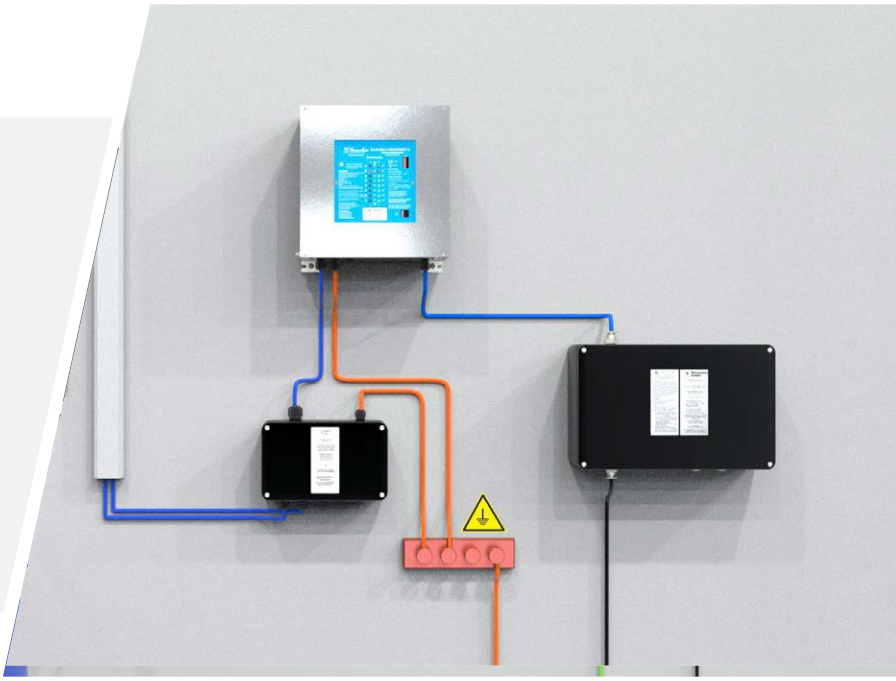
Online Inquiry >

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

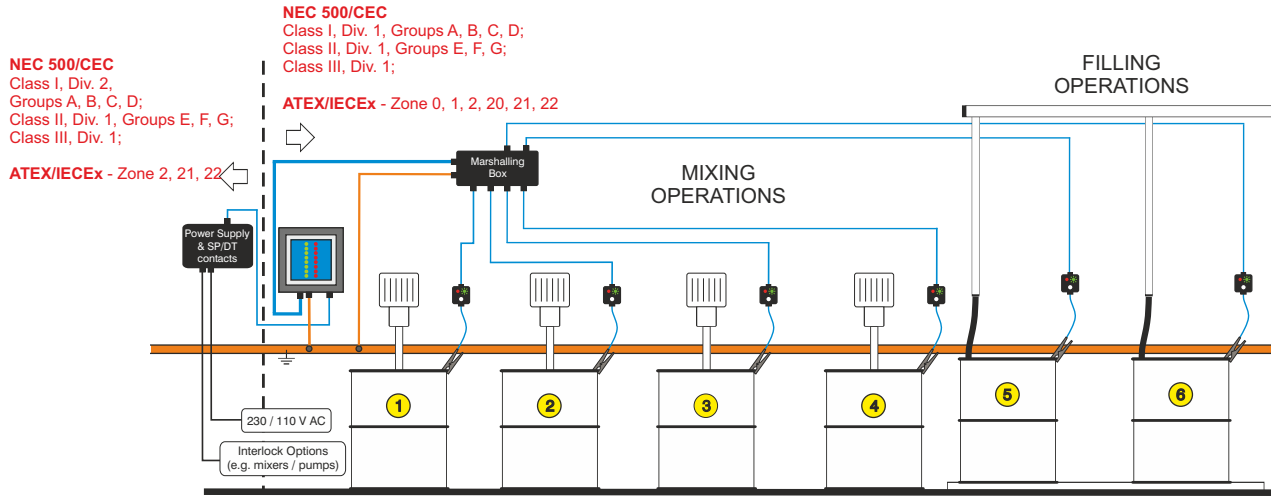
The **Earth-Rite MULTIPOINT II's** monitoring unit contains 8 pairs of LED ground status indicators (red and green).

