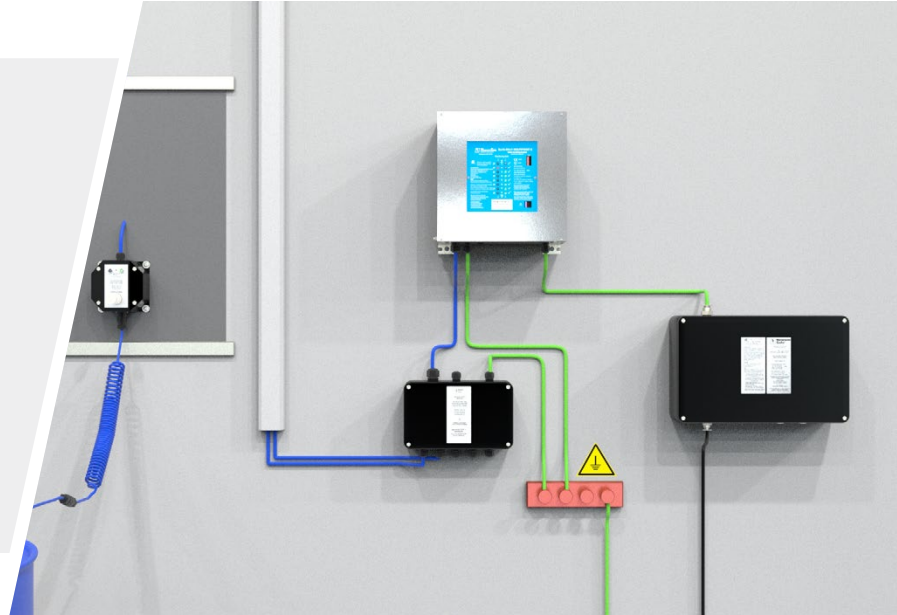


# Earth-Rite® MULTIPOINT II

## Static Grounding System



Earth-Rite MULTIPOINT II Static Grounding System



To ground and monitor multiple items of equipment at points like multi drum loading stations and mixing stations, tote loading stations and railcar loading racks, a large number of conventional static grounding systems would be required to minimize the accumulation of static electricity. 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 a cCSAus / ATEX / IECEx certified static grounding system which identifies when equipment exceeds ground resistance levels outlined in recommended practice documents like IEC TS 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.

Each ground monitoring channel interfaces with it an individual dry contact as standard. In addition to the 8 individual dry 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).

### 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

## Earth-Rite® MULTIPOINT II



The Earth-Rite MULTIPOINT II's monitoring unit contains 8 pairs of LED ground status indicators (red and green).



The Earth-Rite MULTIPOINT II's energy efficient remote indicator stations provide ground status indication for each individual channel. The attention grabbing high intensity GREEN LED pulses continuously when a positive ground connection is made.

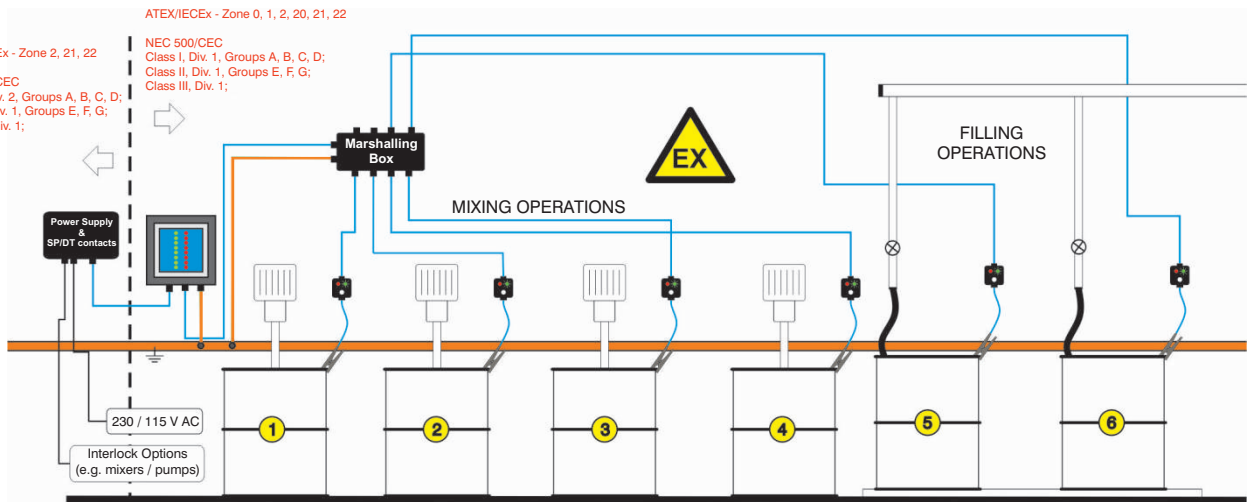


The Earth-Rite MULTIPOINT II's 230 V/110 V AC power supply unit houses eleven (11) dry contacts. 8 of these interface with each monitored grounding channel, 2 provide the grouped channel function and 1 relay provides the fail-safe redundancy output function.

