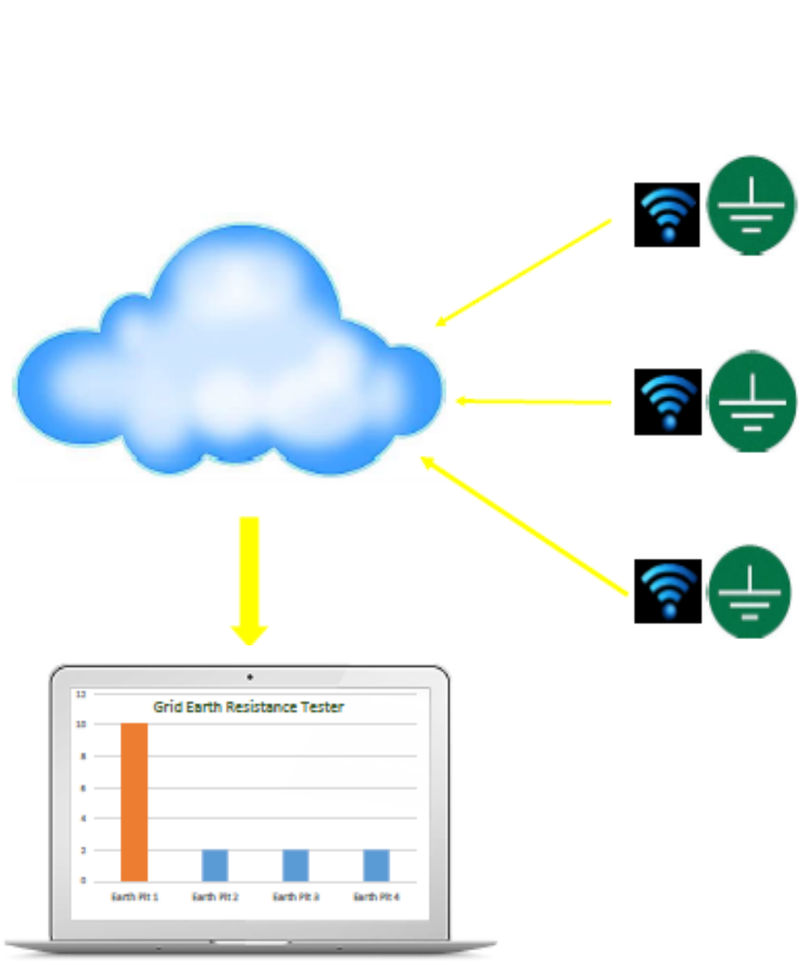
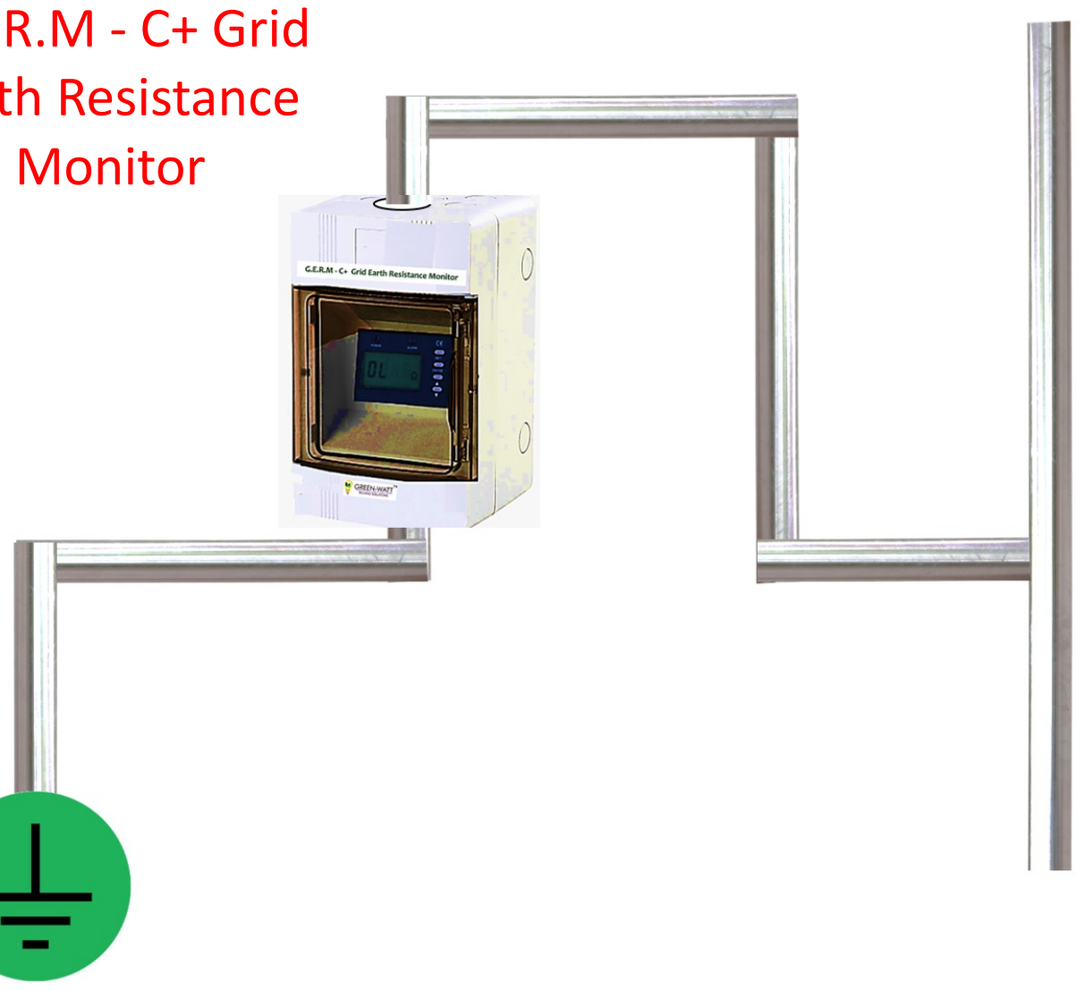
KPM G.E.R.M - C+ Grid Earth Resistance Monitor

