

Earth-Rite® II FIBC

Static grounding protection for Type C FIBC located in potentially flammable/combustible gas or dust atmospheres



The **Earth-Rite® II FIBC** system validates and monitors the resistance of Type C FIBC bags ensuring that the conductive elements of the bag are capable of dissipating electrostatic charges in compliance with IEC 61340-4-4 “Standard test methods for specific applications - Electrostatic classification of flexible intermediate bulk containers (FIBC)” and NFPA 77 “Recommended Practice on Static Electricity”.

The **Earth-Rite® II FIBC** system can be installed and setup to ensure that operators ground the bag before filling or emptying operations are started. During the bag filling/emptying process the **Earth-Rite® II FIBC** system continuously monitors the resistance of the bag so that if it rises above the recommended upper monitoring resistance level* this dangerous situation can be indicated to operators and the process halted, either manually or via the system’s pair of NO/NC volt free contacts.

This feature ensures the generation and accumulation of static charges on the bag is stopped mitigating the risk of an incendive electrostatic spark discharge. To compensate for normal wear and tear on Type C bags it is important to ensure the bag maintains its capacity to dissipate charge and also ensure the ground connection between the bag and plant earth grounding point is functioning correctly.

Newson Gale can also provide FIBC grounding systems that can validate and monitor Type C bags designed with an upper resistance threshold of 1×10^8 ohms (100 meg-ohm) or 1×10^7 ohms (10 meg-ohm).



Earth-Rite II FIBC
Type C Static
Grounding System

The Earth-Rite® II FIBC includes:

- SDP Controller (static dissipative GRP) with Intrinsically Safe Monitoring Circuits.
- FIBC Grounding Clamp with single conductor Hytel® Protected Cable.
- Junction Box with Stowage Pin for stowing FIBC Grounding Clamp.

*Recommended upper monitoring resistance level:

- IEC 61340-4-4 state that the resistance through a Type C FIBC bag should not exceed 1×10^8 ohms (100 meg-ohm)
- NFPA 77, state that the resistance through a Type C FIBC bag should not exceed 1×10^7 ohms (10 meg-ohm)

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Features and Benefits:

Attention grabbing LEDs

Three green LEDs continuously pulse informing operators that the FIBC bag to be protected from static discharges is correctly grounded. When the system is not in use, or when it detects the resistance in the static dissipative loop is higher than the upper monitoring resistance level*, a red LED illuminates the indicator panel located in the static dissipative GRP indicator station.

Continuous Ground Loop Monitoring

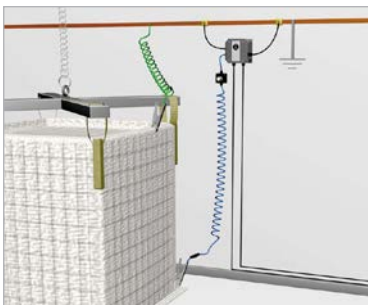
Monitors the resistance of the static dissipative loop through the FIBC bag back to the **Earth-Rite® FIBC** via the plant earth grounding point. If the system detects that resistance in the loop is higher than the upper monitoring resistance level*, it engages a pair of output contacts.

Two volt free output contacts

The primary contact can interlock with electro-mechanical devices or PLC systems to shutdown the flow of product. The secondary contact can interface with attention grabbing audible alarms or strobe lights to provide an extra degree of safety over the hazard.

Easy Installation

Simple to mount GRP enclosures complemented by straightforward cabling and PCB system wiring. Flexible hazardous area enclosure location options with separate IS monitoring / indicator and Power supply PCBs. Power supply PCB can run off both 240 V and 110 V mains / line supply and 24 V / 12 V DC voltage supply.



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ensures Type C FIBC bags are protected from incendive electrostatic discharges during bag filling and discharging operations.



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can be installed in Zoned / Classified combustible dust atmospheres. If gas and vapour atmospheres are present an Ex(d) / XP, Zone 1 / Class I, Div. 1 system may be specified.



FIBC stainless steel grounding clamp with Quick Connect and optional lengths of Hytel protected single core cable included.

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Options

Ex(d)XP Flameproof enclosure for gas & vapour atmosphere.

A 2nd clamp connects FIBC bag to verified earth grounding point.

Explosion Proof Strobe Light

Intrinsically safe (I.S) Switching PCB

IEC/Cenelec (European) and NEC/CEC (North American) versions available

Certification



IECEx



SIL 2

Ingress Protection

IP 66

Temperature Range

-40°C to +55°C - ATEX / IECEx
-13°F to +122°F - CSA

Power Supply

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