

Protecting Critical Data Infrastructure

**Fire Protection
Systems for Data
Centers and IT
Environments**

Data centers rely on tightly integrated systems—compute, power, cooling, and energy storage—to maintain uninterrupted operations. A single event can disrupt service, impact revenue, and introduce significant risk.

ORR Protection delivers engineered fire detection, suppression, and monitoring systems designed to protect these environments. Solutions are built to align with operational requirements, regulatory standards, and the scale of modern data center infrastructure.

Detect Early. Act Decisively.

Early identification of fire conditions or system anomalies allows response before escalation—reducing impact to infrastructure and operations.

Incipient Detection Technologies

Air sampling systems and advanced detection methods identify fire conditions at the earliest stage, enabling intervention before visible or damaging events occur.

Compliance Without Compromise

Systems are designed to meet applicable standards, including NFPA 75, while supporting operational continuity and minimizing disruption.

Designed for Uptime

Fire protection must not introduce unnecessary risk. Systems are configured to reduce false activations, avoid unintended discharge, and maintain system reliability.

Engineered System Integration

Fire protection in data centers requires coordination across detection, suppression, and monitoring systems. Each layer is designed to identify risk early, control events quickly, and maintain system integrity.

Systems are developed based on facility configuration, risk profile, and operational requirements to support uptime and scalability.



System Visibility & Monitoring

- **Continuous Oversight:** 24/7 monitoring of alarms, supervisory signals, and system conditions
- **Device-Level Identification:** Precise location data for faster diagnostics
- **Remote Access:** Mobile and offsite visibility for facility teams
- **Integrated Systems:** Compatibility across detection, alarm, and suppression platforms
- **Reporting & Documentation:** Support for inspection, compliance, and audit requirements
- **Multi-Site Awareness:** Centralized view across facilities and portfolios

Key System Functions

- **Detection & Alarm Systems**
High-sensitivity detection and intelligent alarm systems provide early warning and precise event identification
- **Suppression Methods**
Pre-action sprinkler, clean agent, and water mist systems designed to control fire while limiting impact to equipment
- **Monitoring & Control**
Real-time visibility into system status, alarms, and supervisory conditions

Protection Strategy for Critical Environments

Effective fire protection in data centers requires a coordinated approach integrating detection, suppression, and monitoring systems.

ORR Protection develops solutions based on facility design, risk profile, and performance requirements—aligned with both current operations and future expansion.

Life Safety Systems

- Bi-directional amplifiers
- Area of refuge systems

Supporting code compliance and occupant safety.

Inspection & Maintenance Programs

Structured inspection and maintenance programs ensure system performance, reliability, and ongoing compliance.

System Capabilities

Detection & Alarm Infrastructure

High-sensitivity detection and intelligent alarm systems provide:

- Early warning
- Accurate event identification

Suppression Technologies

- Pre-action sprinkler systems
- Clean agent systems
- Water mist solutions

Engineered to suppress fire while limiting impact to equipment and operations.

