

NWGQ.E145541

Information Technology Equipment Including Electrical Business Equipment

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Guide Information

ECHELON CORP
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SAN JOSE, CA 95126 USA

E145541

Accessory ethernet adapters, Model(s) 72001, 72002.

Accessory network adapters SLTA-10, Model(s) 73301, 73302, 73303, 73304, 73351, 73352, 73354, 73381, 73382, 73383, 73384, 73401, 73402, 73403.

Accessory PCLTA-20 PCI Lontalk adapters, Model(s) 7440x.

Accessory PCLTA-21 PCI Lontalk adapters, Model(s) 74501, 74502, 74503, 74504.

Accessory protocol analyzers, Model(s) LonManager PCC-10.

iLON 100 Internet servers, Model(s) 72101FT, 72102FT 56K Analog Modem, 72103PL, 72104PL 56K Analog Modem.

iLON 600 LonWorks/IP Server, Model(s) 72601-FT-10, 72602-TPT/XF-1250, 72603-FT-10, 72604-TPT/XF-1250.

Internet adapters, "ilon 10", Model(s) 72010FT, 72011PL.

LAN modules, Model(s) 71000, 73000.

Power line coupling circuits, "78200 Type", Model(s) PL-10 CM 240 VAC, PL-10 DM 240 VAC, PL-10L-E 120V, PL-10L-E 240V, PL-10L-N 240V, PL-20 CM 240 VAC, PL-20 DM 240 VAC, PL-20L-E 120V, PL-20L-E 240V, PL-20L-N 240V, PL-30 DM 240 VAC, PL-30L-N 240V.

Power line coupling circuits, Model(s) 78200, 78200 Type PL-10 CM 115 VAC.

Power line serial LONTALK adapters PL-SLTA, Model(s) 76000, 76100.

x - Represents any number from 1 through 5

NWGQ.GuideInfo

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Guide Information for Electrical Equipment for Use in Ordinary Locations

GENERAL

This category covers equipment, appliances and systems rated 600 V or less normally found in offices and other business establishments, residences (homes), educational facilities, and other similar environments classified as ordinary locations.

Equipment in this category has been investigated for installation in information technology equipment (computer) rooms as defined in ANSI/NFPA 75, "Protection of Electronic Computer/Data Processing Equipment", and Article 645 of ANSI/NFPA 70, "National Electrical Code" (NEC), unless the equipment is otherwise identified by a marking or instruction.

EQUIPMENT TYPE

Equipment may be electronic or electromechanical in design or a combination thereof.

Various groupings of equipment are included for the manufacturers, such as:

Information processing equipment: automated information storage equipment, central processing units (CPUs), disk drives, fiber optic transceivers, hand-held computers (personal assistants), laptop computers, monitors, personal computers, plotters, printers, point-of-sale terminals, scanners, including portable barcode scanners, tape drives, workstations.

Telecommunication equipment: cellular site equipment, cordless telephone sets, facsimile machines, ISDN systems and telephones, modems, key telephone systems, private automated branch exchanges (PABXs), telephone answering machines, telephone sets, voicemail systems, wireless telephony systems.

Office appliances: adding machines, bursters, calculators, collators, dictation and transcribing machines, electric typewriters, erasers, folding, embossing and sealing machines, label printers, microfilm readers, motor operated file cabinets, paper cutters, paper shredders, pencil sharpeners, sorters, stackers, staplers.

Reproduction equipment: copiers, duplicating machines, microfilm printers, mimeograph machines.

Mailing, banking and currency handling equipment: cash registers, coin counters, -feeders, -dispensers, accounting machines, check-writing-, -assigning, -dating, -inserting, -mailing, -numbering and -stamping machines, point-of-sale terminals.

Multi-media equipment/accessories: CD-ROM/RW drives, digital cameras, microphones, speakers, video

conferencing systems.

Network equipment: baluns, bridges, hubs, nodes, repeaters, routers, switches, transceivers.

PC card accessories: PCMCIA-memory, -modem cards.

Wireless (RF, infrared) transceiving equipment: RF modems, hand-held computers with integral transceivers.

