UL 2755

Outline of Investigation for Prefabricated Modular Data Center Systems and Related Modular Units

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Summary of Topics

This fourth issue of the Outline of Investigation for Prefabricated Modular Data Center Systems and Related Modular Units, UL 2755, dated October 19, 2026, covers prefabricated modular data center systems and related modular units intended for use in data centers and other commercial applications. Issue 4 includes removal of UL 2878 from Normative References and added copyright statement under 6.4.

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1 Scope

1.1 Coverage

This document covers prefabricated modular data center (MDC) systems and related modular units intended for use in data centers and other commercial applications. These modular units (collectively “modules”) are categorized by their primary functions and into one of the following types:

- IT modules
- Power modules
- Energy storage modules
- HVAC modules
- Generator assembly modules
- Hybrid modules
- Other modules

These modules are prefabricated units consisting of an outer enclosure housing, an open skid type frame, or an elevated structure. Each module includes integrated equipment, subassemblies, components and materials.

These factory-built modules incorporate pre-installed materials, components, subassemblies and equipment which, after installation, can be concealed and may not be accessible for inspection at the final installation site.

This document also covers overhead IT rack assemblies consisting of modules, bays and/or cable trays, raceways and supporting structures designed to be factory assembled and transported to the installation site. Overhead IT rack assemblies may contain modules or open bays for modules to be added after installation.

1.1.1 Intended installation

These modules are intended for installation in accordance with the National Electrical Code, NFPA 70; the International Building Code, ICC IBC; the International Fire Code, ICC IFC; the International Mechanical Code, ICC IMC and / or other applicable installation codes and standards.

1.2 Application

The requirements apply to the installation of equipment, subassemblies, components and materials within a module, and not to the internal construction within individual subassemblies, components and materials that have been investigated and found to comply with the individual equipment or component safety standard.

This document assumes that the final installation of these modules will be performed by qualified service personnel in accordance with the applicable installation instructions and

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accepted installation practices. Evaluation and compliance with this document are product-based and do not constitute approval of a site-specific installation.

These modules may permit the temporary entry of authorized personnel within the enclosure for servicing, maintenance, repairs, upgrades, or replacement. They are not intended to provide an occupied space (as in an office) for personnel.

1.3 Exclusions

The requirements do not cover the following:

- Site utilities, external infrastructure, site layout, or building systems beyond the interfaces explicitly evaluated within the scope of this document
- Evaluation of the structural design of the module, including anchorage to the foundation, anchorage structural loading, stacking/racking capacity, and strength of lifting means, unless otherwise expressly covered by this document
- Field provided equipment and systems unless otherwise noted in the installation instructions
- The effects of vibration on the unit during transportation
- Mechanical structures such as skids, ramps, ladders, stairs, and platforms
- Compliance with federal, state and provincial transportation requirements
- Compliance with occupational safety and health regulations
- Compliance with explosion protection and explosion venting

1.4 Relationship to installation codes and regulatory requirements

The requirements of this document establish product safety evaluation criteria for prefabricated modular data center systems and related modular units. Where applicable, installation codes and referenced installation standards may be identified in evaluation documentation to describe assumptions, environmental conditions, or jurisdictional constraints provided by the manufacturer. Any such identification is informational and does not form the basis of compliance decisions under this document.

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2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document and in alphabetical order. For dated references, only the edition cited applies. Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition to that code or standard. See also Appendix A.

NFPA 70® National Electrical Code ® (NEC ®)

NFPA 855, Standard for the Installation of Stationary Energy Storage Systems

UL 50, Enclosures for Electrical Equipment, Non-Environmental Considerations

UL 50E, Enclosures for Electrical Equipment, Environmental Considerations

UL 67, Standard for Panelboards

UL 467, Standard for Grounding and Bonding Equipment

UL 486A, Standard for Wire Connectors and Soldering Lugs for Use With Copper Conductors

UL 486B, Standard for Wire Connectors for Use With Aluminum Conductors

UL 486E, Standard for Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors

UL 891, Standard for Switchboards

UL 924, Standard for Emergency Lighting and Power Equipment

UL 969, Standard for Marking and Labeling Systems

UL 1059, Standard for Terminal Blocks

UL 1741, Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources

UL 1973, Batteries for Use in Stationary and Motive Auxiliary Power Applications

UL 2140, Prefabricated Power Distribution Assemblies

UL 2200, Stationary Engine Generator Assemblies

UL 2878, Power Units for Data Centers

UL 6200, Controllers for use in Power Production

UL 9540, Energy Storage Systems and Equipment

UL 9540A, Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems

UL 60335-2-40, Household and Similar Electrical Appliances – Safety – Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers

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UL/IEC 62368-1, Audio/Video, Information and Communication Technology Equipment – Part 1: Safety Requirements

3 Terms, definitions and abbreviations

3.1 Abbreviations

For the purposes of this document the following terms, definitions and abbreviations apply.

Table 1

Abbreviations

CDU	Coolant distribution unit
CRAH	Computer room air handler
CRAC	Computer room air conditioner
EPS	Electric Power System
ESS	Energy storage system
HVAC	Heating, ventilation, and air conditioning
ICT	Information and communication technology
IT	Information technology
MDC	Modular data center
NFPA	National Fire Protection Association
PDU	Power distribution unit
SCCR	Short-circuit current rating
UPS	Uninterruptible power supply

3.2 Modular data center terms and definitions

3.2.1 – **MODULAR DATA CENTER (MDC)**
Prefabricated units, consisting of an outer enclosure housing multiple racks or cabinets of information technology equipment (ITE) (e.g., servers) and various support equipment, such as

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