Earth-Rite® II PLUS

Static Ground Indicator and Interlock System

ATEX IECEx SIL 2 INMETRO

Precision and reliability is what the **Earth-Rite® II PLUS** provides to HAZMAT professionals and engineers who are tasked with protecting personnel and plant assets from the ignition hazards of static electricity during tank car, LACT & skid unit and tote loading/unloading operations.

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

Earth-Rite II PLUS Static Grounding System

Conductive metal objects like tank cars, LACT units, skids, totes and IBCs that come into contact with electrostatically charged liquids can accumulate hazardous levels of electrostatic charge that could discharge static sparks with energies far in excess of the minimum ignition energies of a vast range of combustible gases and vapors. The ignition of combustible atmospheres by static electricity can be prevented by ensuring that such objects are grounded.

The **Earth-Rite II PLUS** is the ideal solution for grounding and bonding a broad range of equipment at risk of igniting combustible gases and vapors. In combination with demonstrating the full range of Class I, Div. 1 approvals for all gas and liquid vapor groups, the **Earth-Rite II PLUS** ensures a continuously monitored 10 ohm, or less, connection is present between the grounded object and a designated true earth grounding point. This feature provides equipment specifiers with the ability to demonstrate compliance with the grounding and bonding recommendations of NFPA 77*, API RP 2003* and IEC 60079-32*.

***NFPA 77**, “Recommended Practice on Static Electricity.”

***API RP 2003**, “Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents.”

***IEC 60079-32**, “Explosive atmospheres: electrostatic hazards, guidance”.

The Earth-Rite II PLUS includes:

> **Ex(d)** / **XP Controller** with Intrinsically Safe Monitoring Circuit.
or
> **HAZLOC approved static dissipative GRP** controller with Intrinsically Safe Monitoring Circuit.

> **Ground Connection Junction Box** with Clamp Stowage Point and Quick Release Connector.

> Universal Grounding Clamp with various lengths of 2 conductor Cen-Stat protected Cable.

> Flexible HAZLOC installation options.

Newson Gale | For over 30 years Newson Gale has been supplying the chemical and processing industry worldwide with its market leading range of static control products ensuring people and plant are protected from static related fires and explosions.

Earth-Rite® II PLUS Static Ground Indicator and Interlock System

Features and Benefits

Attention grabbing LEDs

Three green LEDs continuously pulse informing operators that the object to be protected from static discharges is grounded. When the system is not in use, or when it detects the resistance in the static grounding path is higher than 10 ohms*, a red LED illuminates the indicator panel located inside the XP enclosure.

Continuous Ground Loop Monitoring

Monitors the resistance of the ground loop from the grounded object through to the site's verified true earth grounding point. If the Earth-Rite® PLUS detects that resistance in the ground loop is higher than 10 ohms*, it engages a pair of dry output contacts that can be interlocked with the product transfer system.

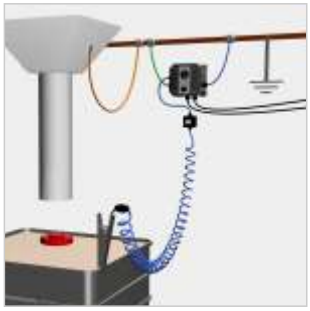
Two dry output contacts

The primary contact can be interlocked with electro-mechanical devices or PLC systems to shut down the flow of product. The secondary contact can interface with attention grabbing audible alarms or strobe lights to provide an extra layer of protection over the hazard.

Easy Installation

Simple "bolt-on" enclosures complemented by straightforward cabling and PCB system wiring requirements. Flexible hazardous location enclosure options and power supplies which can run off both 240 V / 110 V AC and 24 V / 12V DC.

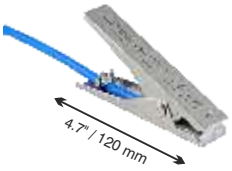
* The international recommended practice for controlling the ignition hazards of static electricity in HAZLOC atmospheres, IEC 60079-32 and NFPA 77, recommend that the maximum resistance between conductive metal plant equipment and verified true earth grounding points should not be more than 10 ohms resistance.



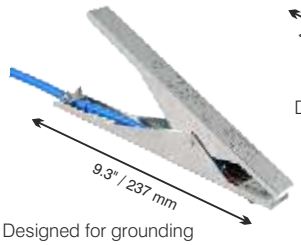
Filling IBCs, Totes, Drums, Containers and Rail Cars

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

Universal grounding clamp
with Quick Connect and optional lengths of Hytrel protected 2 core cable included.



