

Grounding
Systems



Grounding Monitor

MPTV



Designed to supervise and ensure the correct grounding of vehicles & containers in areas where flammable or combustible material is manipulated and there is a possibility of ignition due to static electricity, such as the Paint & Coating Industry or the Oil & Gas Industry.

“

The safest way to work is for the operators of hazmats, tank trucks or containers, while filling/emptying flammable or combustible material, to ground the vehicle or container using grounding equipment.

The MPTV is designed to operate in extreme environments.

It is built on an A.P.E. (explosion proof) box with all accessories, such as the portholes, and is designed to be explosion proof (Ex).

Once the vehicle or container is grounded by the clamp, grounding is initiated through a high impedance resistance, in order to minimize the risk of generating a static spark when grounding the vehicle or container.



Industries we serve:

- Chemical
- Paints & Coatings
- Pharmaceutical
- Food & Beverage

Used for filling & emptying of:

- Hazmats
- Tank Trucks
- Intermediate Bulk Containers (IBC)
- Totes
- Drums
- Big Bags
- Railcars
- Vessels
- Portable Containers
- Mobile Tanks

NO MAINTENANCE REQUIRED

10-Year Warranty

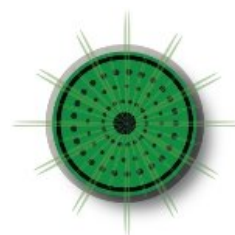
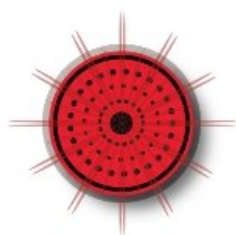
Typical Uses of the Grounding Monitor Equipment

Cleaning and recovery operations for the on-site cleaning of storage tanks and chemical spills.

Transport of chemicals to different production points in chemical processing plants.

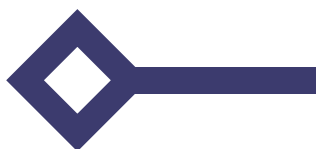
Transport of flammable products to external plants where the installed earthing systems do not exist or have not been verified by the supplier.

Flammable material collection operations to recover flammable spills after transport and loss in containment incidents.

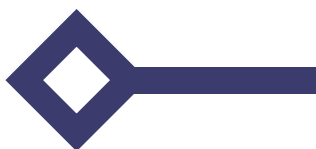


Grounding Monitor: Operation

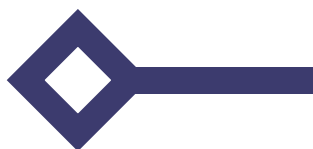
The operation of the MPTV equipment is fully automatic.



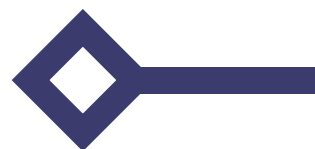
After a period of 5 seconds, the ground connection is cleared and service can then be started.



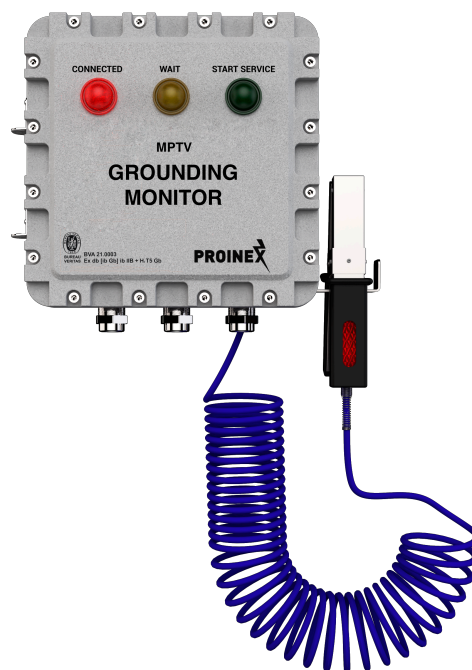
The Grounding Monitor also has a set of auxiliary NO/ NC terminals that can be used to command a solenoid valve or other intervening device in the process, which will not be activated until the vehicle or container is safely grounded.



Among the functions monitored by the control system is the connection of the ground to the vehicle or container, the waiting and the start of service.



Each status is indicated by LED lamps of different colors in order to avoid false readings.