KPM G.E.R.M – C+ Grid Earth Resistance Monitor is for on- line monitoring of grounding system. The detector adopts open-contact CT and is based on non-contact measurement technology. The grounding strip directly penetrates through GERM C+ and installation can be done without disconnecting the conductor . GERM C+ can be installed in Rain and dust proof structures.

GERM C+ is an all in one system to ensure the reliability of critical earth pits . **G.E.R.M – C+ consist of a display and an alarm function ,**user can set the alarm threshold as per system requirement , when the ground resistance value is greater than the set threshold, the alarm light will flicker. G.E.R.M C+ can be monitored real time via its RS232/RS485 interface.



G.E.R.M - C+ Grid Earth Resistance Monitor



A State of Art Device for online monitoring the health of your critical Earthing System

Grid Earth Resistance Monitor (GERM)

Grid Earth Resistance Monitor (Germ) is an state of art device which continuously monitors the earth value of the Earth Pits and raises an alarm whenever it detects any fault .

GERM C+ can also measures the Temperature & Humidity Data of the site & find the relation between variation of earth pit resistance w.r.t. the environmental parameters with the help of optional accessories.

All the information from the site are securely sent to the server via advance communication methods .

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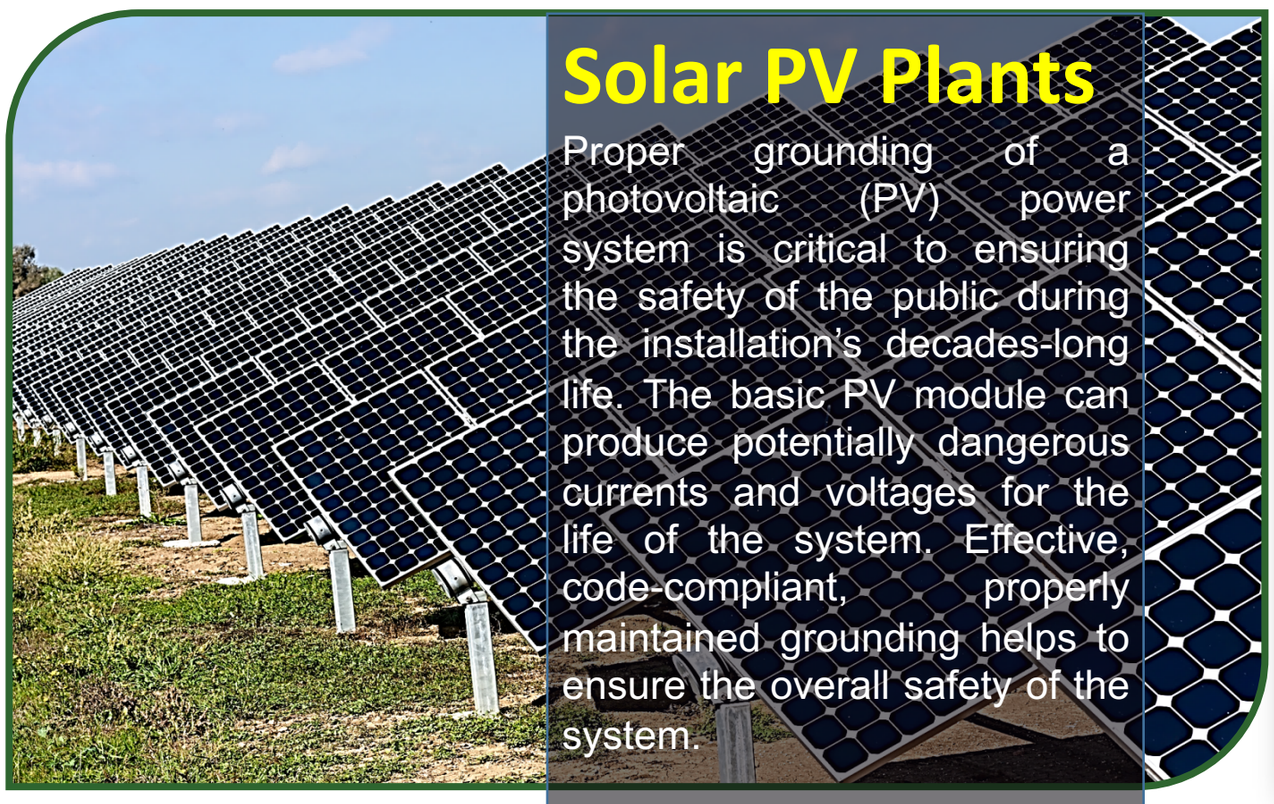
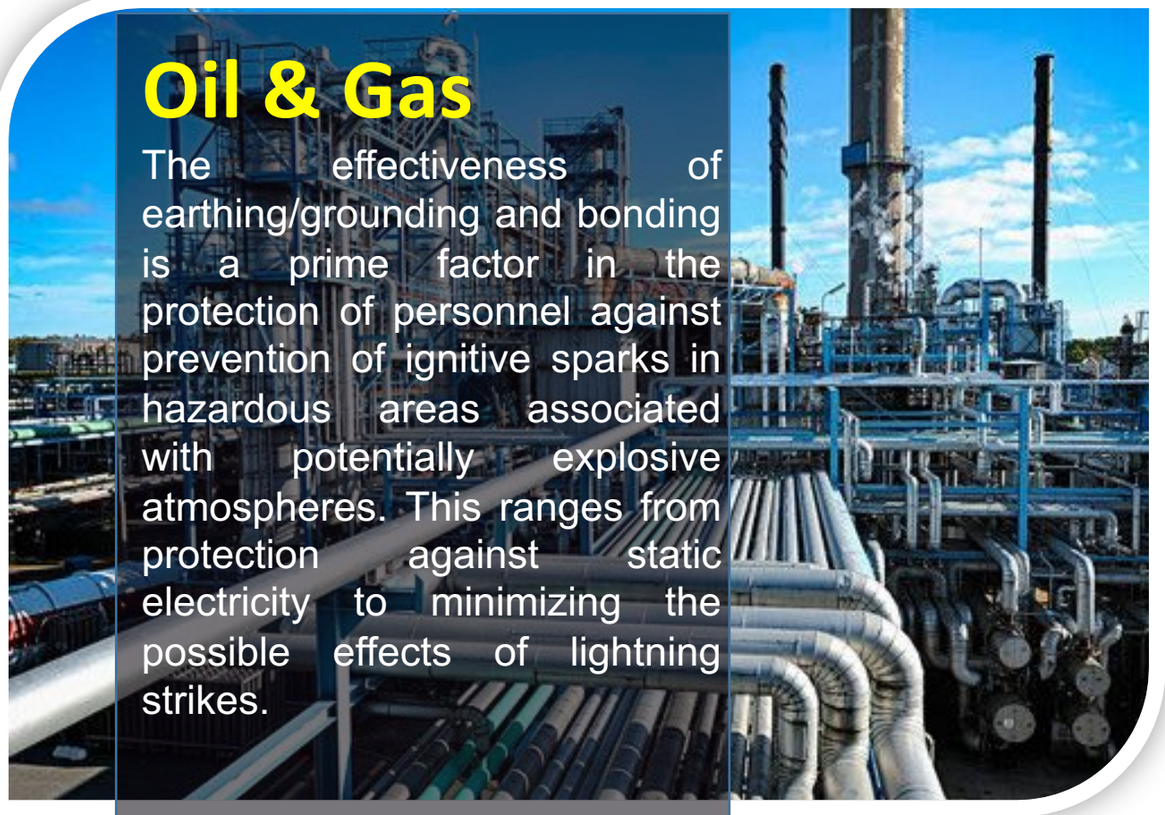


