RDL Technologies Pvt. Ltd.

# GROUNDING & ESD SAFETY MONITORING SYSTEM

## Continuous protection for every bonding and earthing point across your site.

Automotive paint booths contain flammable paint particles, solvents, and VOCs. ESD from personnel, equipment, vehicles, or paint systems can generate sparks, creating serious fire, explosion, safety, and production risks.



## WHERE IT'S DEPLOYED

- Data Centres
- Automotive Paint Shops
- Fuelling Stations
- Coal Mining & Oil / Gas
- R&D Labs & Hospitals

### Live 24×7 Monitoring

Every bonding and grounding point watched around the clock, not spot-checked.

### Fault - Location Alerting

Pinpoints exactly where a bonding or grounding fault has occurred.

### Site-wide coverage

Scales from a single earth pit to plant-wide, multi-location networks.

### Data you can audit

Logged history supports fire, safety and compliance reporting.

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WHY BONDING & GROUNDING NEED TO BE MONITORED

# From Static Build-Up to a Verified, Continuously Watched Ground Path

## STATIC ELECTRICITY

Friction between dissimilar materials - a liquid rushing through a pipe, a mixer agitating a tank, even foot traffic across a floor - moves electrons from one surface to another. That imbalance is stored as an electrical potential. When it meets a lower - potential surface across a gap, current jumps to equalise it: a spark, released in a fraction of a second.

## BONDING & GROUNDING

### BONDING

Electrically connects two objects so they sit at the same potential - no potential difference means no spark can form between them.

### GROUNDING

Gives that shared potential a conductive path to earth, so any remaining charge dissipates safely instead of waiting to discharge.



## APPLICATIONS

- Coal mining, Oil and Gas industry
- Fueling Station
- Automotive Paint shop
- Broadcast and RADAR, satellite relay station
- Power Grid & Substations
- Manufacturing Industry
- Testing, R&D Lab and Hospital
- Cell phone tower sites.
- Data Center
- Electronic Production Industry

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## How RDL Closes the Loop

**Charge Builds**
Process friction or material transfer generates a static electrical potential.

**Bond & Ground Connections**
Equipment and containers are bonded, and one point is tied to earth.

**Resistance Monitoring**
RDL measures earth resistance and connectivity status around the clock.

**Instant Fault Alert**
A failed path triggers an immediate alert with its exact location.

UNIQUE FEATURES OF THE SYSTEM

## Everything Needed to Prove Your Ground Path Is Live

### Fault-Location Alerting
Pinpoints exactly where a bonding or grounding fault has occurred.

### Accurate Earth Resistance
Continuous, precise measurement of earth resistance at every point.

### Maintenance Alerts
Scheduled grounding-system maintenance reminders, sent automatically.

### History & Fault Prediction
Grounding history is logged and analysed to predict faults early.

### Automatic Failover
Switches to an alternate ground source the moment the primary drops.

### Live Connectivity Status
Real-time bonding & grounding connection status, always visible.

### Broad Protocol Support
Integrates over MODBUS TCP/RTU, JSON, MQTT and FTP into your existing systems.

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## OPERATIONAL BENEFITS

What a continuously verified ground path means for the plant floor.

- Higher equipment & machinery uptime
- Fire & safety compliance
- Equipment protection from ESD damage
- Real-time alerting system
- Predictive analytics & stronger ROI




**CASE STUDY**

### See It Deployed on a Live Production Floor

What a continuously verified ground path means for the plant floor.

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