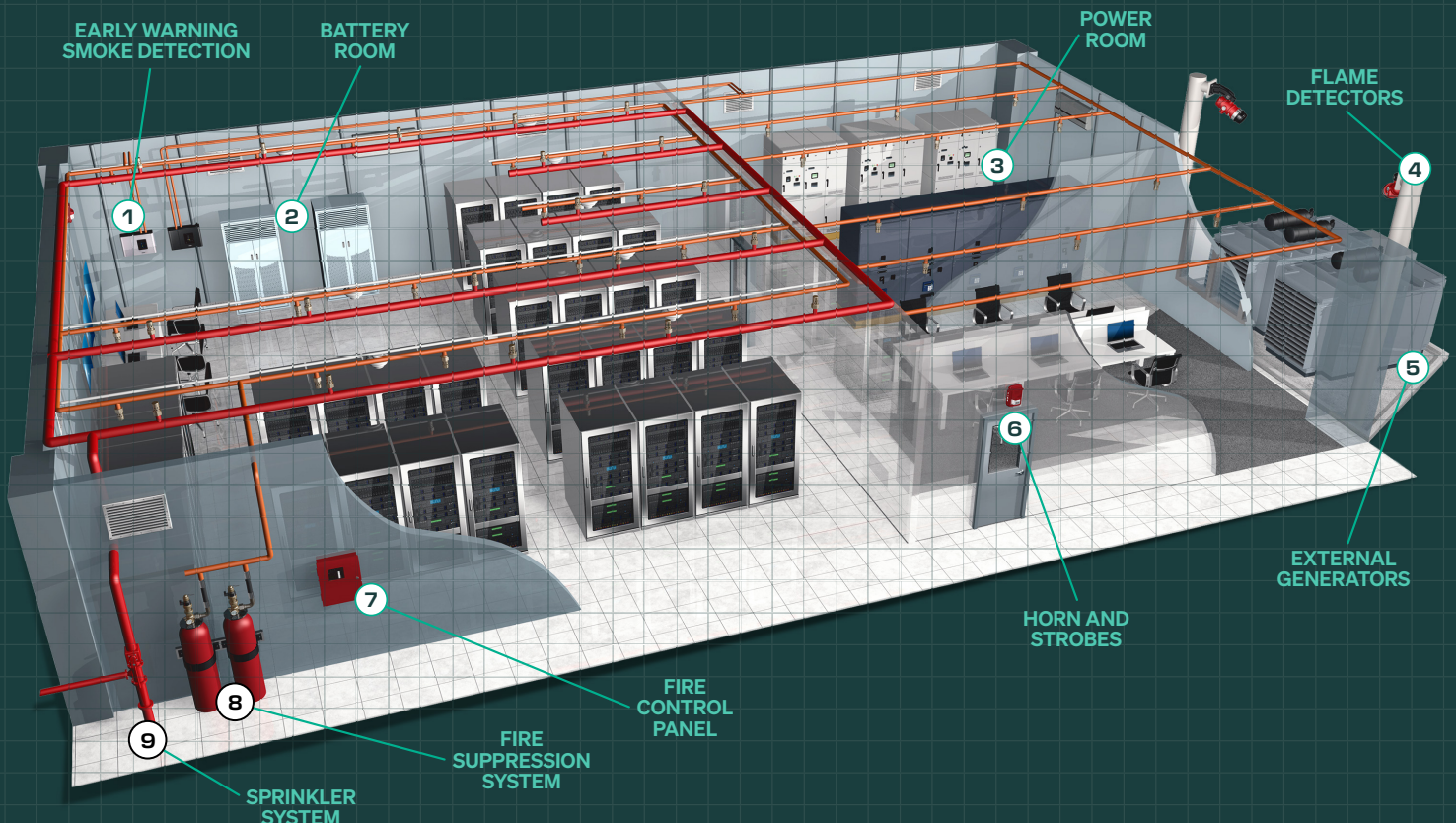
Battery Risk Mitigation

Lithium-ion detection technologies identify abnormal conditions associated with battery failure, supporting early intervention

Monitoring & Control

- Real-time system visibility
- Continuous insight into system status and performance

ORR 3D TELECOM DATACENTER



Protecting People, Property, and Critical Operations

Since 1948, ORR has supported organizations operating in high-consequence environments. ORR Protection was established to deliver engineered fire protection solutions for facilities where system performance is critical.

Today, ORR provides detection, suppression, and monitoring systems designed to protect infrastructure, maintain uptime,

and support mission-critical operations.



Who We Work With

Organizations operating complex, high-value environments—including hyperscale, enterprise, and colocation data centers—rely on ORR to protect their infrastructure.

What Drives Our Work

Delivering fire protection solutions that perform reliably under real-world conditions, while supporting compliance and operational continuity.

Engage ORR Protection to assess and strengthen your fire protection strategy.



Align Your Data Center Protection Strategy with Real-World Risk. [Contact ORR today.](#)

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