



## ENCLOSURES FOR ELECTRICAL EQUIPMENT

This product category description is to be used in conjunction with the “Overview of ARL’s Listing, Labeling and Follow-Up Inspection Services” (LSc001) which details ARL’s system requirements for obtaining a listed product certification.

*This includes the following subcategories:*

- **Enclosures for Electrical Equipment (1000 Volts Maximum)**
- **Enclosures for Electrical Equipment, Non-Environmental Considerations**
- **Enclosures for Electrical Equipment, Environmental Considerations**

### **Enclosures for Electrical Equipment (1000 Volts Maximum)**

This category includes enclosures for electrical equipment rated not more than 1000 Volts and intended to be installed and used as follows:

- a. Enclosures for indoor locations, Types 1, 2, 5, 12, 12K, and 13; and
- b. Enclosures for indoor or outdoor locations, Types 3, 3X, 3R, 3RX, 3S, 3SX, 4, 4X, 6, and 6P

These products comply with ARL requirements which include applicable sections of the **NEMA 250-2018 Enclosures for Electrical Equipment (1000 Volts Maximum)**.

This category includes products required to provide protection to the enclosed equipment against specific environmental conditions. The requirements of the reference standard mandate that enclosures and equipment shall be installed and used in accordance with manufacturer’s instructions and 110.3(B) of the National Electrical Code®, ANSI/NFPA 70.

This category includes enclosures that are intended to be installed and ready for use in non-hazardous (unclassified) locations.

This category does not include products that are required to comply with the requirements for enclosures that are installed and ready for use where permitted by National Electrical Code® (NEC) in hazardous (classified) locations as defined by the NEC, ANSI/NFPA 70, or by Nonincendive Electrical Equipment, Hazardous (Classified) Locations, ANSI/ISA 12.12.01.

The standard referenced in this category supplements requirements for enclosures that are contained in the individual product standards. The reference standard does not cover the requirements for protection of the enclosed equipment against conditions such as condensation, gas vapor ignition, thermal damage, icing, corrosion, or contamination, which may occur within the enclosure or which may enter via conduit or unsealed openings.

This category does not include products providing protection of personnel from contact with enclosed electrical equipment where the enclosures or equipment are incompletely installed or

where enclosed electrical equipment has been rendered accessible for servicing, maintenance, testing, troubleshooting, internal measurements, or calibration or by damage.

A product that contains features, characteristics, components, materials, or systems new or different from those in use when the reference standard was developed, and that involves a risk of fire, electric shock, or injury to persons shall be evaluated using the appropriate additional component and end-product requirements as determined necessary to maintain the level of safety for the user of the product as originally anticipated by the intent of this Standard.

Each listed product is marked with the name or trademark of the (manufacturer) or vendor, a distinctive type, style, model or catalog designation, date code, electrical ratings, electrical hazard warnings, and other markings and cautionary warnings as required for specific types of products.

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### **Enclosures for Electrical Equipment, Non-Environmental Considerations**

This category includes enclosures for electrical equipment intended to be installed and used in non-hazardous locations in accordance with the provisions of the National Electrical Code, N FPA 70, as follows:

- a. Enclosures for indoor locations, Types 1, 2, 5, 12, 12K, and 13; and
- b. Enclosures for indoor or outdoor locations, Types 3, 3X, 3R, 3RX, 3S, 3SX, 4, 4X, 6, and 6P.

These products comply with ARL requirements which include applicable sections of the **UL Standard 50, Enclosures for Electrical Equipment, Non-Environmental Considerations.** UL 50 includes the non-environmental construction and performance requirements for enclosures to provide a degree of protection to personnel against incidental contact with the enclosed equipment. The additional environmental construction and performance requirements for enclosures are located in UL 50E, which is intended to be used in conjunction with UL 50.

Where an individual product standard contains requirements that are at variance with those of this category, the requirements of the individual product standard in that category take precedence.

Outlet boxes having a volume of not more than 1640 cm<sup>3</sup> (100 in<sup>3</sup>) are evaluated to the requirements of the UL 514 series of standards (see Annex B, Ref. No. 6 and 13) and are not included in this category.

Swimming pool type junction boxes are evaluated to the requirements of UL 1241 (see Annex B, Ref. No. 11) and are not included in this category.

Each listed product is marked with the name or trademark of the (manufacturer) or vendor, a distinctive type, style, model or catalog designation, date code, electrical ratings, electrical hazard warnings, and other markings and cautionary warnings as required for specific types of products.

## Enclosures for Electrical Equipment, Environmental Considerations

This category includes enclosures for electrical equipment intended to be installed and used in non-hazardous locations in accordance with the provisions of the National Electrical Code, NFPA 70as follows:

- a. Enclosures for indoor locations, Types 1, 2, 5, 12, 12K, and 13; and
- b. Enclosures for indoor or outdoor locations, Types 3, 3X, 3R, 3RX, 3S, 3SX, 4, 4X, 6, and 6P.

These products comply with ARL requirements which include applicable sections of **the UL Standard 50E, Enclosures for Electrical Equipment, Environmental Considerations**. This category includes additional environmental construction and performance requirements for enclosures. The general requirements for enclosures are contained in UL 50 or the end-use product standards that are to be used in conjunction with the requirements of this category.

This category does not include product conforming to the requirements for protection of devices against conditions such as condensation, icing, corrosion, or contamination that may occur within the enclosure or that may enter via conduit or unsealed openings.

Where an individual product standard contains requirements that are at variance with those of this category, the requirements of the individual product standard in that category take precedence.

Each listed product is marked with the name or trademark of the (manufacturer) or vendor, a distinctive type, style, model or catalog designation, date code, electrical ratings, electrical hazard warnings, and other markings and cautionary warnings as required for specific types of products.

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A product that contains features, characteristics, components, materials, or systems new or different from those covered by the requirements of the standard, and that involve a risk of fire, electric shock, or injury to persons, have been evaluated using the appropriate additional component and end-product requirements as determined necessary to maintain the acceptable level of safety as originally anticipated by the intent of the standard. A product whose features, characteristics, components, materials, or systems conflict with specific provisions of the standard have been judged to be in non-compliance with the standard.

Only products which properly bear the ARL Listing Mark (Label) are considered Listed by ARL.