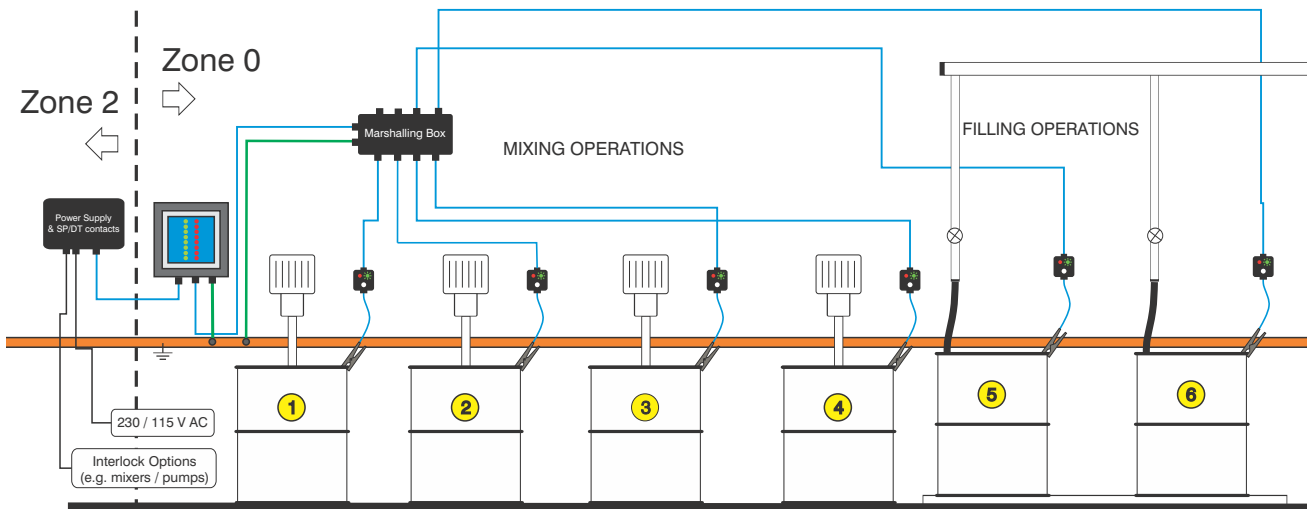
The **Earth-Rite MULTIPOINT II's** energy efficient external indicator stations provide ground status indication for each individual channel. The attention grabbing GREEN LED pulses continuously when a positive ground connection is made. The indicator stations can be mounted in all ATEX / IECEx zones and all Class and Division rated hazardous locations. In addition to the standard GRP option, stainless steel indicator stations can be specified.

The Earth-Rite® MULTIPOINT II forms part of the Earth-Rite® range of Static Grounding and Bonding Equipment available from Newson Gale Ltd.