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.

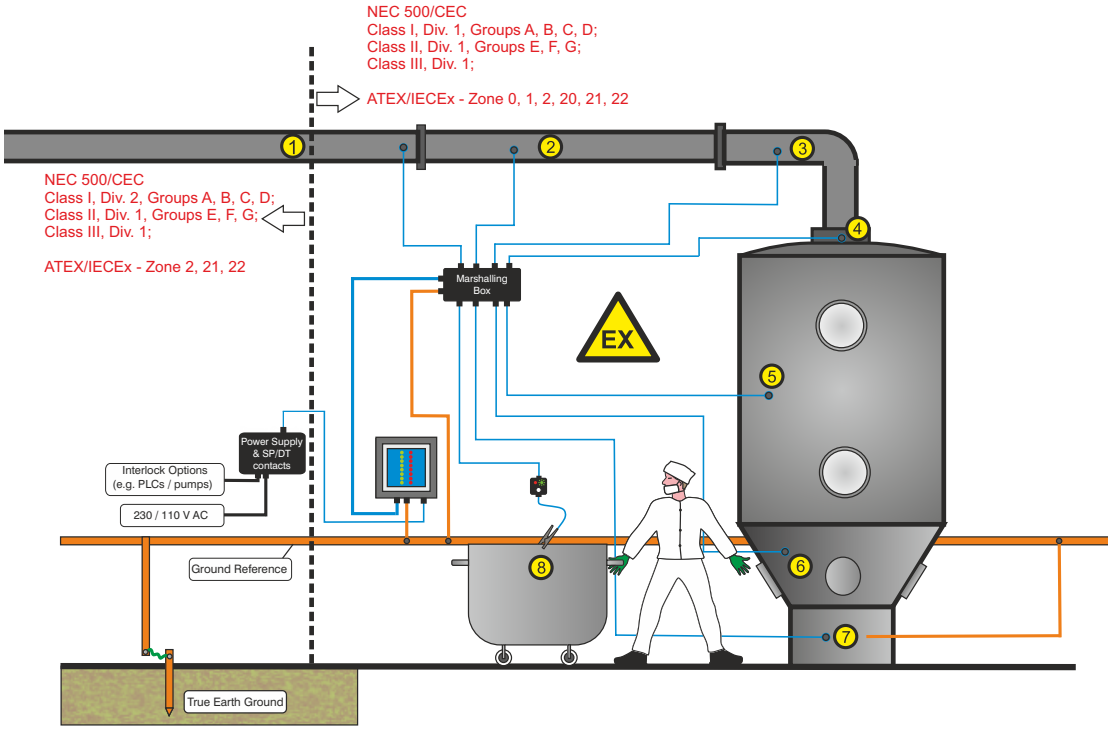
The **Earth-Rite MULTIPOINT II's** 230 V/110 V AC power supply unit houses eleven (11) dry contacts. 8 of these interface with each monitored grounding channel, 2 provide the grouped channel function and 1 relay provides the fail-safe redundancy output function.

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.



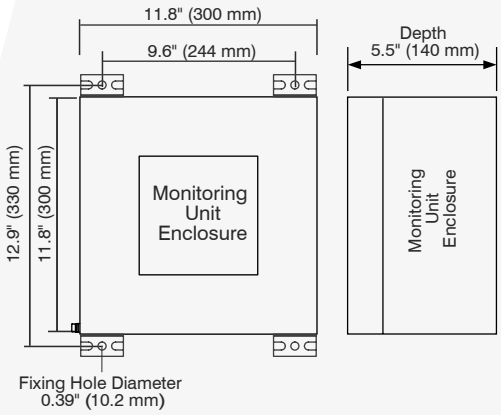
In this example the Earth-Rite MULTIPOINT II is configured to ground multiple interconnected components for a fluid bed dryer system. The marshalling box feeds seven channels out to seven permanent ground connection points [the connection points may be disconnected for routine cleaning, inspection and 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

Technical Specification
(with GRP power supply)

