UL Product iQ™

NITW.E319917 - Industrial Control Panels

Industrial Control Panels

See General Information for Industrial Control Panels

WALTHER ELECTRIC E319917
Unit F
12 World's Fair Dr
Somerset, NJ 08873 USA
Industrial control panels.

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NITW.GuideInfo - Industrial Control Panels

[Industrial Control Equipment] Industrial Control Panels

See General Information for Industrial Control Equipment

GENERAL

This category covers industrial control panels, which are factory-wired assemblies of industrial control equipment, such as motor controllers, switches, relays and auxiliary devices. The panels may include disconnect means and motor branch-circuit protective devices. An industrial control panel does not include the controlled loads, including motors, luminaires, heaters, or utilization equipment.

An enclosed industrial control panel is comprised of the enclosure, all components located within the enclosure, and all components mounted to the walls of the enclosure.

An open industrial control panel is comprised of a mounting sub-panel and all components mounted to the sub-panel, and is intended for installation into an enclosure in the field.

This category also covers industrial control panel enclosures. The enclosures may contain ventilation openings, observation windows, conduit fittings, environmental control devices, or maintenance luminaires. Industrial control panel enclosures are intended to house open-type industrial control panels or individual items of industrial control equipment installed in the field.

Industrial control panels are intended for installation in accordance with Article 409 of NFPA 70, "National Electrical Code" (NEC).

Unless otherwise marked, industrial control panels covered under this category are intended for general-use industrial applications for control of heaters, lighting, motors or pump loads, or a combination of these loads, and are intended for installation in accordance with Chapter 4 of the NEC.

Industrial control panels marked "Industrial Control Panel for Industrial Machinery" on the unit nameplate have been investigated to determine that they meet the requirements of NFPA 79, "Electrical Standard for Industrial Machinery," in addition to Article 670 of the NEC. Industrial control panels designated for control of industrial machinery may not be suitable for use with other equipment.

Industrial control panels marked "Flame Control Panel" on the unit nameplate contain controls for fossil fuel-burning equipment, such as incinerators, kilns, and drying ovens, intended for industrial applications. These control panels may additionally contain controls for other loads.

Industrial control panels marked "Crane Control Panel" or "Hoist Control Panel" on the unit nameplate contain controls for overhead cranes and hoists for industrial applications. These panels are intended for installation in accordance with Article 610 of the NEC and may not be suitable for use with equipment other than cranes and hoists.

Industrial control panels marked "Industrial Control Panel for Marine Use" on the unit nameplate are intended for use aboard vessels over 65 feet (19.9 m) in length. These panels have been investigated to determine that they meet the requirements of USCG Electrical Engineering Regulations Subchapter J (46CFR, Part 110).

Industrial control panels marked "Industrial Control Panel for Refrigeration Equipment" or "Industrial Control Panel for Air Conditioning Equipment" on the unit nameplate contain controls for hermetic refrigerant compressor motors for industrial applications. These control panels are intended for installation in accordance with Article 440 of the NEC. Industrial control panels designated for control of refrigeration equipment may not be suitable for use with equipment other than refrigeration equipment.

Industrial control panels marked for service equipment use may be provided with ground-fault protection for services or major feeders. The circuit(s) so protected are identified by a marking, such as on a wiring diagram or on the equipment. Instructions are provided for on-site testing of the ground-fault protection at the time of installation.

Industrial control panels marked "Fountain Control Panel" on the unit nameplate are intended for control of permanently installed fountains or floating fountains. These control panels are intended for installation in accordance with Article 680 or 682 of the NEC.

Industrial control panels marked to indicate suitability of use in load-management applications contain control circuitry that limits output current to a marked maximum load.

Industrial control panels are not intended for installation in motor control center sections or units.

RATINGS

Industrial control panels are rated 600 V or less. Each power circuit output from the control panel is rated in current or power, voltage, and the intended load type, such as a motor. Each supply input to the industrial control panel is rated in full load amperes, rating of largest motor load, voltage, number of phases, and frequency. Each supply input is additionally provided with a short-circuit current rating indicating the maximum rms symmetrical amperes and voltage available at the input terminals of the industrial control panel or, for an industrial control panel not supplied with branch-circuit protection, the maximum rms symmetrical amperes and voltage available on the line side of the overcurrent protection installed in the field.

ENVIRONMENTAL RATINGS

Industrial control panel enclosures are marked with the enclosure type ratings for which they were investigated.