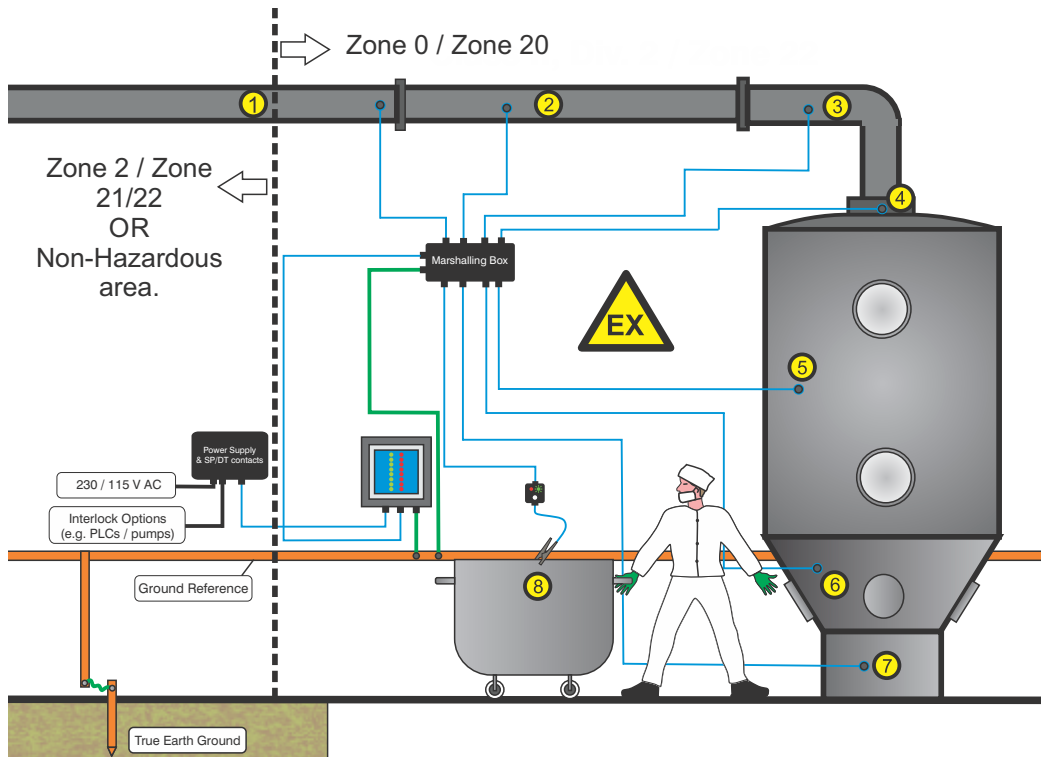


The **Earth-Rite MULTIPOINT II's** 4 way and 8 way marshalling junction boxes link the monitoring unit with the external ground connection points and external LED ground status indicator stations. The marshalling boxes can be supplied as GRP and stainless steel.

**Earth-Rite® MULTIPOINT II** Static Grounding System



The Earth-Rite MULTIPOINT II's monitoring unit and power supply can be configured to ground and monitor a wide range of equipment. In this example the system is setup to ground four mixing stations (1 to 4) and two filling stations (5 and 6). Each mixer is interlocked with an individual relay corresponding to the equivalent ground monitoring channel. Channels 5 and 6 are grouped via the group relay so that if either drum is not grounded the pump feeding the filling station is shut down immediately, thereby preventing the build up of static on the drums.



In this example the Earth-Rite MULTIPOINT II is configured to ground multiple interconnected components for a fluid bed dryer system. The marshalling box feeds seven channels out to seven permanent ground connection points [the connection points may be disconnected for routine cleaning, inspection and maintenance]. Channels 1 to 7 are grouped together to provide a single output contact controlling the flow of powder into the fluid bed dryer. Channel 8 utilises an external ground status indicator station to provide the operator with a visual confirmation that the mobile bin is grounded when filled.

**Earth-Rite® MULTIPOINT II** Static Grounding System

Technical Specification (with GRP power supply)

Monitoring unit  
Zone 0/20 Installations

<b>Ambient Temperature Range</b>	-40°C to +60°C
<b>Ingress Protection</b>	IP 66
<b>Construction</b>	Stainless Steel 304
<b>Monitoring Circuit</b>	Intrinsically Safe
<b>Operational Series Ground Resistance</b>	Nominally ≤10 Ohm
<b>Cable Entries</b>	3 x M20, 1 x M25

Power Supply Unit  
Zone 2/21 Installations

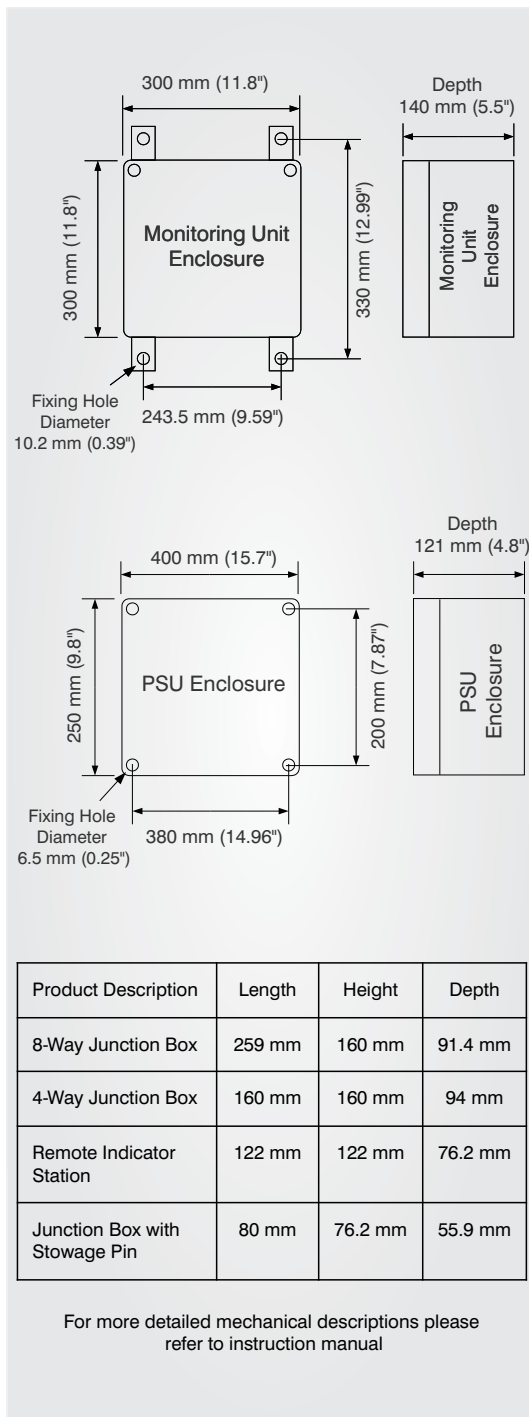
<b>Power Supply</b>	110 V or 240 V AC, 50-60 Hz
<b>Current Rating</b>	200 mA
<b>Power Rating</b>	10 Watts
<b>Ambient Temperature Range</b>	-40°C to +60°C
<b>Ingress Protection</b>	IP 66
<b>Construction</b>	GRP with carbon loading
<b>Output to Monitoring Unit</b>	Intrinsically Safe
<b>Output Channel Relay</b>	8 off Voltage free change over switch contacts
<b>Output Group Relay</b>	2 off Voltage free change over switch contacts
<b>Output Fault Relay</b>	1 off Voltage free change over switch contacts
<b>Relay Contact Rating</b>	240 V AC, 5 A, 500 VA max resistive 30 V DC, 2 A, 60 W max resistive
<b>Cable Entries</b>	12 x M20

