Earth-Rite® OMEGA

ATEX IECEx SIL 2

The **Earth-Rite OMEGA II** is a compact panel mounted static grounding module that can monitor a range of resistance values, based on the grounding application and installation requirements of specific processes.

Earth-Rite OMEGA

The **OMEGA II** monitors the resistance of the static grounding circuit for processes where a risk of static charge accumulation on the equipment could result in an incendive electrostatic spark within locations that have potentially flammable atmospheres present.

It is specified primarily for applications where an alternative means of ground status indication is provided, e.g. via panel mounted indicators or remote indicator stations, as opposed to more regular grounding solutions in the **Earth-Rite** range.

The DIN rail mountable module can be located in an electrical panel mounted in a non-hazardous area or inside an XP certified enclosure located inside the hazardous area.

Two volt free changeover contacts can be used to switch power to additional ground status indicators or interlock with the process to shutdown product transfer when the OMEGA II detects an open circuit on the path to ground.

The OMEGA II is designed specifically for monitoring the static grounding of process equipment and has 4 resistance set points depending on the installation and operating characteristics of the application. It can also be installed to monitor the resistance of bonding circuits and lightning protection grounding points.

Up to four (4) OMEGAs can be powered by a single Newson Gale power supply.

Europe / International:

IECEx
[Ex ia Ga] IIC (gas & vapour).
[Ex ia Da] IIIC (combustible dusts).
Ta = -40ºC to +60ºC.
IECEx SIR 13.0003X
IECEx certifying body: SIRA.

ATEX
Ex II (1)GD
[Ex ia Ga] IIC (gas & vapour).
[Ex ia Da] IIIC (combustible dusts).
Ta = -40ºC to +60ºC.
Sira 13ATEX2009X
ATEX Notified Body: SIRA.

North America:

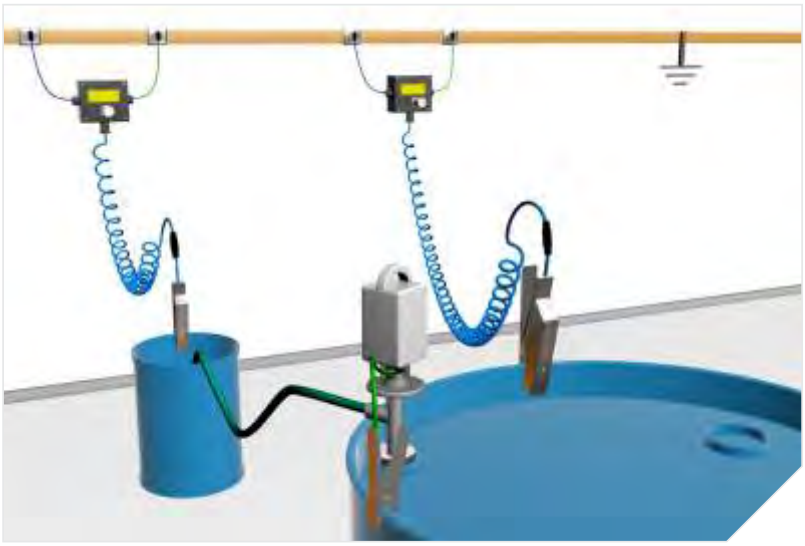
NEC 500 / CEC (Class & Division)
Intrinsically safe associated apparatus for supply to locations classified:
Class I, Div. 1, Groups A, B, C, D.
Class II, Div. 1, Groups E, F, G.
Class III, Div. 1.
Ta = -40°C to +60°C.
Ta = -40°F to +140°F
OSHA recognized NRTL: CSA.

NEC 505 & 506 (Class & Zoning)
Class I, Zone 0, [AEx ia], IIC (gas & vapour).
Class II, Zone 20, [AEx iaD], IIIC (combustible dusts).

CEC Section 18 (Class & Zoning)
[Ex ia] IIC

Click here for more information

Grounding drums and containers with indication



Static grounding solutions that combine an extra layer of protection provided by interlocks may not be a feasible installation option for certain applications and locations. In most scenarios this will be because there is no means of interfacing the output contacts of **Bond-Rite®** systems with the systems or power source controlling equipment that is capable of generating static electricity.

Such restrictions do not mean that specifiers have to take a downward leap to passive grounding clamps (non-monitored). An intermediate layer of static grounding protection is possible through the specification of **Bond-Rite®** solutions that can continuously monitor and verify that the resistance between the equipment to be grounded and a true earth ground source is 10 ohms or less.

The Bond-Rite CLAMP is one example of a grounding solution that not only continuously monitors the resistance in the ground path between the equipment to be grounded and a true earth ground source, it also provides process operators with a visual reference point to ensure the equipment is grounded.

This visual reference is provided by a green LED mounted in the body of the Bond-Rite CLAMP. When the Bond-Rite has a verified and continuous resistance of 10 ohms or less between the object at risk of discharging static sparks and a verified true earth ground source the green LED pulses continuously.

This patented feature enables process operators to take active responsibility for their own safety and that of their colleagues by repeatedly referring back to the status of the LED indicator. If the LED indicator is not pulsing, they can take action to halt the process to eliminate charge generation or sound an alarm to draw attention to the hazard.

Just because a particular installation or application does not lend itself to an inter-lockable grounding solution, specifying the Bond-Rite CLAMP enables specifiers to maintain an effective layer of protection over the ignition risks of electrostatic discharges.

IEC 60079-32-1, 13.3.1.4 "Movable metal items" states:

Portable conductive items (e.g. trolleys equipped with conductive rollers, metal buckets etc.) are earthed through their contact with dissipative or conductive floors.

However, in the presence of contaminants like dirt, or paint on the contact surface of either the floor or the object the leakage resistance to earth may increase to an unacceptable value resulting in possible hazardous electrostatic charge on the object. Where such situations are expected, the object should be earthed by an alternative means (e.g. earthing cable). A connection resistance of 10 Ω between the cable and the item to be earthed is recommended.

NFPA 77, 7.4.1.3.1, "Bonding and Grounding" states:

Where the bonding/grounding system is all metal, resistance in continuous ground paths typically is less than 10 ohms. Such systems include those having multiple components. Greater resistance usually indicates that the metal path is not continuous, usually because of loose connections or corrosion.