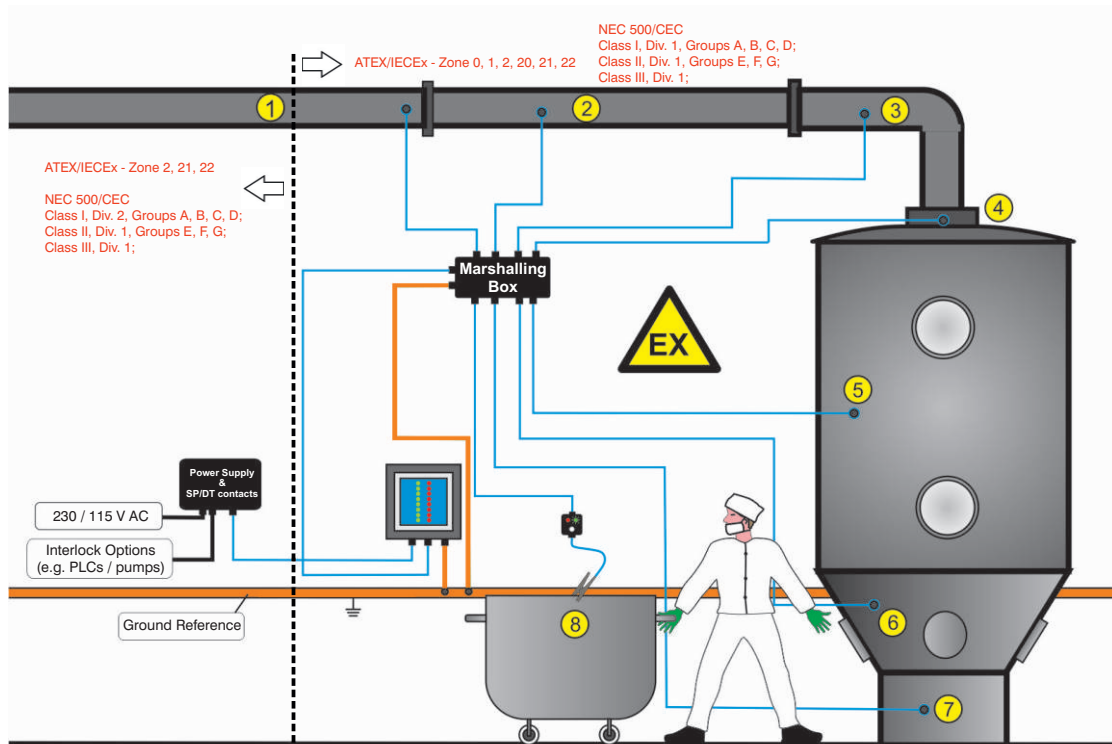


The Earth-Rite MULTIPOINT II's 4 way and 8 way marshalling junction boxes link the monitoring unit with the external ground connection points and external LED ground status remote indicator stations. The marshalling boxes can be supplied as GRP and stainless steel.

## Earth-Rite® MULTIPOINT II



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 mitigating 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 LED remote indicator station/clamp/cable to provide the operator with a visual confirmation that the mobile bin is grounded when filled.

# Earth-Rite® MULTIPOINT II

## Static Grounding System

## Earth-Rite® MULTIPOINT II

### Technical Specification (with GRP power supply)

#### Monitoring unit

##### Class I, Div.1 Installations

<b>Ambient Temperature Range</b>	-40°F to +140°F
<b>Ingress Protection</b>	Type 4X (IP66)
<b>Construction</b>	Stainless Steel (SS grade: 304)
<b>Monitoring Circuit</b>	Intrinsically Safe (ia)
<b>Monitoring Loop Resistance</b>	Nominally $\leq 10$ Ohm ( $\pm 10\%$ )
<b>Cable Entries</b>	3 x M20, 1 X M25 (NPT adaptors available)