Marshalling Junction Box

<b>Enclosure Material</b>	GRP with carbon loading
<b>Cable Entries</b>	8 Way - 10 x M20, 1 x M25 4 Way - 6 x M20, 1 x M25

Remote Indicator Station  
Associated Apparatus - Zone 0/20 installation

<b>Enclosure Material</b>	GRP with carbon loading
<b>Cable Entries</b>	1x M20



Product Description	Length	Height	Depth
8-Way Junction Box	259 mm	160 mm	91.4 mm
4-Way Junction Box	160 mm	160 mm	94 mm
Remote Indicator Station	122 mm	122 mm	76.2 mm
Junction Box with Stowage Pin	80 mm	76.2 mm	55.9 mm

For more detailed mechanical descriptions please refer to instruction manual

**Earth-Rite® MULTIPOINT II** Static Grounding System

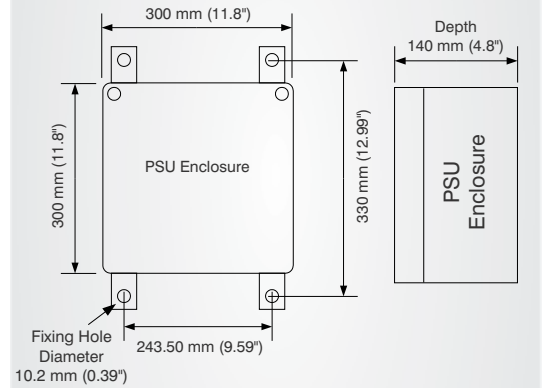
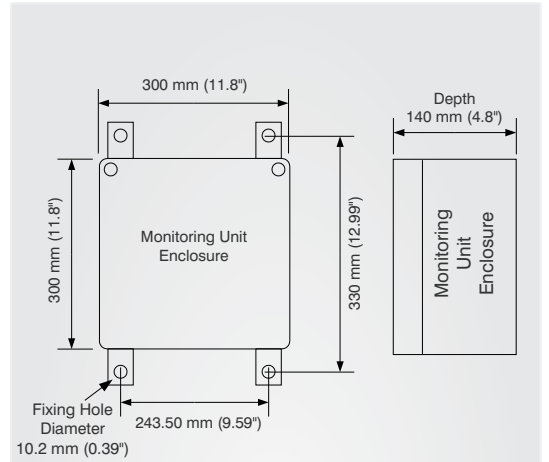
Technical Specification (with stainless steel power supply)

Monitoring unit Zone 0/20 Installations	
<b>Ambient Temperature Range</b>	-40°C to +60°C
<b>Ingress Protection</b>	IP 66
<b>Construction</b>	Stainless Steel 304
<b>Monitoring Circuit</b>	Intrinsically Safe
<b>Operational Series Ground Resistance</b>	Nominally ≤10 Ohm
<b>Cable Entries</b>	3 x M20, 1 X M25

Power Supply unit Zone 2/21 Installations	
<b>Power Supply</b>	110 V or 240 V AC, 50-60 Hz
<b>Current Rating</b>	200 mA
<b>Power Rating</b>	10 Watts
<b>Ambient Temperature Range</b>	-40°C to +60°C
<b>Ingress Protection</b>	IP 66
<b>Construction</b>	Stainless Steel 304
<b>Output to Monitoring Unit</b>	Intrinsically Safe
<b>Output Channel Relay</b>	8 off Voltage free change over switch contacts
<b>Output Group Relay</b>	2 off Voltage free change over switch contacts
<b>Output Fault Relay</b>	1 off Voltage free change over switch contacts
<b>Relay Contact Rating</b>	240 V AC, 5 A, 500 VA max resistive 30 V DC, 2 A, 60 W max resistive
<b>Cable Entries</b>	12 x M20