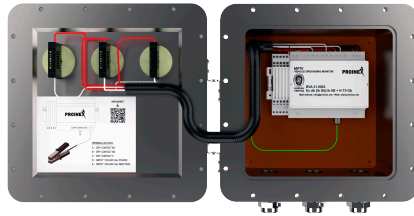


Installation in 5 Simple Steps



01

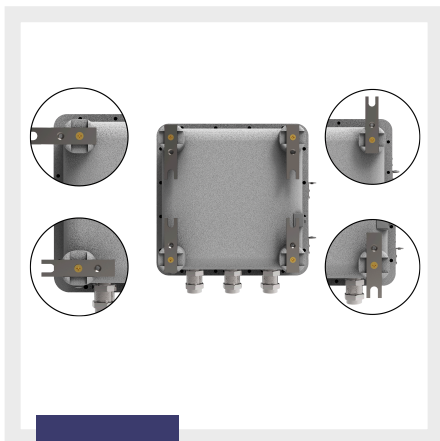
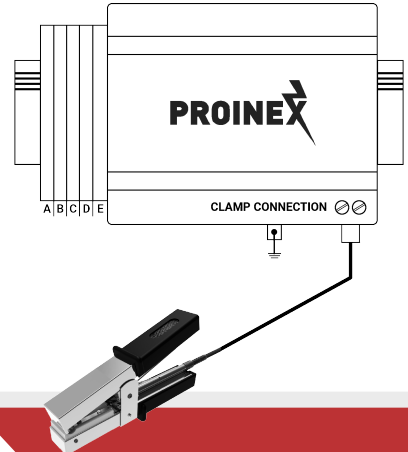
Remove the 16 screws holding the cover.



A. NC Contact
B. NO Contact
C. Common Contact
D & E. Power Supply 100-240 VAC

02

Identify the connection terminals.



03

Secure the box.



1. Electrical power supply
2. Signal normal open / normal closed
3. PAT Clamp connection

04

Cable glands for connections.



05

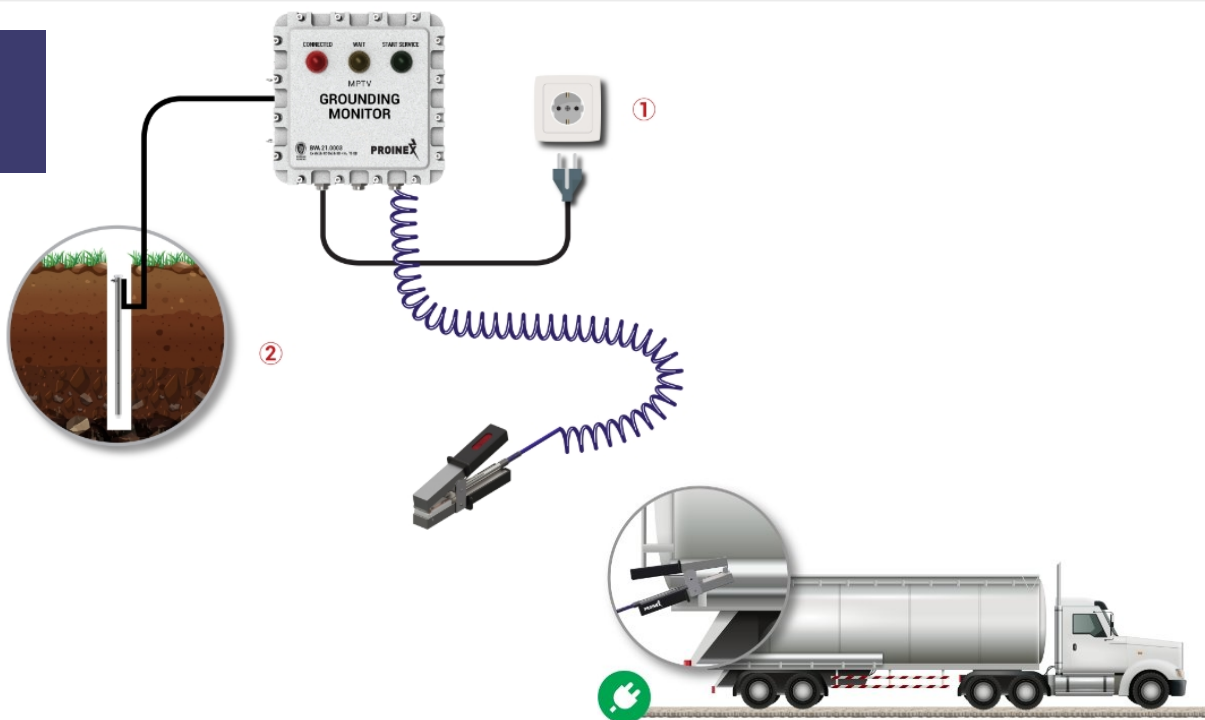
Proceed with the connections.