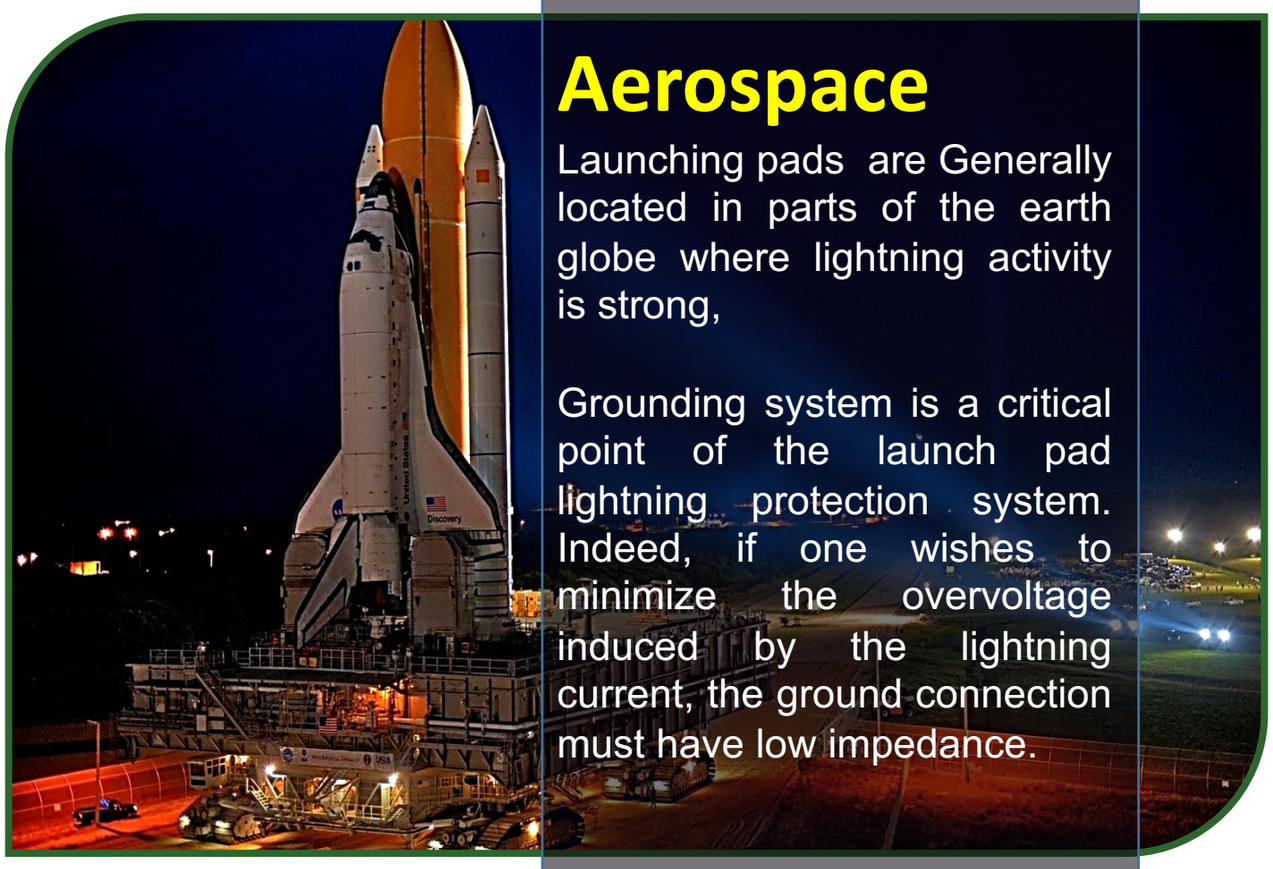
Solar PV Plants

Proper grounding of a photovoltaic (PV) power system is critical to ensuring the safety of the public during the installation's decades-long life. The basic PV module can produce potentially dangerous currents and voltages for the life of the system. Effective, code-compliant, properly maintained grounding helps to ensure the overall safety of the system.



Oil & Gas

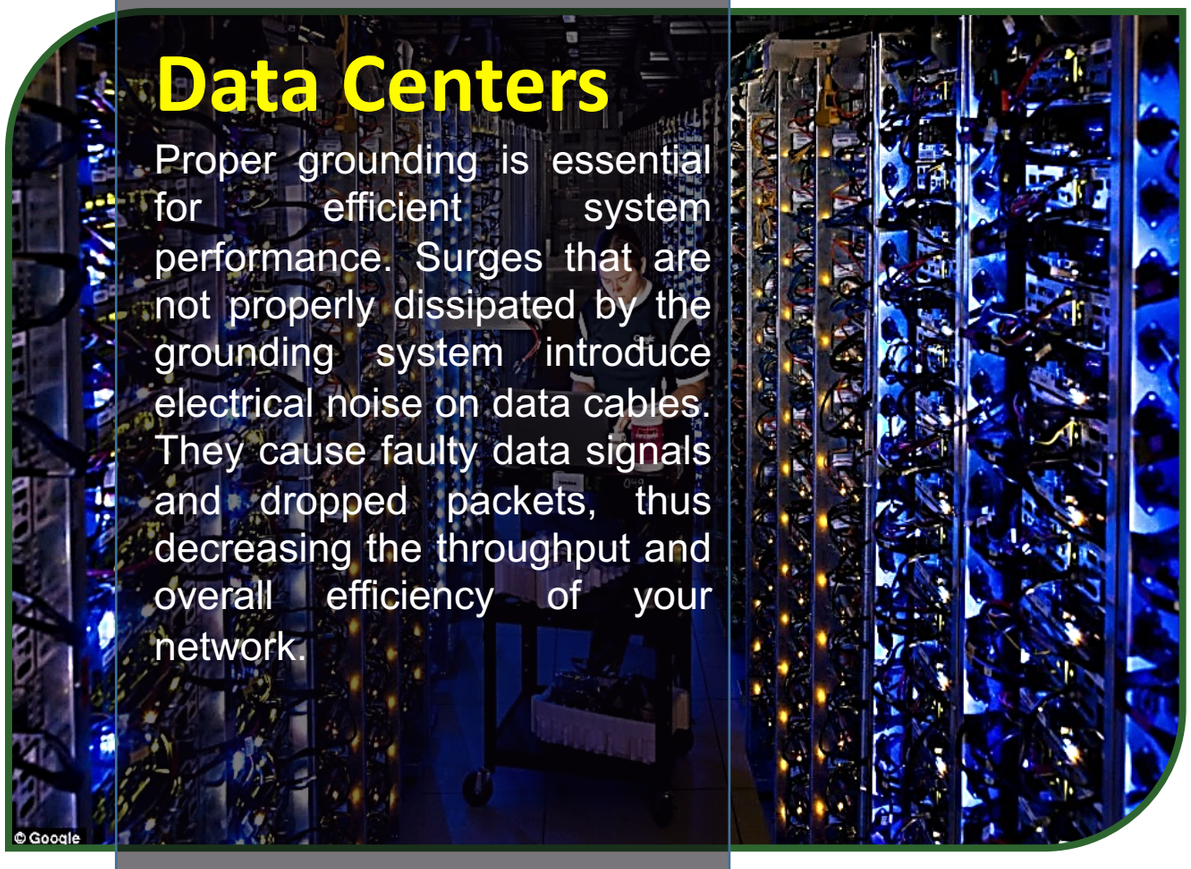
The effectiveness of earthing/grounding and bonding is a prime factor in the protection of personnel against prevention of ignitive sparks in hazardous areas associated with potentially explosive atmospheres. This ranges from protection against static electricity to minimizing the possible effects of lightning strikes.