Designed for grounding drums and small containers



Designed for grounding large drums and large containers

Options

- 50ft Self-Retracting Cable Reel
- 16ft, 32ft, 50ft lengths of Retractable Spiral Cable
- Large or Standard size 2 Pole Clamps
- Intrinsically Safe (I.S.) Switching PBC
- Explosion Proof Strobe Light
- IEC/Cenelec (European) and NEC/CEC (North American) versions available

Certification

IECEx SIL 2

Ingress Protection
Type 4X - IP 66

Power Supply
110/120 V or 220/240 V AC, 50-60 Hz
12 V or 24 V DC

Earth-Rite® II PLUS Static Ground Indicator and Interlock System

Technical Specification

XP (Class I, II, III - Div 1 Installations)

Monitoring unit

Power supply	110/120 V or 220/240 V AC, 50-60 Hz 12 V or 24 V DC
Power rating	10 watt
Ambient temperature range	-40°F to +122°F (-40°C to +55°C)
Ingress protection	Type 4X (IP 66)
Weight	9.9 lbs (4.5 kg) nett
Construction	Copper-free cast aluminium
Monitoring Circuit	Intrinsically Safe
Operational Series Ground Resistance	Nominally ≤10 Ohm
Output Relay Contact Rating	2 off dry contacts, 250 V AC, 5 A, 500 VA max resistive 30 V DC, 2 A, 60 W max resistive
I.S Switching PCB (NAMUR compatible)	30 V DC, 500 mA Li = 0H, Ci = 0F Optional extra - See system options
Cable Entries	7 x ¾" NPT (supplied with 4 stopper plugs)

Junction Box/Stowage Point

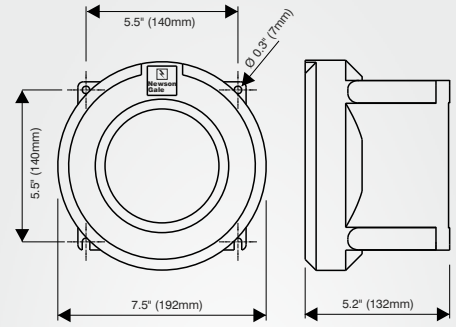
Enclosure Material	GRP with carbon loading
Terminals	2 x AWG #14 conductor capacity
Stowage Device	Insulated 0.79" diameter pin
Cable Entries	1 x M20
Clamp Cable Connection	Quick Connect

Grounding Clamp

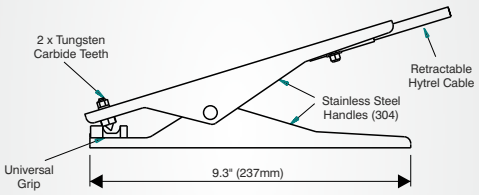
Clamp Design	2 pole with tungsten carbide teeth
Body	Stainless steel
Certification	Ex II 1 GD T6
Approval	FM Approved

Spiral Cable

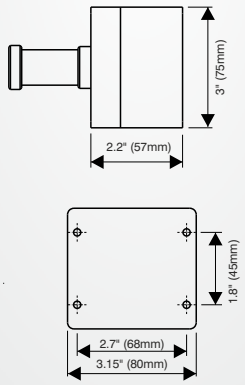
Cable	Blue Cen-Stat Hytrel sheath (Static dissipative, chemical & abrasion resistant)
Conductors	2 x AWG #18 copper
Length	32 ft. extended, 3 ft. unextended (other lengths available - please inquire)



Approved copper free cast aluminium enclosure - IP 66 / Type 4X



ATEX certified / FM Approved 2 Pole stainless steel grounding clamp fitted with one pair of tungsten carbide tips