#### Power Supply Unit

##### Class I, Div.2 (Class II, Div.1) Installations

<b>Power Supply</b>	115 V or 230 V AC, 50-60 Hz
<b>Current Rating</b>	200 mA
<b>Power Rating</b>	10 Watts
<b>Ambient Temperature Range</b>	-40°F to +140°F
<b>Ingress Protection</b>	Type 4X (IP66)
<b>Construction</b>	GRP with carbon loading
<b>Output to Monitoring Unit</b>	Intrinsically safe
<b>Output Channel Relay</b>	8 off dry change over switch contacts
<b>Output Group Relay</b>	2 off dry change over switch contacts
<b>Output Fault Relay</b>	1 off dry 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 (NPT Adaptors available)

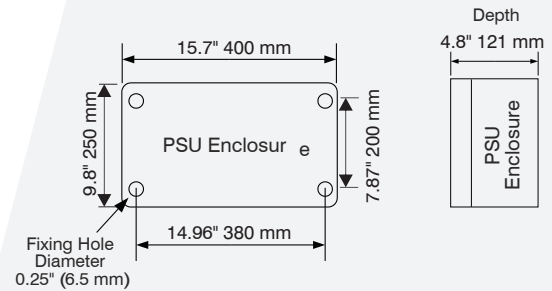
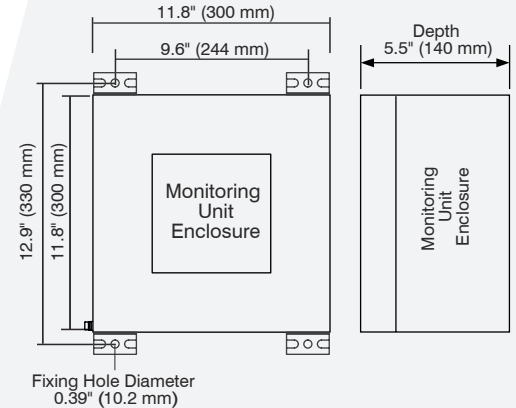
#### Marshalling Junction Box

<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 (NPT Adaptors available)

#### Remote Indicator Station

##### Associated Apparatus - Class I, Div. 1 installation

<b>Enclosure Material</b>	GRP with carbon loading
<b>Cable Entries</b>	1 x M20 (NPT Adaptors available)



Product Description	Length	Height	Depth
8-Way Junction Box	10.2"	6.3"	3.6"
4-Way Junction Box	6.3"	6.3"	3.7"
Remote Indicator Station	4.8"	4.8"	3"
Junction Box with Stowage Pin	3.15"	3"	2.2"

For more detailed mechanical descriptions please refer to instruction manual

# Earth-Rite® MULTIPOINT II

## Static Grounding System

## Earth-Rite® MULTIPOINT II

### Technical Specification

(with stainless steel power supply)

#### Monitoring unit

##### Class I, Div.1 Installations

<b>Ambient Temperature Range</b>	-40°F to +140°F
<b>Ingress Protection</b>	Type 4X (IP66)
<b>Construction</b>	Stainless Steel (SS grade: 304)
<b>Monitoring Circuit</b>	Intrinsically Safe (ia)
<b>Monitoring Loop Resistance</b>	Nominally $\leq 10$ Ohm ( $\pm 10\%$ )
<b>Cable Entries</b>	3 x M20, 1 X M25 (NPT Adaptors available)

#### Power Supply Unit

##### Class I, Div.2 (Class II, Div.1) Installations

<b>Power Supply</b>	115 V or 230 V AC, 50-60 Hz
<b>Current Rating</b>	200 mA
<b>Power Rating</b>	10 Watts
<b>Ambient Temperature Range</b>	-40°F to +140°F
<b>Ingress Protection</b>	Type 4X (IP66)
<b>Construction</b>	Stainless Steel (SS grade: 304)
<b>Output to Monitoring Unit</b>	Intrinsically Safe (ia)
<b>Output Channel Relay</b>	8 off dry change over switch contacts
<b>Output Group Relay</b>	2 off dry change over switch contacts
<b>Output Fault Relay</b>	1 off dry 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 mm (NPT Adaptors available)

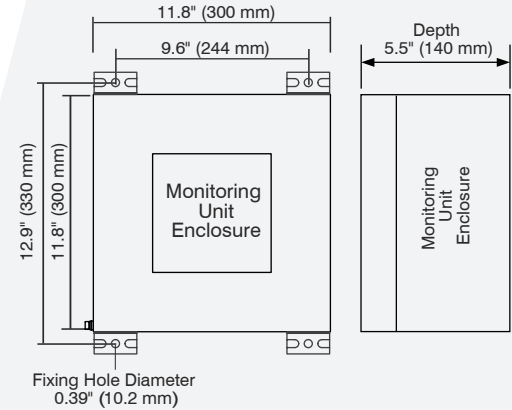
#### Marshalling Junction Box

<b>Enclosure Material</b>	Stainless Steel (SS grade: 304)
<b>Cable Entries</b>	8 Way - 10 x M20, 1x M25 mm dia. 4 Way - 6 x M20, 1x M25 mm dia. (NPT Adaptors available)

