

Industrial Control Panels FAQs:

Below is a list of Frequently Asked Questions about UL's Industrial Control Panel Program.

What is the official UL definition of an Industrial Control Panel?

UL considers an Industrial Control Panel (ICP) an assembly incorporating two or more pieces of industrial control equipment or related control circuit devices, provided with interconnecting wiring and terminals for connections in the field.

To allow the installer to properly install the panel in accordance to the National Electrical Code and other codes, electrical ratings and instructions are to be clearly explained on the panel.

What are the benefits of UL Listed Industrial Control Panels?

The UL Listing Mark on an Industrial Control Panel provides evidence of third party certification to North American safety standards to the purchaser of the panel.

UL Listed Industrial Control Panels are constructed and marked to facilitate installation to the National Electrical Code and Canadian Electrical Code. As such, the UL Listing Mark on an Industrial Control Panel is widely recognized and accepted by municipal inspection authorities.

The Listing Mark may be applied to a wide variety of designs, ranging from custom built to standardized designs. Industrial Control Panels can be constructed and marked for general use applications as well as a number of special use applications.

What is covered by the UL Listing Mark?

The UL Listing Mark on an enclosed type Industrial Control Panel covers the enclosure, the components installed within the enclosure, panel-mounted components and components mounted to the outside walls of the enclosure at the manufacturer's facility.

The UL Listing Mark on an open type Industrial Control Panel only covers the mounting subpanel and those components that are mounted to the subpanel at the manufacturer's facility.

Please note that the UL Listing Mark on an Industrial Control Panel does not include coverage for the connected loads or utilization equipment, even if provided by the panel manufacturer. Also, the UL Mark does not include coverage of any components shown on the wiring diagram that are indicated as being field provided or as being mounted remotely from the Industrial Control Panel.

If a "complete equipment" Listing is required, please contact UL at ulhelps@ul.com.

What types of “complete equipment” does UL evaluate?

Control panels supplied together with the controlled equipment can be evaluated by UL. Examples include:

- **Factory Automation equipment**
Such as assembly of components, packaging, sorting, or counting of parts, or hole punching or cutting. The equipment may also incorporate manufacturing processes involving heating or cooling, drying, or gluing of parts.
- **Packaged Pumping systems**
Equipment consisting of pumps, electric motors, frequency drives, control valves, gauges and piping mounted on a structural steel base. They are used for plumbing boosters, heat transfer, hot water heating, HVAC chilled and hot water packages, irrigation, boiler feed and condensate packages, and similar applications.
- **Heating and Cooling equipment**
Various types of heating and cooling equipment typically used for space conditioning

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What requirements apply to a UL Listed Industrial Control Panel?

The basic requirements for Industrial Control Panels rated not more than 600 volts and for installation in ordinary locations are specified in UL 508A, the Standard for Safety of Industrial Control Panels. For Canada, the basic requirements are contained CSA C22.2 No. 14, Industrial Control Equipment.

A procedure document is written for each individual panel builder. The procedure may contain additional construction requirements and specific UL Recognized Components or Listed assemblies that have been found acceptable as a result of an engineering investigation.

What documents are helpful to review before initiating a panel investigation?

Review of the material contained in UL 508A Standard will help to determine whether an Industrial Control Panel complies with the construction and marking requirements. Copies can be obtained from www.comm-2000.com.

How do I determine if components are acceptable for use within my Listed Industrial Control Panel?

The following steps shall be considered when determining suitability of components used within an Industrial Control Panel:

1. Determine whether component is Listed or Recognized via UL's Online-Certifications Directory.

2. If component is Listed or Recognized, note the corresponding Product Category (CCN) and Standard. If not Listed or Recognized contact UL to discuss alternative options for use within your Industrial Control Panel.
3. If component is Listed or Recognized, refer to Table SA1.1 of UL 508A for the product type category and Standard number.
4. Once identified, refer to the associated Standard clause reference and corresponding note in Table SA1.1.
 - Where nothing is entered in the Notes Column, any component from the product category may be used in the Industrial Control Panel.
 - Where the Notes or Standard clause give a selection criteria, any component meeting the selection criteria shall be used.
 - Where the Notes indicate “Procedure Description is required”, these components will need to be described within your UL File before it can be used. Please contact us at ulhelps@ul.com.

How long does the investigation take?

Normally the investigation will be completed approximately six weeks after the project has been accepted. However, if you require panels to be labeled in less than six weeks, please let us know the date you require Listing on your quote request. We will work with you to expedite completion of the investigation.

Is training required for UL Listing?

Yes. The flexibility of the program mandates the need for training to understand the standards involved. Since training is an essential part of the program, authorization to apply the mark comes after the training. The training is typically a one day program, and can occur at a UL office or the manufacturer's facility.

What requirements apply to panels with components operating from a source of more than 600 volts?

Panels operating from a source of supply greater than 600 volts are outside the scope of UL 508A, however, alternative paths may be applicable after a review of the construction.

Does UL offer a program for Industrial Control Panels intended for installation into Hazardous Locations?

Panels intended for installation in a hazardous location or having circuits that will extend into a hazardous location are required to comply with additional requirements.

The categories are as follows:

- For panels installed in an ordinary location but have circuits that extend into a Hazardous location (i.e. having IS barriers):

Industrial Control Panels Relating to Hazardous Locations

- For panels installed in Hazardous Locations:

Control Panels and Assemblies for Use in Hazardous Locations

Please see the [hazardous locations section](#) for more information.

What about other special use panels?

In addition to general use panels, requirements for the following panels are contained in UL 508A:

- Overhead crane control
- Industrial Machinery, including Metal working machine tools, plastic injection molding machinery
- Flame safety supervision control
- Service equipment use
- Marine use
- Air Conditioning and Refrigeration Equipment use
- Fountain Control
- Irrigation Equipment use

What about Elevator control panels?

Additional requirements apply to panels intended for elevator control use. Please contact UL at ulhelps@ul.com.

What kind of Follow-Up Services apply to industrial control panels?

Once it has been determined that the Industrial Control Panel meets the necessary requirements, we will establish a factory Follow-Up Service examination program to audit the continued compliance of the panels with the specifications developed during this investigation. You will receive a UL procedure document that contains these specifications. The product will then be eligible to bear a UL Listing.

An initial production examination is conducted by a local UL field representative before we authorize use of the Listing Mark on the panels. This examination can accommodate your production schedule, so please inform us when the panels are scheduled for production.

Where do I get labels to put on my Listed Industrial Control Panels?

Once it has been determined the product meets the necessary requirements, instructions for ordering standard Listing Mark labels will be provided.

Does UL offer services for Industrial Control Panels that are intended for installation in Europe?

Yes, UL can provide CE Marking assistance by providing the following services. See also CE Marking for Industrial Control Panels.

- Providing a technical report containing construction compliance, testing results, or both.
- Provide Draft Declaration of Conformity for the manufacturer to create and place in the manufacturer's Technical Construction File.

Additional services are also available for installations in other global locations. Please contact us at ulhelps@ul.com.