Data Center Offerings from UL Solutions

Data centers are the vital facilities that control and centralize an organization's information technology (IT) operations and equipment. Housing critical proprietary assets, data centers store, process and disseminate data and applications — the lifeblood of modern communications and commerce. Operating a data center is a continuous and long-term commitment. Well-designed data centers should be resilient with no downtime, fully utilized with optimized capacity and energy efficient to meet ever-growing market and regulatory demands.

Data center infrastructure has been critical for decades, but its importance has expanded in recent years. The digitalization of the business, commercial and consumer sectors accelerated during the recent COVID-19 pandemic, which brought significant change to the ways we shop, learn, work, entertain and do business. A multitude of Internet of Things (IoT) devices and applications have quickly evolved and spread to all facets of daily life. This Fourth Industrial Revolution — Industry 4.0 — includes limitless possibilities for automotive, factory and medical automation and limitless too are its critical applications through Fifth Generation (5G) networking technology. Infinite data brings infinite possibilities, but it also puts incredible stress and demand on data centers, whose constitution, performance, staffing and capabilities must also meet environmental, health and social (EHS) requirements.

At UL Solutions, our experts have the technical knowledge and insights to help your data centers meet the rapidly advancing changes, opportunities and demands and mitigate the risks of failure, outages and falling behind. We can help you evaluate your products for compliance while facilitating optimization through the integration of electric power conversion and distribution, air conditioning, lighting, power cables, backup power, servers, IT cabinets and racks.

Integrated Data Center Services

- Component and sub assembly safety services
- Data Center Certification Program
- Modular data center certification
- Personnel certification
- Sustainability
- Regulatory services
- Additional services

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Integrated Data Center Services Continued compliance – surveillance

Component and sub assembly safety services

- IT racks and IT installed equipment (servers, PDU)
  - UL 62368-1, the Standard for Audio/video, information and communication technology equipment
  - UL 2416, the Standard for Audio/Video, Information and Communication Technology Equipment Cabinet, Enclosure and Rack Systems
- HVAC Systems
  - UL 484, the Standard for Room Air Conditioners
  - UL 1995, the Standard for Heating and Cooling Equipment
  - IEC 60335-2-40
- Immersion cooling systems
  - UL 2416
  - UL 62368-1
- Power panelboard and switchboard
  - UL 67, the Standard for Panelboards
  - UL 891, Standard for Switchboards
  - IEC 61439
- Battery/UPS
  - UL 1778, the Standard for Uninterruptible Power Systems
  - UL 1973, the Standard for Batteries for Use in Stationary and Motive Auxiliary Power Applications
  - UL 9540, the Standard for Energy Storage Systems and Equipment
  - IEC 62040-3
- Fire detection and suppression systems
  - UL 864, the Standard for Control Units and Accessories for Fire Alarm Systems
  - UL 521, the Standard for Heat Detectors for Fire Protective Signaling Systems

- UL 268 the Standard for Smoke Detectors for Fire Alarm Signaling Systems
- UL 464, the Standard for Audible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories, or UL 1480, the Standard for Speakers for Fire Alarm and Signaling Systems, Including Accessories
- UL 1971, the Standard for Signaling Devices for the Hearing Impaired
- UL 38, the Standard for Manual Signaling Boxes for Fire Alarm Systems
- UL 2075, the Standard for Gas and Vapor Detectors and Sensors
- EN 54-2 Control and Indicating Equipment
- EN 54-3 Fire Alarm Devices – Sounders
- EN 54-5 Heat Detectors – Point Detectors
- EN 54-7 Smoke Detectors – Point Detectors
- EN 54-11 Manual Call Points
- EN 54-20 Aspirating Smoke Detectors
- EN 54-23 Visual Alarm Devices
- NFPA 75 – Standard for the Fire Protection of Information Technology Equipment
- ANSI/UL 154, CAN/ULC-S503, Standard for Carbon-Dioxide Fire Extinguishers ANSI/UL 2129, CAN/ULC-S566, Standard for Halocarbon Clean Agent Fire Extinguishers
- NFPA 12 Carbon Dioxide Extinguishing Systems
- UL 2166 Halocarbon Clean Agent Extinguishing System Units
- UL 2127 Inert Gas Clean Agent Extinguishing System Units

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Data Center Certification Program
- UL 3223, Outline of Investigation for Data Center Certification – Comprehensive facility-based certification requirements to increase end-user transparency, provider accountability and proper data center documentation in areas of mechanical, electrical, HVAC, telecom, commissioning, security and fire detection and suppression.

Modular data center certification
- UL 2755, Outline of Investigation for Modular Data Centers – Compliance path towards meeting requirements under Article 646 of NFPA 70 National Electric Code®.

Personnel certification
- Data Centers Integrator Qualification (DCIQ) Program – Qualification for IT equipment installers and their companies have a capability to ensure proper installation methods are practiced through qualification and meeting regularly scheduled audits.

Sustainability
- Energy Star® certification
- Healthy Buildings/SPIRE – smart building performance
- Zero waste – UL 2799, the Standard for Environmental Claim Validation Procedure for Zero Waste to Landfill
- Product sustainability – ROHS, REACH, California Prop 65
- Renewable energy – equipment and reporting/accountability

Regulatory services
- Code review and gap assessment to electrical, building and fire code requirements
- Field engineering services – UL Solutions Field Evaluation program

Additional services
- Market access services/Global Compliance Management (GCM)

UL Solutions can help you solve the critical challenges of maintaining reliability in vital data center infrastructure. Learn more about our Data Center Services or contact us for more information.

Related resources

- Data Center Integrator Qualification (DCIQ) Program
- Modular Data Center Testing and Certification
- Data Center Immersion Cooling

Learn more at UL.com/services/data-centers.

Solutions

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