Enclosed industrial control panels are marked with an enclosure type rating. The type rating of the industrial control panel may differ from the rating of the basic enclosure due to the presence of components or assemblies installed through the enclosure walls by the manufacturer.

PRODUCT MARKINGS

Industrial control panels are marked with the electrical ratings for each source of supply to the panel. The panel or wiring diagram provided with the panel is marked with the electrical ratings of the intended load equipment, such as motors, heaters, lighting, or appliance loads. Industrial control panels are provided with a complete schematic diagram of the panel as built by the manufacturer. When the schematic wiring diagram includes components that are not supplied with the industrial control panel, such as remote control devices, motors or similar devices, a notation or similar means is used to identify such components. When additional installation instructions are provided on a separate drawing, a reference to the drawing containing the information is marked on the nameplate of the industrial control panel.

The nameplate of industrial control panels is marked with the short-circuit current rating for each supply as follows: "Short circuit current: ___ kA rms symmetrical, ___ V maximum," or the equivalent.

SPECIAL CONSIDERATIONS

These control panels are investigated for electrical fire and shock hazards only. The investigation of industrial control panels does not include investigation of the adequacy of the control and protective devices to supervise the functioning of the controlled equipment.

Special relationships and investigations may be necessary for the proper operation of certain equipment, as noted below:

1. Control panels investigated for use in access control systems, which provide a means of regulating or controlling entry into an area, are covered under Access Control System Units (ALVY).

2. Industrial control panels investigated with air conditioning and refrigeration equipment are covered under Heating and Cooling Equipment (LZFE) or Specialty Refrigeration Equipment (SROT).

3. Industrial control panels investigated with industrial machinery are covered under Machinery (GPNY).

4. Flame control panels investigated with specific burner assemblies are covered under Commercial/Industrial Gas Burners (KXWT), Gas-Oil Burners (KYKR) or Oil Burners (KYXZ).

5. Fluid-handling systems consisting of industrial control panels, pumps, valves, gauges, and piping mounted to a structural base are covered under Packaged Pumping Systems (QCZJ).

6. Control panels investigated with equipment intended for use as part of a semiconductor manufacturing process are covered under Analysis and Measurement Equipment (TWLR), Miscellaneous Semiconductor Manufacturing Equipment (TWTZ), Power Supplies, Semiconductor (TWVJ) or Semiconductor Manufacturing Equipment, Limited Production (TWWU).

7. Control panels investigated for use with flammable-liquid dispensing devices are covered under Control, Monitoring and Auxiliary Equipment (EQXX). Liquids with a flash point below 100°F are defined as flammable. Liquids with a flash point of 100°F and above are defined as combustible.

8. Control panels intended for use in motor control center sections or units are covered under Motor Control Centers (NJAV).

9. Control panels intended to energize or de-energize electrical loads to achieve the desired use of electrical power are covered under Management Equipment, Energy (PAZX).

LIMITED-PRODUCTION EQUIPMENT

This category also covers single pieces of equipment or equipment manufactured in a limited quantity under a single production run in accordance with UL's Limited Production Certification Program. This limited-production equipment meets all of the same requirements as equipment that may be produced under continuous production runs, except there is no ongoing surveillance (UL Follow-Up Service), since subsequent UL-certified production does not continue after the single run. UL certification is based on the serial number or other discrete identifier of the limited-production equipment, and not based on any model number. A UL Certificate of Compliance is also issued (see **UL CERTIFICATE** below).

FACTORS NOT INVESTIGATED

The physiological or other attributes or effects that can result from the use of this equipment have not been investigated.

PRODUCT IDENTITY

One of the following product identities appears on the product:

Enclosed Industrial Control Panel

Industrial Control Panel Enclosure

Open Industrial Control Panel

RELATED PRODUCTS

Enclosures for general-use electrical equipment or wiring are covered under Boxes, Junction and Pull (BGUZ) or Cabinets and Cutout Boxes (CYIV).

Control panels intended for elevators, dumbwaiters, escalators, moving walks, inclined lifts and their associated equipment are covered under Elevator Control Panels (FQPB).

Control panels with connection to sensors or initiating devices to detect and activate emergency alarms are covered under Signal System Units (UDTZ).

Equipment for gas or vapor detection and intended for connection to emergency alarm equipment is covered under Gas and Vapor Detectors and Sensors (FTAM).

Control equipment intended to supply automatic illumination, power, or both, to critical areas and equipment essential to safety of human life is covered under Emergency Lighting and Power Equipment (FTBR).