Static neutralizing equipment: power units with discharge bars used with or within copiers, collators, film plate processors, digital printers, duplicating machines and similar equipment.

Interconnecting cable assemblies: cable assemblies intended for use beneath raised floors of computer rooms. These assemblies also may be found under Computer Interconnection Cable Assemblies (**DVPJ**) in the Electrical Construction Equipment Directory.

Included within the above groupings is equipment which is battery powered, either by standard size consumer replaceable batteries (e.g., AA, C, D), or nonstandard sizes specified by manufacturer, type and ratings.

This category also covers power distribution units (PDUs) and computer power centers which are investigated as part of the computer system for use exclusively in information technology equipment (computer) rooms in accordance with Article 645 of the NEC. This equipment is connected to branch circuits, and it distributes power to other units in the computer system by means of interconnecting cable assemblies complying with one or more of the wiring methods outlined in Article 645 of the NEC. Many of these units require special installation, such as a separate transformer, special grounding methods, motor generator equipment, air conditioning, etc. Such features are covered in the manufacturer's installation instructions.

RELATED EQUIPMENT

Power distribution centers for communications equipment are covered under Power Distribution Centers for Communications Equipment (**QPQY**).

Power supplies for information technology and telecommunications equipment are covered under Power Supplies, Information Technology Equipment Including Electrical Business Equipment (**QQGQ**) and Power Supplies, Telephone (**QQJE**).

Static neutralizing equipment may be covered under Static Neutralizing Equipment (**VWWZ**). High voltage parts that may be accessible after installation have been investigated as Limited Current Circuits.

Air conditioning equipment for use in computer rooms or other areas in which information technology equipment is installed is covered under Air Conditioning Equipment (**AAYZ**).

Fire resistant materials, sprinklers, extinguishers and associated equipment required for compliance of computer rooms with ANSI/NFPA 75 are covered in the Fire Protection Equipment Directory, Fire Resistance Directory or Building Materials Directory.

Filing cabinets covered under this category have not been investigated with respect to fire resistance or security. Fire resistant filing cabinets are Listed in the Building Materials Directory under Record Protection Equipment (**RYPH**).

Smoke detectors and alarm equipment are found in the Fire Protection Equipment Directory.

Other equipment associated with information technology/processing but not intended for use in offices, residences or computer rooms may be found under Graphics Arts Equipment (**KCQT**), Teaching and Instruction Equipment (**WYFW**), Medical and Dental Equipment, Professional (**KFBQ**), Marking and Coding Equipment, Electronic (**PGBE**), Photographic Equipment (**QINT**) and X-ray Equipment (**ZQOR**). Other multi-media equipment and accessories may be found under Audio/Video Apparatus (**AZSQ**) and Audio and Video Equipment (**AZUJ**). Other telecommunications appliances and equipment may be found under Telephone Appliances and Equipment (**WYQQ**).

Modular assemblies of telecommunication equipment (e.g. racks, circuit card assemblies) which are designed for field installation by trained service personnel are covered under Custom-Built Telecommunication Equipment (**WYKM**).

Equipment intended to be installed on the network side of the subscriber demarcation point and installed and maintained by telephone companies, CATV companies and similar network communication companies, is covered under Communication Service Equipment (**DUZO**).

Cabinet, enclosure and rack/frame systems that are not complete information technology (IT) or telecommunications equipment, but include components and assemblies that are intended to power, protect, heat, cool or otherwise support IT or telecommunications equipment that will be installed at a later time are covered under Information Technology and Telecommunication Equipment Cabinets, Enclosures and Racks (**NWIN**).

SPECIAL CONSIDERATIONS

Card readers, badge readers and similar identification equipment covered under this category have not been investigated with respect to security.

The burglary and theft protection features of coin-operated equipment, banking and currency handling equipment, cash registers, coin counters and the like have not been investigated under this category.

Automated teller machines (ATMs) that have been investigated for security and burglary resistance are Listed under Automated Teller Systems (**TPEU**). ATMs that have not been investigated for security and burglary protection are Classified under Bank Equipment (**BALT**).