Aerospace

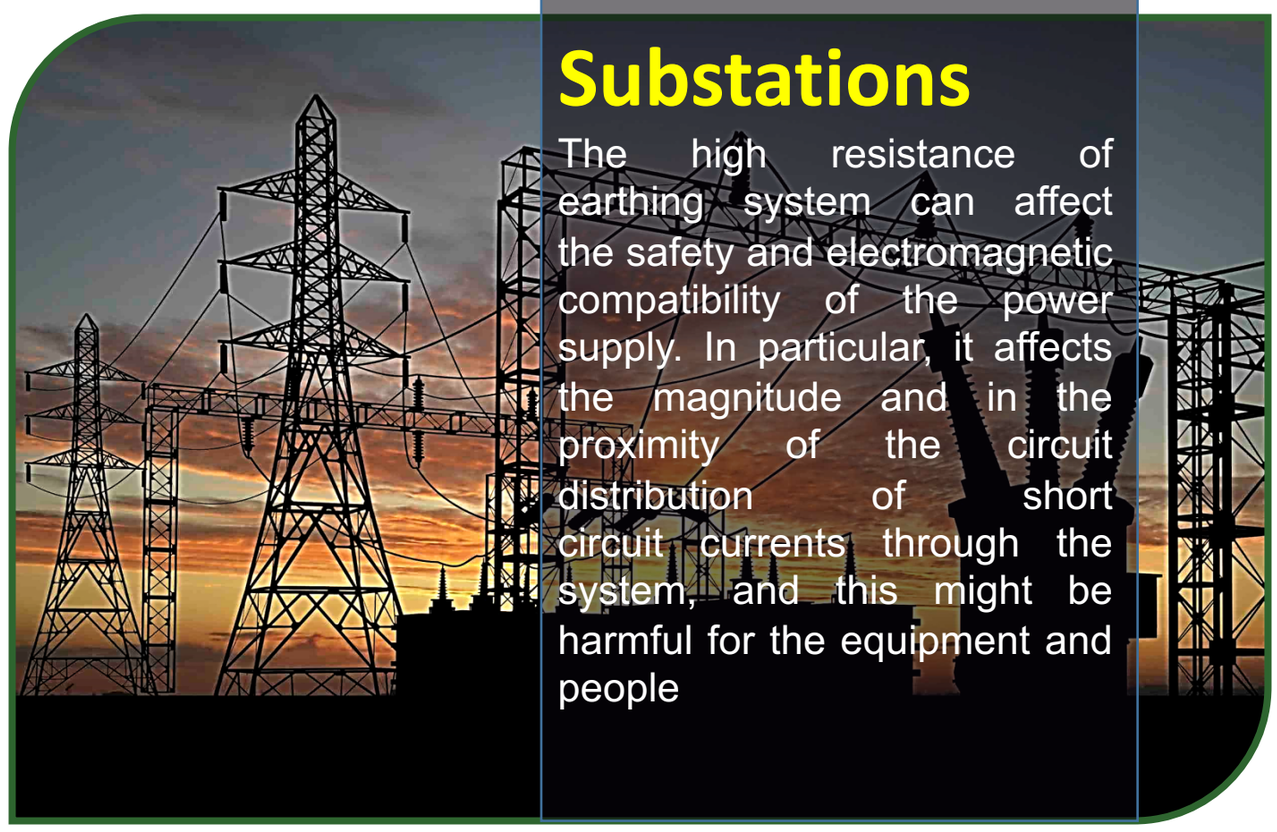
Launching pads are Generally located in parts of the earth globe where lightning activity is strong,

Grounding system is a critical point of the launch pad lightning protection system. Indeed, if one wishes to minimize the overvoltage induced by the lightning current, the ground connection must have low impedance.