Freestanding motor control center sections, motor control center units and equipment intended for field installation into a motor control center are covered under Motor Control Centers (NJAV).

Control panels intended for installation in hazardous (classified) locations are covered under Industrial Control Panels and Assemblies for Use in Hazardous Locations (NNNY).

Control panels provided with intrinsically safe circuits for extension into hazardous (classified) locations are covered under Industrial Control Panels Relating to Hazardous Locations (NRBX).

Cabinets, enclosures and rack/frame systems that include components and assemblies intended to power, protect, heat, cool or otherwise support information technology (IT), telecommunications equipment, or audio/video equipment (A/V) are covered under Information Technology and Communications Equipment Cabinet, Enclosure and Rack Systems (NWIN).

Equipment intended for the control of fuel cells, photovoltaic systems, or utility interactive systems are covered under AC Modules and Photovoltaic Modules with Integrated Electronics (QHYZ), Distributed Resource Power Systems (QIJL) or Static Inverters and Converters for Use in Independent Power Systems (QIKH).

Portable control panels containing switches, overcurrent protection, and that are cord connected via attachment plugs and receptacles for use at carnivals, circuses, fairs, exhibition halls, motion picture and television studios, theaters, construction sites and similar locations are covered under Portable Power Distribution Units and Devices (QPSH) or Portable Power Distribution Panels (QPSM).

Assemblies comprised of equipment such as circuit breakers, fuses, switches, and related accessory equipment and intended to distribute power to field installed communications equipment are covered under Power Distribution Centers for Communications Equipment (QPQY).

Control panels intended for industrial application on power-operated machines intended for such uses as pressing, punching, shearing or braking operations, and additionally investigated in accordance with the Occupational Safety and Health Administration Standard Section 1910.217 are covered under Press and Other Power-operated Machine Controls and Systems (QUEQ).

Controllers intended for electric fire pumps are covered under Pump Controllers, Fire (QYZS).

Industrial control panels additionally investigated in accordance with SEMI S2 Standards are covered under Control Panels (TWRF).

Control panels containing electrical control units for use in fire-protective signaling systems are covered under Control Units, Releasing Device (SYZV), Control Units, System (UOJZ) or Smoke Control System Equipment (UUKL).

Control panels intended for use with equipment for water-play fountains and water playground areas, swimming pools and spas, or fountains with water in common with swimming pools are covered under Controls (WAWU).

Freestanding assemblies of circuit breakers and busses for control of electric light and power circuits of equipment for installation into dead-front switchboards are covered under Switchboards, Dead-front (WEVZ).

Enclosed assemblies consisting only of lengths of busbars, terminal strips, or terminal blocks with provision for wire connectors to accommodate incoming or outgoing conductors for power circuits are covered under Termination Boxes (XCKT).

ADDITIONAL INFORMATION

For additional information, see Industrial Control Equipment (NIMX) and Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is UL 508A, "Industrial Control Panels."

UL MARK

The Certification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Certification and Follow-Up Service. The Certification Mark for these products includes the UL symbol, the words "CERTIFIED" and "SAFETY," the geographic identifier(s), and a file number.

The Certification Mark on enclosed industrial control panels covers both the enclosure and the provided panel. The Certification Mark on industrial control panel enclosures covers only the enclosure; the compatibility of the enclosure and the installed equipment and associated wiring has not been investigated unless a Certification Mark is also present on the enclosed industrial control panel.

Alternate UL Mark

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Open Industrial Control Panel,""Enclosed Industrial Control Panel" or "Industrial Control Panel Enclosure."

The "Enclosed Industrial Control Panel" Listing Mark covers both the enclosure and the provided panel. Open panels employ the "Open Industrial Control Panel" Listing Mark. The "Industrial Control Panel Enclosure" Listing Mark covers only the enclosure; the compatibility of the enclosure and the installed equipment and associated wiring has not been investigated unless an "Enclosed Industrial Control Panel" Listing Mark is also present.

UL CERTIFICATE

A UL Certificate of Compliance is issued for limited-production equipment investigated under UL's Limited Production Certification Program. Issuance of a UL Certificate of Compliance indicates that UL has investigated a sample of the equipment and determined that it complies with the applicable requirements of this category. Each Certificate of Compliance is valid only for the individual units covered by the investigation and certification by UL.

At a minimum, each Certificate contains the following information:

- Certificate number
- Certificate issue date
- Report reference
- Responsible company name and address
- Limited-production equipment serial number/discrete identifier
- Applicable standards

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