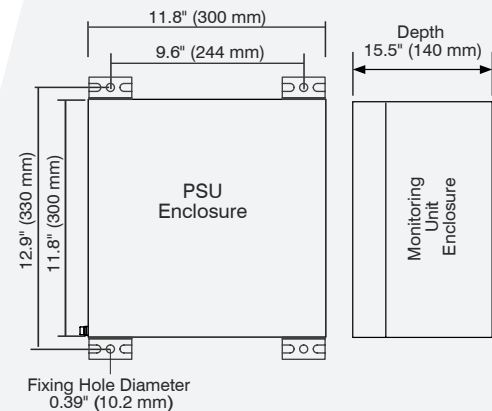
#### Remote Indicator Station

##### Associated Apparatus - Class I, Div. 1 installation

<b>Enclosure Material</b>	Stainless Steel (SS grade: 304)
<b>Cable Entries</b>	1 x M20 (NPT Adaptors available)



Fixing Hole Diameter  
0.39" (10.2 mm)



Fixing Hole Diameter  
0.39" (10.2 mm)

Product Description	Length	Height	Depth
8-Way Junction Box	11.8"	7.9"	3.2"
4-Way Junction Box	5.9"	5.9"	3.2"
Remote Indicator Station	5.9"	5.9"	3.2"
Junction Box with Stowage Pin	5.9"	5.9"	3.2"

For more detailed mechanical descriptions please refer to instruction manual

## Earth-Rite® MULTIPOINT II

### Hazardous Area Certification

#### Monitoring Unit

##### North America:

##### Europe / International Version Available:

##### NEC 500 / CEC (Class & Division)

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 (-40°F to +140°F)

OSHA recognised NRTL: CSA  
CSA 15.70005381

##### NEC 505 & 506 (Class & Zoning)

Class I, Zone 0, AEx ia IIC T4 Ga  
(gas & vapour)  
Class II, Zone 20, AEx ia IIIC T135°C Da  
(combustible dusts)

##### CEC Section 18 (Class & Zoning)

Ex ia IIC T4 Ga  
Ex ia IIIC T135°C Da

##### IECEX

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

##### ATEX

Ⓔ 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

#### Power Supply Unit

##### North America:

##### Europe / International Version Available:

##### NEC 500 / CEC (Class & Division)

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 (-40°F to +140°F)

OSHA recognised NRTL: CSA  
CSA 15.70005381

##### NEC 505 & 506 (Class & Zoning)

Class I, Zone 2, AEx nA[ia Ga] nC IIC T4 Gc  
(Gas & vapour)  
Class II, Zone 21, AEx tb IIIC T65°C Db  
(Combustible Dusts)

##### CEC Section 18 (Class & Zoning)

Ex nA[ia Ga] nC IIC T4 Gc  
Ex tb IIIC T65°C Db

##### IECEX

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

##### ATEX

Ⓔ 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

### Additional Certification

EMC Tested:

to EN 61000-6-2, EN 61000-6-3  
FCC - Part 15

## System Options

### 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 aids in the reduction of powder deposit build up over time and aids in clean down operations.

- Made using Stainless Steel (SS grade: 304) with Viton O-Rings
- IP 66
- -40°F to 140°F (-40°C to 60°C)
- Various lengths of straight or spiral Hytrel cable available.
- IECEx Ex h Certification:
  - Ex h IIC T6 Ga
  - Ex h IIIC T85°C Da
  - Ta = -40°C to +60°C
  - IECEX EXV 20.0033



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Leading the way in hazardous area static control



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United Kingdom  
**Newson Gale Ltd**  
Omega House  
Private Road 8  
Colwick, Nottingham  
NG4 2JX, UK  
+44 (0)115 940 7500  
[groundit@newson-gale.co.uk](mailto:groundit@newson-gale.co.uk)

United States  
**IEP Technologies LLC**  
417-1 South Street  
Marlborough, MA 01752  
USA  
+1 732 961 7610  
[groundit@newson-gale.com](mailto:groundit@newson-gale.com)

Deutschland  
**IEP Technologies GmbH**  
Kaiserswerther Str. 85C  
40878 Ratingen  
Germany  
+49 (0)2102 58890  
[erdung@newson-gale.de](mailto:erdung@newson-gale.de)