

Earth-Rite[®] MULTIPOINT

Static Earthing System

The problem of static electricity in hazardous atmospheres is ever present in many sectors of the processing industries. Effective earthing and bonding procedures are always the first step in controlling static, with special techniques being called for to suit individual applications.

One such application exists with items of process plant incorporating sections, which must be removed periodically for cleaning, product discharge or other purposes. A typical example of this is the product bowl on a Fluid Bed Dryer, but there are many other similar applications such as ductwork sections, conveying systems etc.

In these instances the possibility exists that the removable parts may become isolated conductors if they do not have a sufficiently low resistance path to ground to enable any static generated to safely dissipate. If this happens, high levels of charge may accumulate on the isolated part, posing the risk of energetic static discharges (sparks). If this occurs in a hazardous atmosphere there will be a chance of a resulting fire, explosion or dangerous physiological shocks for operators.



Multipoint Monitoring Unit



The **Earth-Rite MULTIPOINT** solves these problems by ensuring that all parts of the equipment are connected together and to ground by using a unique Intrinsically Safe monitoring system.

An important design criterion of the Earth-Rite MULTIPOINT ensures that the sum of all circulating currents does not compromise the intrinsic safety of the monitoring system.

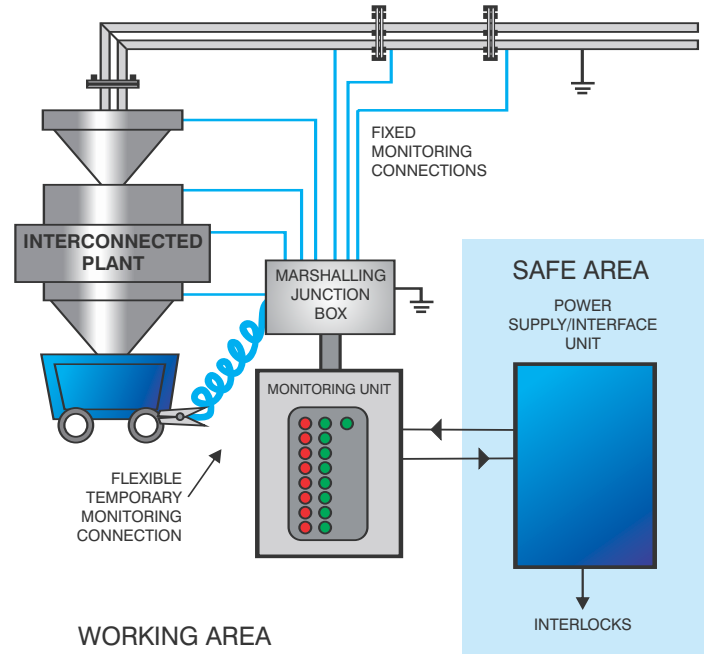
This is achieved by supplying the monitoring system from a single I.S. supply, which may be used to monitor up to eight separate points. The system provides permissive outputs only when the earth loop resistance of each utilised channel is less than 10 Ohms, as recommended in the various International standards for the control of undesirable static electricity.

The **Earth-Rite MULTIPOINT** may be used to provide status indication for the equipment, or automatically linked back to a control system to prevent operation until the required bonding and earthing conditions have been achieved. The system is ATEX approved for use in hazardous atmospheres and meets all current EC directives.



Technical Specification

- For plant and machinery where there are several potentially isolated conductive parts, the Earth-Rite MULTIPOINT provides monitoring and static earthing for up to 8 channels, with individual indication.
- One interlock output contact is provided as standard, which is activated if any of the channels loses its earth connection. Additional contacts may be added to provide individual outputs for each channel in use.
- Typical applications include fluid bed dryers, filling / discharge equipment, pipework / ducting and many other installations where part(s) of the assembly must be disconnected periodically.
- The system maintains hazardous area and operator safety at all times by operating from a single Intrinsically Safe power supply.



Certification	Monitoring Unit Power Supply / Interface Unit	II 1 GD EEx ia IIC T4 II (1) GD [EEx ia] IIC
Power Supply	230V or 110V ± 10%, 50hz	FM Pending
System Elements	Monitoring Module with Multiple Ground Indicator LEDs Power Supply Unit with Interlock output contact Cable Marshalling Box	
Options	Multiple Interlock output contacts (see second point above) Ground monitoring clamps and cables for mobile equipment Fixed monitoring leads and plug/socket connectors <i>(see System Accessories Data Sheet for full details)</i>	

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