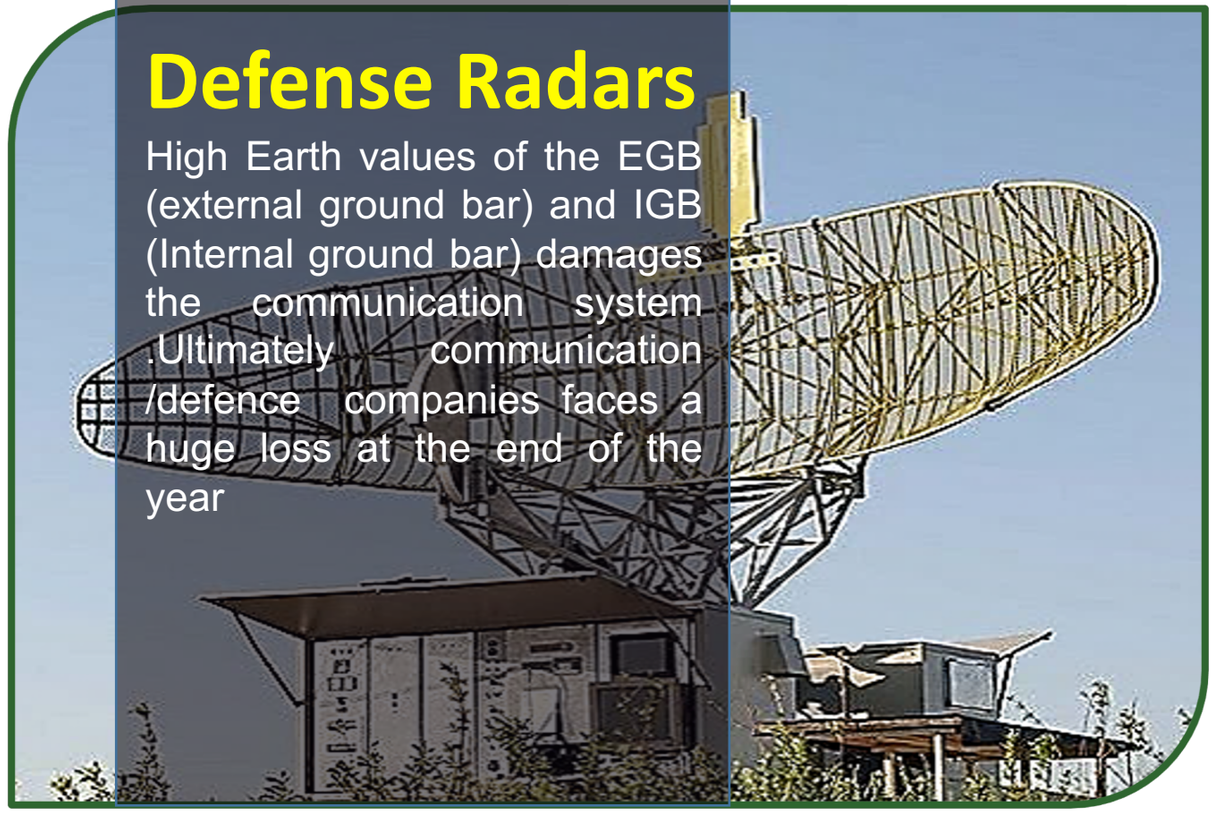
Data Centers

Proper grounding is essential for efficient system performance. Surges that are not properly dissipated by the grounding system introduce electrical noise on data cables. They cause faulty data signals and dropped packets, thus decreasing the throughput and overall efficiency of your network.



Substations

The high resistance of earthing system can affect the safety and electromagnetic compatibility of the power supply. In particular, it affects the magnitude and in the proximity of the circuit distribution of short circuit currents through the system, and this might be harmful for the equipment and people



Defense Radars

High Earth values of the EGB (external ground bar) and IGB (Internal ground bar) damages the communication system .Ultimately communication /defence companies faces a huge loss at the end of the year

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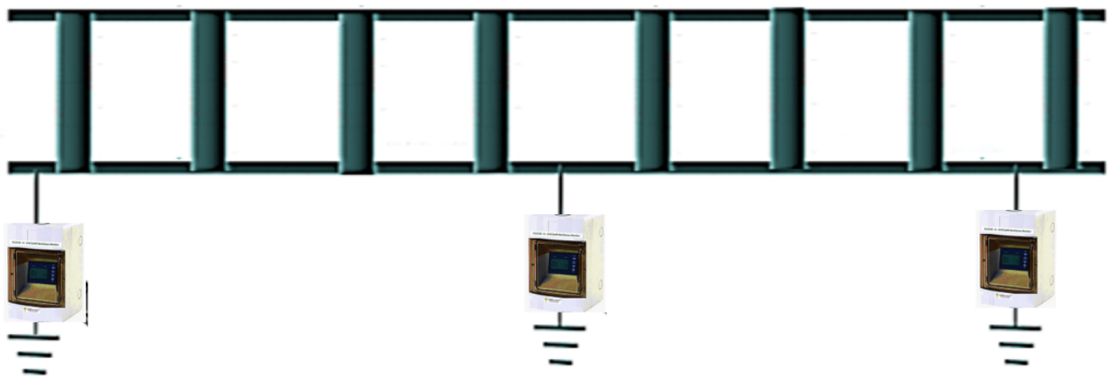
*All product catalogues are subject to change without prior notification