INSTALLATION

Some equipment has been investigated for installation in a restricted access location, such as a dedicated equipment room or telecommunication equipment closet, where access is limited to trained service personnel. Such equipment is provided with a marking or installation instructions which state "To be installed only in a Restricted Access Location" or similar wording. If also intended for installation over a concrete or noncombustible surface, such equipment will also be marked "Suitable for mounting on concrete or other noncombustible surface only" or similar wording.

Equipment installed in a restricted access location generally receives power from a centralized d.c. power source. If field wiring terminals are not contained in an internal compartment, both protection of exposed wiring terminals and wiring methods used for such equipment are intended to be provided in accordance with (1) markings on or instructions with the equipment, and (2) the provisions of Sections 110.26 and 110.27 of the NEC.

Equipment, such as LAN transceivers and baluns, which are investigated for installation in an environmental air space, are provided with a marking or installation instruction which states "Suitable for Use in Other Environmental Air Space in Accordance with Section 300.22(C) of the National Electrical Code," or similar wording. Such equipment has been investigated to UL 2043, "Fire Test for Heat and Visible Smoke Release for Discrete Products and their Accessories Installed in Air-Handling Spaces."

When Listed equipment intended for use with a detachable power supply cord is not provided with such a cord, a cord suitable for connection of the equipment to the branch circuit is to be separately provided.

Equipment intended to be installed in closed and multi-unit standard racks and cabinets has been determined to be suitable for use in ambient temperatures not exceeding the manufacturer's recommended ambient temperature as specified in the equipment's installation instructions.

Equipment identified with an enclosure type designation, or as "Raintight" or "Rainproof" is intended for use as indicated in Electrical Equipment for Use in Ordinary Locations (**AALZ**).

OUTPUT CONNECTORS/CIRCUITS

Class 2 circuits are marked "Class 2." All other output circuits, including those associated with the Universal Serial Bus (USB), IEEE 1394 bus and PS/2 connectors are limited power circuits supplied by UL 60950 limited power sources, unless:

- the circuits are clearly telecommunication circuits (e.g., RJ series modular jack, 50 pin commercial connectors with insulation piercing terminals). These circuits are limited to telecommunication network voltages (TNV) and are suitable for connection to the telecommunication network and distribution wiring in accordance with Article 800 of the NEC; or
- the circuits are marked, or otherwise identified in the installation instructions with the type of circuit (e.g., Class 1), intended cable type (e.g., DP-2) or specific equipment intended to be interconnected (e.g., mfg/model printer).

Limited power circuits of listed ITE supplied by limited power sources are recognized by Section 725.41(A)(4) of the NEC as being equivalent to Class 2 circuits for purposes of applying Article 725 Class 2 wiring requirements.

PHYSIOLOGICAL EFFECTS

The physiological effects of chemical substances used in or with this equipment have not been investigated.

The long-term characteristics or the possible physiological effects of radio frequency (RF) electromagnetic fields associated with this equipment have not been investigated. Hand-held transportable RF products with interconnect to the telecommunication network through RF transmitters/receivers are additionally investigated for short-term characteristics to ANSI/IEEE C95.1-1999, "Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz."

ACCESSORIES

Field-installed accessories to Listed equipment are provided with suitable markings and/or instructions detailing proper installation or assembly of the accessory with either a specific or generic Listed equipment specified in the markings or instructions.

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations ([AALZ](#)).

REQUIREMENTS

The basic standards currently used to investigate products in this category are UL 60950 or UL 60950-1, "Safety of Information Technology Equipment," or UL 60950-21, "Safety of Information Technology Equipment - Remote Power Feeding," as appropriate. The ability or reliability of these products to perform their intended function in a particular application has not been investigated.

UL MARK

The Listing Mark of Underwriters Laboratories Inc. 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 one of the following category identifiers: "UL 1950," "UL 60950," "Information Technology Equipment," "NWGQ," "I.T.E.," or "Info. Tech. Equip.," and may also include one of the following product names: "Copier," "Modem," "Paper Shredder," "Personal Computer," "Cordless Telephone," or other appropriate product name as shown in the individual Listings.

The category identifier for field-installed accessories is provided with the additional word "Accessory."

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