Connecting the Grounding: The ground connection is located on the left side of the Grounding Monitor. * AVOID USING "U" TERMINALS

Connecting Cables: Following the graphics printed on the inside of the equipment (see figure 2). Respect the phase and neutral polarity indicated in the diagram.

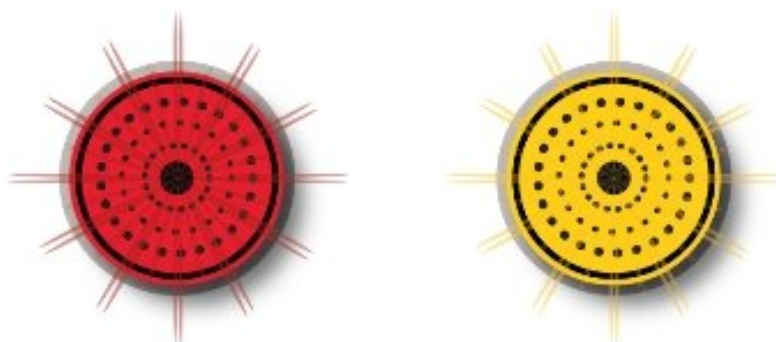
Operating Sequence for grounding hazmats or tank trucks

01



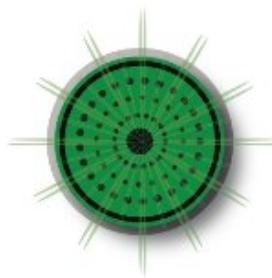
Connect the P.A.T. clamp to the ground of the vehicle.

02



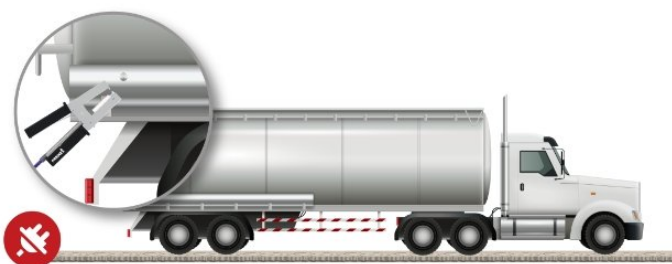
If the connection was successful, the amber and red light will flash at the same time.

03



After 5 seconds the amber indicator will go out and the green indicator will light up. In time the internal auxiliary contacts will change state. (NO to NC and NC to NO)

04



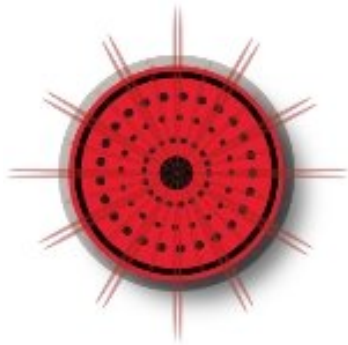
Once the unloading service has been completed, remove the clamps from the vehicle.

05



All the indicators will go out and the equipment will be ready to operate again and to perform a new download.

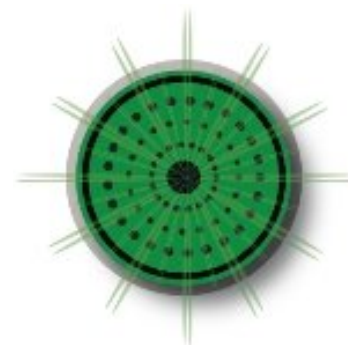
3 Light Indicators To Follow The Entire Sequence



Red indicates that the clamp is connected. In case of false contact or false connection, this light will not light up.



Yellow indicates that the high impedance discharge is taking place and its duration is 5 seconds.



Green indicates that the grounding has been done and that the discharge can be done normally.

When the MPTV enters the green condition the dry contacts change state allowing remote signalling, actuation of a solenoid valve, etc.

Technical Specifications

- Supply voltage: 100 - 220 Vac
- Maximum permissible grounding value: 10Ω
- Discharge time at high impedance: 8 sec.
- Operating temperature: -4°F a $+ 149^{\circ}\text{F}$ (-20°C to $+ 65^{\circ}\text{C}$)
- Degree of protection: IP66
- Category Ex: Ex d (ib IIC Gb) ib IIB + H2 T6 Gb
- Auxiliary contacts: 1 set of dry contacts - 5 A @ 220Vac.
- Dimensions: 10.0 x 9.8 x 8.1 in (245 x 248 x 207 mm) Width - Height - Depth
- Clamp cable length: 3.3 ft (10 metros)

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CALL US NOW!



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