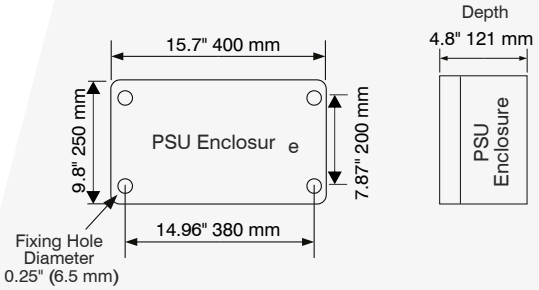
Monitoring unit
Class I, Div.1 Installations

Ambient Temperature Range	-40ºF to +140ºF
Ingress Protection	Type 4X (IP66)
Construction	Stainless Steel (SS grade: 316L)
Monitoring Circuit	Intrinsically Safe (ia)
Monitoring Loop Resistance	Nominally ≤10 Ohm (± 10%)
Cable Entries	3 x M20, 1 X M25 (NPT adaptors available)



Power Supply Unit
Class I, Div.2 (Class II, Div.1) Installations

Power Supply	115 V or 230 V AC, 50-60 Hz
Current Rating	200 mA
Power Rating	10 Watts
Ambient Temperature Range	-40ºF to +140ºF
Ingress Protection	Type 4X (IP66)
Construction	GRP with carbon loading
Output to Monitoring Unit	Intrinsically safe
Output Channel Relay	8 off dry change over switch contacts
Output Group Relay	2 off dry change over switch contacts
Output Fault Relay	1 off dry change over switch contacts
Relay Contact Rating	240 V AC, 5 A, 500 VA max resistive 30 V DC, 2 A, 60 W max resistive
Cable Entries	12 x M20 (NPT Adaptors available)



Marshalling Junction Box

Enclosure Material	GRP with carbon loading
Cable Entries	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

Enclosure Material	GRP with carbon loading
Cable Entries	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"

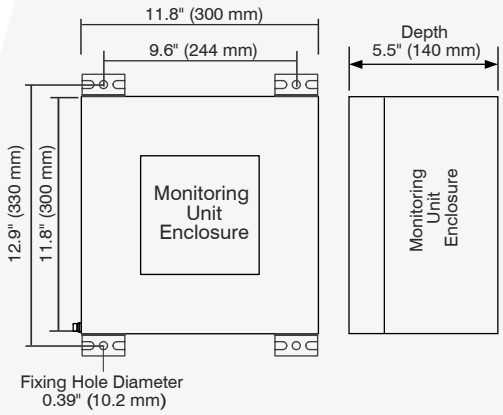
For more detailed mechanical descriptions please refer to instruction manual

Earth-Rite® MULTIPOINT II

Technical Specification
(with stainless steel power supply)

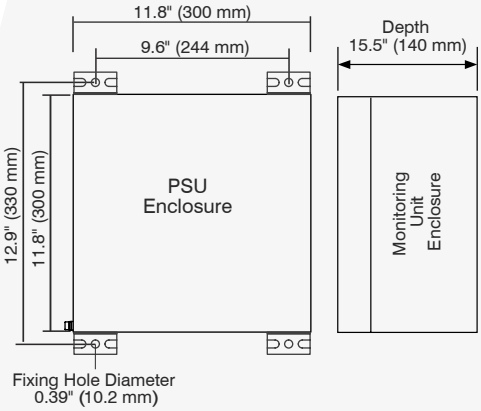
Monitoring unit
Class I, Div.1 Installations

Ambient Temperature Range	-40°F to +140°F
Ingress Protection	Type 4X (IP66)
Construction	Stainless Steel (SS grade: 316L)
Monitoring Circuit	Intrinsically Safe (ia)
Monitoring Loop Resistance	Nominally ≤10 Ohm (± 10%)
Cable Entries	3 x M20, 1 X M25 (NPT Adaptors available)