Simple Apparatus GRP clamp stowage box with grounding clamp stowage pin

Earth-Rite® II PLUS Static Ground Indicator and Interlock System

Hazardous Area Certification

Europe / International:	North America:
IECEx Ex d[ia] IIC T6 Gb(Ga) (gas & vapour) Ex tb IIIC T80ºC IP66 Db (combustible dusts) Ta = -40ºC to +55ºC IECEx EXV 19.0052 IECEx certifying body: ExVeritas **ATEX** Ⓔx II 2(1)GD Ex d[ia] IIC T6 Gb(Ga) Ex tb IIIC T80ºC IP66 Db Ta = -40ºC to +55ºC ExVeritas 19ATEX0537 ATEX Notified Body: ExVeritas	**NEC 500 / CEC (Class & Division)** Associated 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 Providing intrinsically safe circuits 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; ERII-Q-10110 cCSAus Ta = -40°C to +50°C Ta = -40°F to +122°F OSHA recognised NRTL: CSA **NEC 505 & 506 (Class & Zoning)** Class I, Zone 1 [0] AEx d[ia] IIC T6 Gb(Ga) (gas & vapour) Class II, Zone 21 [20] AEx tD [iaD] 21 T80°C (combustible dusts) **CEC Section 18 (Class & Zoning)** Class I, Zone 1[0] Ex d[ia] IIC T6 Gb(Ga) DIP A21, IP66, T80ºC

Additional Certification

Safety Integrity Level:	SIL 2 (in accordance with IEC/EN 61508)
SIL assessment body:	Exida
EMC Tested:	to EN 61000-6-3, EN 61000-6-2 FCC - Part 15 (Class B)

ATEX IECEx SIL 2 INMETRO

Earth-Rite® II PLUS Static Ground Indicator and Interlock System

Technical Specification

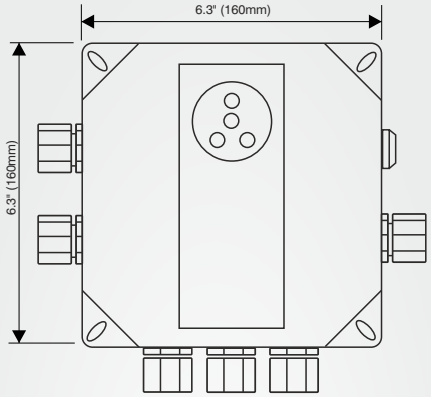
for single unit installation in Div.2 hazardous locations.

Power Supply & Monitoring Unit	
Power Supply	108/125 V or 216/250 V AC, 50-60 Hz 12 V or 24 V DC
Power Rating	10 watt
Ambient Temperature Range	-13°F to +131°F (-25°C to +55°C)
Ingress Protection	Type 4X (IP 66)
Weight	4.4 lbs (2 Kg) nett
Construction	Carbon-loaded GRP
Monitoring Circuit	Intrinsically safe
Operational Series Ground Resistance	Nominally ≤10 Ohm
Output Relay Contact Rating	2 off dry contacts, 250 V AC, 5 A, 500 VA max resistive 30 V DC, 2 A, 60 W max resistive
I.S Switching PCB (NAMUR compatible)	30 V DC, 500 mA Li = 0H, Ci = 0F Optional extra - See system options
Cable Entries	7 x M20 (4 x plugged)

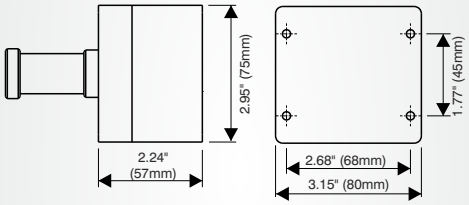
Junction Box/Stowage Point	
Enclosure Material	GRP with carbon loading
Terminals	2 x AWG #14 conductor capacity
Stowage Device	Insulated ¾" Ø pin
Cable Entries	1 x M20
Clamp Cable Connection	Quick Connect

Grounding Clamp	
Clamp Design	2 pole with tungsten carbide teeth
Body	Stainless Steel (SS 304)
Certification	Ex II 1 GD T6
Approval	FM Approved

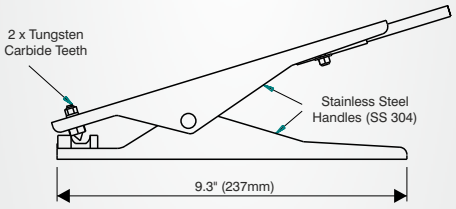
Spiral Cable	
Cover	Cover Blue Cen-Stat Hytrel sheath (Static dissipative, chemical & abrasion resistant)
Conductors	2 x AWG #18 copper
Length	32 ft extended, 3 ft unextended (other lengths available - please inquire)



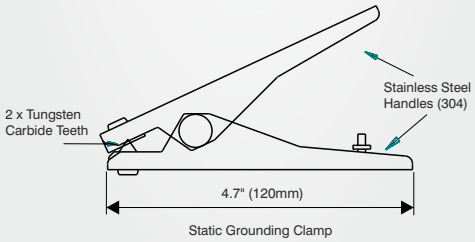
Earth-Rite PLUS consisting of ground loop monitoring module and 230V/110V power supply.