Key Parameter Monitoring

KPM G.E.R.M - C+ Grid Earth Resistance Monitor

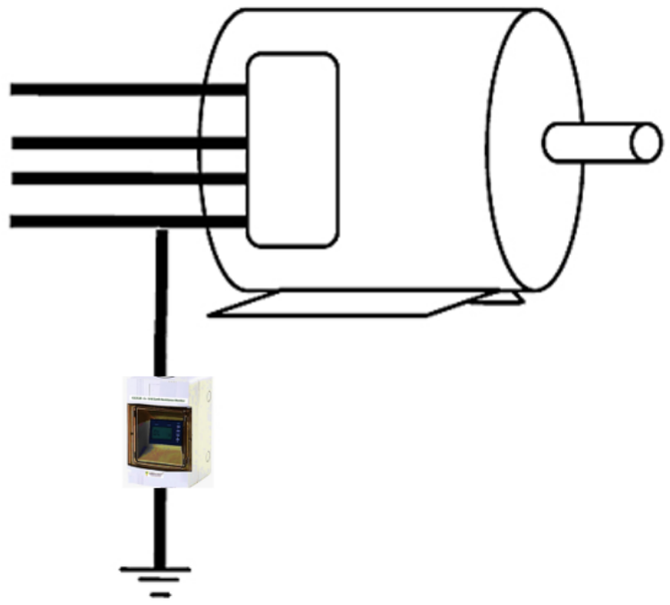
Application Diagrams:

Railways:



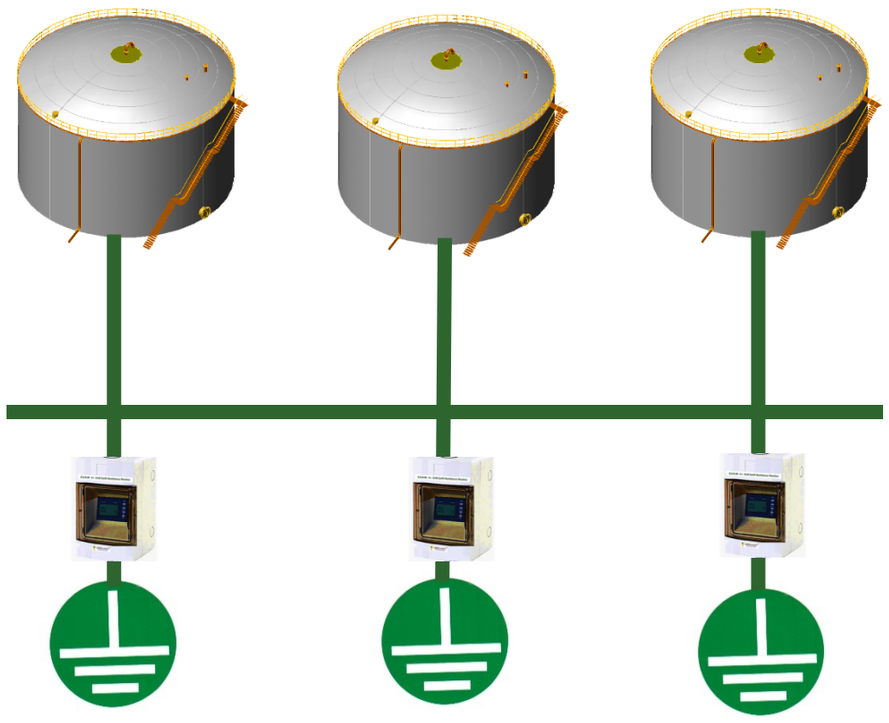
Railway Tracks

Generation:

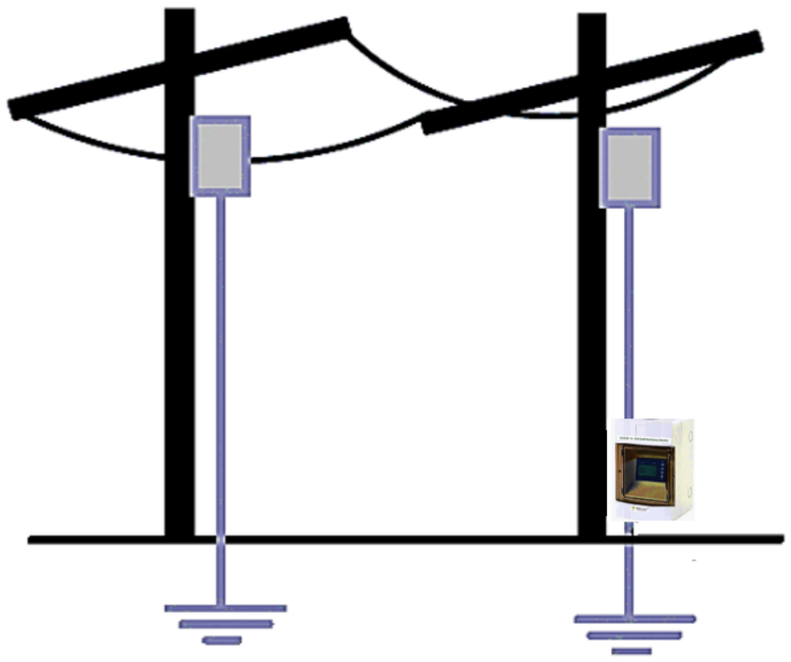


Power Generator

Oil and Gas:



Transmission:

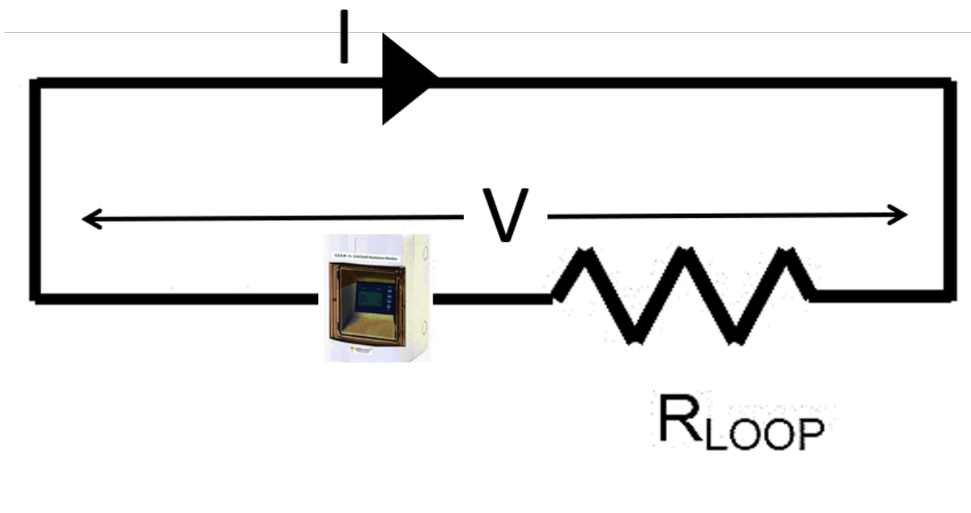


Transmission Lines

Principle of Operation:

KPM G.E.R.M-C+ Grid Earth Resistance Monitor consists of 2 coils namely Voltage Generator & Current Measuring coil. The generator coil generates voltage (V) by virtue of which electrical current (I) starts flowing in the loop which is then measured by the measuring coil.

$$R_{LOOP} = V/I$$



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KPM G.E.R.M - C+ Grid Earth Resistance Monitor

Technical Specification:

Power supply	DC 6V ~ 9V, 50mA Max. (External power supply)
Jaw size	56mm × 26mm (open and close type)
LCD size	47mm × 28.5mm (with backlight)
Range	0.01Ω ~ 100.0Ω
Resolution	0.001Ω
Accuracy	± 2% rdg ± 3dgt (20 ± 5) ° C, 70% RH or less
Automatic shut-down	Do not shut down automatically
Power consumption	≤50mA
Working environment	-20 ℃ ~ 55 ℃; 20% rh ~ 90% rh
Store the environment	-20 ℃ ~ 60 ℃; 90% rh or less
Communication method	Wired network: RS232, RS485, RS485-MODBUS-RTU communication protocol Wireless network: RS232, RS485, RS485-MODBUS-RTU, GSM communication protocol (optional), 0-10V / 4 to 20mA (Optional)
Communication distance	Wired network: about 1,500 meters, scalable Wireless network: There is a cell phone signal place
Network points	Wired network: 1 ~ 255 grounding points, scalable Wireless network: 1 ~ 100 grounding points, can be expanded
Overflow instructions	When the displayed value is greater than the maximum range, the LCD and system software display the "OL Ω" symbol
Data Display	LCD direct display, the system software display
Alarm indication	Detector audible and visual alarm and system software alarm indication
Alarm Settings	Detector panel settings, system software settings
Single measurement time	0.5 seconds / second
Shift	Automatic gear shift
External magnetic field	<40A / m
External electric field	<1V / m
Ground interference current	Should be avoided
Degree of protection	Circuit board, the sensor is completely closed
Power and communication lines	1, 1 meter long (5 core wire)
Mounting screw hole size	Φ8mm
Installation guideline	Grounding Strip through the center of the detector hole
Installation requirements	Avoid rain, water immersion installation
Wiring identification	Red / brown --- power input is positive; Black --- power input; Blue --- RS485 signal is positive; Gray --- RS485 signal negative; White --- shielded ground; (power input and ground can be short-circuit connection)
Weight	1000g
Clamp size	119mm × 118mm × 76mm

KPM ENGINEERING SOLUTIONS PVT. LTD.
815 A, 8th Floor, Unitech Arcadia, Sec 49,
Gurugram – 122018 ,Haryana
Website : www.kpmtek.com ,
Email : sales@kpmtek.com
Phone No : +91 124 4001088