Power Supply Unit
Class I, Div.2 (Class II, Div.1) Installations

Power Supply	115 V or 230 V AC, 50-60 Hz
Current Rating	200 mA
Power Rating	10 Watts
Ambient Temperature Range	-40°F to +140°F
Ingress Protection	Type 4X (IP66)
Construction	Stainless Steel (SS grade: 316L)
Output to Monitoring Unit	Intrinsically Safe (ia)
Output Channel Relay	8 off dry change over switch contacts
Output Group Relay	2 off dry change over switch contacts
Output Fault Relay	1 off dry change over switch contacts
Relay Contact Rating	240 V AC, 5 A, 500 VA max resistive 30 V DC, 2 A, 60 W max resistive
Cable Entries	12 x M20 mm (NPT Adaptors available)



Marshalling Junction Box

Enclosure Material	Stainless Steel (SS grade: 316L)
Cable Entries	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

Enclosure Material	Stainless Steel (SS grade: 316L)
Cable Entries	1 x M20 (NPT Adaptors available)

Product Description	Lengt	eigh	epth
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:

NEC 500 / CEC (Class & Division)
Suitable for use In
Class I, Div. 1, 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;
Temperature Code T4
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
Class II, Zone 20, AEx ia IIIC T135°C Da

CEC Section 18 (Class & Zoning)
Ex ia IIC T4 Ga
Ex ia IIIC T135°C Da

Europe / International Version Available:

IECEx
Ex ia IIC T4 Ga
Ex ia IIIC T135ºC Da
Ta = -40ºC to +60ºC
IECEx EXV 19.0062X
IECEx Certifying Body: ExVeritas

ATEX
Ⓔx II 1 G
II 1 D
Ex ia IIC T4 Ga
Ex ia IIIC T135ºC Da
Ta = -40ºC to +60ºC
ExVeritas 19ATEX0546X
ATEX Notified Body: ExVeritas

UKCA Ex
Ⓔx II 1 G
II 1 D
Ex ia IIC T4 Ga
Ex ia IIIC T135ºC Da
Ta = -40ºC to +60ºC
ExVeritas 21UKEX0837X
UKCA Ex Approved Body: ExVeritas

CCC
Ex ia IIC T4 Ga
Ex ia IIIC T135°C Da
2021312309000479
Approved Body: CNEX

KCs (Gas)
Ex ia IIC T4 Ga
Ta = -40ºC to +60ºC
22-AV4BO-0344X
Approved Body: KOSHA

KCs (Dust)
Ex ia IIIC T135ºC Da
Ta = -40ºC to +60ºC
22-AV4BO-0345X
Approved Body: KOSHA

Additional Certification

EMC Tested:	to EN 61000-6-2, EN 61000-6-3 FCC - Part 15

Earth-Rite® MULTIPOINT II

Hazardous Area Certification

Power Supply Unit

North America:

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;
Temperature Code T4
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
Class II, Zone 21, AEx tb IIIC T65ºC Db

CEC Section 18 (Class & Zoning)
Ex nA[ia Ga] nC IIC T4 Gc
Ex tb IIIC T65ºC Db

Europe / International Version Available:

IECEx
Ex ec nC [ia Ga] IIC T4 Gc
Ex tb [ia Da] IIIC T65ºC Db
Ta = -40ºC to +60ºC
IECEx EXV 19.0062X
IECEx Certifying Body: ExVeritas

ATEX
II 3(1)G
II 2(1)D
Ex ec nC [ia Ga] IIC T4 Gc
Ex tb [ia Da] IIIC T65ºC Db
Ta = -40ºC to +60ºC
ExVeritas 19ATEX0546X
ATEX Notified Body: ExVeritas

UKCA Ex
II 3(1)G
II 2(1)D
Ex ec nC [ia Ga] IIC T4 Gc
Ex tb [ia Da] IIIC T65ºC Db
Ta = -40ºC to +60ºC
ExVeritas 21UKEX0837X
UKCA Ex Approved Body: ExVeritas

CCC
Ex ec [ia Ga] nC IIC T4 Gc
Ex tb IIIC T65ºC Db
Ta = -40ºC to +60ºC
2021312309000479
Approved Body: CNEX

KCs (Gas)
Ex ec [ia Ga] nC IIC T4 Gc
Ta = -40ºC to +60ºC
22-AV4BO-0346X
Approved Body: KOSHA

KCs (Dust)
Ex tb IIIC T65ºC Db
Ta = -40ºC to +60ºC
22-AV4BO-0347X
Approved Body: KOSHA

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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