Junction Box/Stowage Point



Static Grounding Clamp



Static Grounding Clamp

ATEX certified / FM Approved 2 Pole stainless steel grounding clamp fitted with one pair of tungsten carbide teeth

Earth-Rite® II PLUS Static Ground Indicator and Interlock System

Hazardous Area Certification

Europe / International:	North America:
IECEx Ex ec nC [ia] IIC T4 Gc(Ga) (gas & vapour) Ex tb IIIC T70ºC Db (combustible dusts) Ta = -40ºC to +55ºC IECEx EXV 19.0059X IECEx certifying body: ExVeritas **ATEX** Ⓔx II 3(1) G Ex II 2D Ex ec nC [ia] IIC T4 Gc(Ga) Ex tb IIIC T70ºC Db Ta = -40ºC to +55ºC ExVeritas 19ATEX0545X ATEX Notified Body: ExVeritas	**NEC 500 / CEC (Class & Division)** Associated Equipment [Ex ia] for use in Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups E, F, G Class III, Div. 2 Providing Intrinsically Safe circuits 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; ERII-Q-10165 cCSAus Ta = -25°C to +55°C Ta = -13°F to +131°F OSHA recognised NRTL: CSA **NEC 505 & 506 (Class & Zoning)** Class I, Zone 2, (Zone 0), AEx nA[ia] IIC T4 (gas & vapour) Class II, Zone 21, AEx tD[iaD] 21, T70ºC, (combustible dusts) **CEC Section 18 (Class & Zoning)** Class I, Zone 2 (Zone 0) Ex nA[ia] IIC T4 DIP A21, IP66, T70ºC

Additional Certification

Safety Integrity Level:	SIL 2 (in accordance with IEC/EN 61508)
SIL assessment body:	Exida
EMC Tested:	to EN 61000-6-4, EN 61000-6-2 FCC - Part 15 (Class B)

ATEX IECEx SIL 2 INMETRO

Earth-Rite® II PLUS Static Ground Indicator and Interlock System

Technical Specification

for ground monitor-indicator station mounted in Div.1 locations and power supply for mounting in Div.2 or non-hazardous locations.

for Class 1, Div.1 locations (or lower)

Ground Monitor-Indicator Station

U.S. / Canada Class and Division system:
Intrinsically Safe Equipment Exia 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. ERII-Q-10173 cCSAus

Canada Class and Zone system:
Class I, Zone 0, Ex ia IIC T4
DIP A20 T70C

U.S. Class and Zone system:
Class I, Zone 0 AEx ia IIC T4
Class II, Zone 20, AEx iaD 20 T70C
T4 @ Ta = -25 deg C to +55 deg C
Enclosure Type 4X, IP 66. Static dissipative GRP.

for mounting in Div.2 or Non-Hazardous locations

Power Supply Unit

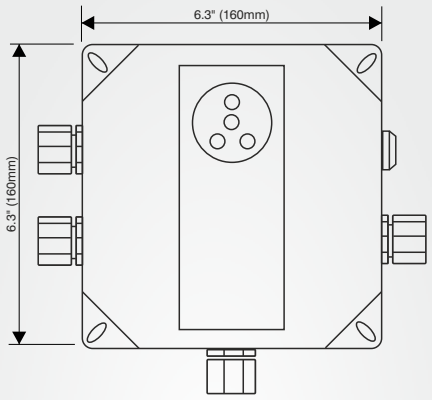
Power Supply
230/240 V AC 50Hz (supply voltage range: 216 V to 250 V AC).
110/120V AC 50Hz (supply voltage range: 108 V to 125 V AC).