Marshalling Junction Box	
<b>Enclosure Material</b>	Stainless Steel 304
<b>Cable Entries</b>	8 Way - 10 x M20, 1 x M25 4 Way - 6 x M20, 1 x M25

Remote Indicator Station Associated Apparatus - Zone 0/20 installation	
<b>Enclosure Material</b>	Stainless Steel 304
<b>Cable Entries</b>	1x M20



Product Description	Length	Height	Depth
8-Way Junction Box	300 mm	200 mm	81 mm
4-Way Junction Box	150 mm	150 mm	81 mm
Remote Indicator Station	150 mm	150 mm	81 mm
Junction Box with Stowage Pin	150 mm	150 mm	81 mm

For more detailed mechanical descriptions please refer to instruction manual

**Earth-Rite® MULTIPOINT II** Static Grounding System

Hazardous Area Certification

Monitoring Unit

Europe / International:	North America:
<p><b>IECEX</b> Ex ia IIC T4 Ga Ex ia IIIC T135°C Da Ta = -40°C to +60°C IECEX EXV 19.0062X IECEX certifying body: ExVeritas</p> <p><b>ATEX</b> II 1GD Ex ia IIC T4 Ga Ex ia IIIC T135°C Da Ta = -40°C to +60°C ExVeritas 19ATEX0546X ATEX Notified Body: ExVeritas</p>	<p><b>NEC 500 / CEC (Class &amp; Division)</b> Intrinsically Safe Equipment Ex ia for use in Class I, Div. 1, Groups A, B, C, D Class II, Div. 1, Groups E, F, G Class III, Div. 1 When installed per Control Dwg; X MPII Q15152 cCSAus Ta = -40°C to +60°C Ta = -40°F to +140°F.</p> <p>OSHA recognised NRTL: CSA CSA 15.70005381</p> <p><b>NEC 505 &amp; 506 (Class &amp; Zoning)</b> Class I, Zone 0, AEx ia IIC T4 Ga (gas &amp; vapour) Class II, Zone 20, AEx ia IIIC T135°C Da (combustible dusts)</p> <p><b>CEC Section 18 (Class &amp; Zoning)</b> Ex ia IIC T4 Ga Ex ia IIIC T135°C Da</p>

Power Supply Unit

Europe / International:	North America:
<p><b>IECEX</b> Ex ec[ia Ga] nC IIC T4 Gc Ex tb IIIC T65°C Db Ta = -40°C to +60°C IECEX EXV 19.0062X IECEX certifying body: ExVeritas</p> <p><b>ATEX</b> II 3(1)G II 2D Ex ec[ia Ga] nC IIC T4 Gc Ex tb IIIC T65°C Db Ta = -40°C to +60°C ExVeritas 19ATEX0546X ATEX Notified Body: ExVeritas</p>	<p><b>NEC 500 / CEC (Class &amp; Division)</b> Suitable for use In Class I, Div. 2, Groups A, B, C, D Class II, Div. 1, Groups E, F, G Class III, Div. 1 Provides intrinsically safe output for Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G Class III, Div. 1; When installed per Control Dwg; X MPII Q15152 Ta = -40°C to +60°C Ta = -40°F to +140°F</p> <p>OSHA recognised NRTL: CSA CSA 15.70005381</p> <p><b>NEC 505 &amp; 506 (Class &amp; Zoning)</b> Class I, Zone 2, AEx nA[ia Ga] nC IIC T4 Gc (Gas &amp; vapour) Class II, Zone 21, AEx tb IIIC T65°C Db (Combustible Dusts)</p> <p><b>CEC Section 18 (Class &amp; Zoning)</b> Ex nA[ia Ga] nC IIC T4 Gc Ex tb IIIC T65°C Db</p>

Additional Certification

<b>EMC Tested:</b>	to EN 61000-6-2, EN 61000-6-3 FCC - Part 15
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## Earth-Rite® MULTIPOINT II Static Grounding System

**Contact Us >** Your enquiry will be processed rapidly via our webform enquiry service. If you would prefer to call us, or e-mail us, please use the contact details provided below.

### Equipment Options

Newson Gale supplies a range of product options that enhance the control and general safety of transfer processes and aid engineers with system installations and routine system service checks.

#### 2-Pole Surface Mountable connector

With this assembly operators tasked with earthing mobile process equipment will have a dedicated earthing point to attach the easy to use screw thread connector. The 'plug and play' connector can interface with all Newson Gale 2 core systems to provide earth monitoring capability on a wide range of mobile processes and equipment where generic earthing clamps cannot be used.

The conical shape design prevents powder deposit build up over time and aids in clean down operations.

- > Made using Stainless Steel 304 with Viton O-Rings
- > IP 66
- > -40°C to 60°C
- > Various lengths of straight or spiral Hytrel cable available.



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