U.S. / Canada Class and Division system:
Associated Equipment [Exia] for use in
Class I, Div. 2, Groups A, B, C, D;
Class II, Div. 2, Groups E, F, G;
Class III, Div. 2,
providing Intrinsically Safe circuits 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. ERII-Q-10173 cCSAus

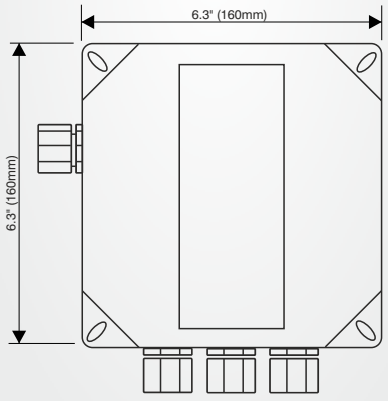
Canada Class and Zone system:
Class I, Zone 2 (zone 0), Ex nA[ia] IIC T4
DIP A21 T70C

U.S. Class and Zone system:
Class I, Zone 2 (zone 0) AEx nA[ia] IIC T4
Class II, Zone 21, AEx tD[iaD] 21 T70C
T4 @ Ta = -25 C to +55 C
Enclosure Type 4X, IP 66. Static dissipative GRP.

Output Relay Contact Rating:
2 off dry contacts,
250 V AC, 5 A, 500 VA max resistive
30 V DC, 2 A, 60 W max resistive



Earth-Rite II PLUS ground status indicator station
for Class 1, Div.1 locations (or lower)



Earth-Rite II PLUS 240V / 110V ac power supply
for mounting in Div.2 or Non-Hazardous locations

Earth-Rite® II PLUS Static Ground Indicator and Interlock System

System 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. Contact Newson Gale or your local Newson Gale representative for more information on the range of options available.

Universal Resistance Tester

The URT is designed to provide owners of Newson Gale **Earth-Rite®** and **Bond-Rite®** static grounding systems with a means of regularly testing the grounding settings for their system on a routine basis.

Periodic testing with the URT verifies that the grounding system's **GO**/**NO GO** settings are working in compliance with the recommendations of:

NFPA 77: "Recommended Practice on Static Electricity."

IEC 60079-32-1: "Explosive atmospheres. Part 32-1: Electrostatic hazards, guidance."

The easy to use tester consists of a pair of switches that enable an electrician to set up the resistance level at which the grounding system should be working and conduct a PASS / FAIL test at the required setting.

Earth-Rite® and **Bond-Rite®** products that can be tested with the URT:

> Earth-Rite® II PLUS
> Earth-Rite® II FIBC (both 10 meg-ohm and 100 meg-ohm variants)
> Bond-Rite® CLAMP
> Bond-Rite® EZ
> Bond-Rite® REMOTE
> OhmGuard® (both 10 ohm and 100 ohm variants)

Earth-Rite® II PLUS Static Ground Indicator and Interlock System

Retractable Cable Reel

The Retractable Cable Reel is supplied for grounding system installations where customers want to ensure the grounding clamp and cable are returned to the static grounding system by operators and drivers on completion of the product transfer process. The reel can be used in conjunction with the **Earth-Rite II RTR**, **Earth-Rite II MGV** and **Earth-Rite II PLUS**.

> Certified for ATEX Zone 1 and 21 hazardous areas.

> Self-retracting with up to 15 m (50 ft.) of Hytrel® protected cable.

> Silver plated ultra low resistance slip ring contacts.

Ex Strobe Light

The strobe light is mounted in an elevated position and when the equipment is correctly grounded, flashes continuously informing personnel that a transfer process is underway and is protected from the static hazard. The strobe light can be used in conjunction with the **Earth-Rite II RTR**, and **Earth-Rite II PLUS**.

> ATEX and Class/Div approved versions

> Bond115 V / 230 V AC and 24 V / 48 V DC options

> Amber, Green & Red strobe colour options

Intrinsically Safe (I.S) Switching PCB

The I.S Switching PCB is an additional circuit board added to Newson Gale system enclosures that enable users to directly interface with, and switch intrinsically safe circuits without the need for additional equipment. The I.S Switching PCB is designed not to affect the I.S signals electrical parameters and is compatible with the **Earth-Rite II RTR**, **MGV, PLUS** and **FIBC** platforms.

> 30 V DC, 500 mA

> Li = 0H, Ci = 0F

> Suitable for Ex ia, ib, ic rated instrinsically safe circuits only

> NAMUR Compatible

Earth-Rite® II PLUS Static Ground Indicator and Interlock System

Contact Us > Your inquiry 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.

Sun Shield

Designed for operating environments subject to intense sunlight, the ERII Sun Shield prevents direct sunlight hitting the indicators on the **Earth-Rite II RTR** and **Earth-Rite II PLUS** static grounding systems.

The Sun Shield casts a shadow over the indicators during peak sun light hours so that operators can easily view the ground status indicators. The shield is constructed from stainless steel and can be fitted to any installation in a matter of minutes.

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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