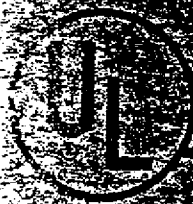


PLAINTIFF'S

EXHIBIT

E-2



UNDERWRITERS
LABORATORIES

ELECTRICAL
CONSTRUCTION
MATERIALS
DIRECTORY

MAY 1971

FOR THE ELECTRICAL INDUSTRY

BY THE UNDERWRITERS LABORATORIES

CHICAGO, ILLINOIS

Victor Electric Wire & Cable Corp., West Warwick, R. I. 02893

UNIT SUBSTATIONS (YEFR)

This listing covers unit substations intended to be installed in accordance with the requirements of the National Electrical Code and in accordance with the installation instructions provided on the unit substation.

A unit substation consists of a transformer in combination with primary and/or secondary overcurrent protective devices or switching devices housed in a single enclosure.

Some unit substations are suitable for use as service equipment and are so marked. Such marking is part of the listing mark as noted below, or is an integral part of other required markings.

Listed unit substations are for use with copper conductors unless marked to indicate which terminals are suitable for use with aluminum conductors. Such marking shall be independent of any marking on terminal connectors and shall be on a wiring diagram or other readily visible location. If all terminals are suitable for use with aluminum conductors, the marking will indicate "Use copper or aluminum wire." A unit substation employing terminals for main or branch circuit units individually Marked Cu-Al will be marked "Use copper-Al wire" or "Use copper wire only." The latter statement indicates that wiring space or other factors make the unit substation unsuitable for aluminum conductors.

Unless the unit substation is marked with both the size and temperature rating of wire to be used, the termination provisions are based on the use of 60 C ampacities for wire sizes Nos. 14-1 Awg and 75 C ampacities for wire Nos. 1/0 Awg and larger.

Unit substations have the secondary neutral bonded to the enclosure and have provision on the neutral for connection of a grounding conductor. A terminal is also provided on the enclosure near the line terminals for use with an equipment grounding conductor between the unit substation and the enclosure of equipment on the line side of the unit substation for use when a metallic conduit system is not provided.

Unit substations are marked for outdoor use or for indoor use.

The suitability of unit substations for use on high capacity circuits has not been investigated.

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 name and/or symbol of Underwriters Laboratories Inc. (as illustrated in the Introduction of this Directory) together with the word "Listed", a control number, and the following product name: "Unit Substation".

Acme Electric Corp., Cuba, N. Y. 14727

GTE Sylvania, Inc., Electrical Equipment Group, Los Angeles, Calif. 90012

GTE Sylvania, Inc., Electrical Equipment Group, Waltham, Mass. 02154

Matra Electric, Inc., Compton, Calif. 90220

Sierra Switchboard Co., Menlo Park, Calif. 94025

Square D Co., Sorgel Div., Milwaukee, Wis. 53204

Unicorn Industries, Anaheim, Calif. 92806

Westinghouse Electric Corp., Greenville, Pa. 16125

WIRES (ZGZX)

Insulated wire is intended for installation and use in accordance with the National Electrical Code. Unless indicated in the individual General Information sections under the various Wire Classifications, conductor sizes range from Nos. 14 Awg to 2000 MCM inclusive.

ASBESTOS-INSULATED (ZHNV)

Asbestos-insulated wires are classified and rated as follows:

Type A—with asbestos insulation, 300 volts maximum, Sizes No. 14 through No. 8 Awg inclusive, copper.

Type AA—with an asbestos or glass braid and asbestos insulation, 300 volts maximum, Sizes No. 14 through No. 4/0 Awg inclusive, copper.

Type AI—with impregnated asbestos insulation, 300 volts maximum, Sizes No. 14 through No. 8 Awg inclusive, copper.

Type AIA—with an asbestos or glass braid and impregnated asbestos insulation, 600 volts maximum, Sizes No. 14 Awg through 1000MCM inclusive, copper.

The Listing Mark of Underwriters Laboratories Inc. on the attached tag, the reel, or the smallest unit container in which the product is packaged with or without the UL symbol on the product is the only method provided by UL to identify these products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the name and/or symbol of Underwriters Laboratories Inc. (as illustrated in the Introduction of this Directory) together with the word "Listed", a control number, and the following product name: "Asbestos-Insulated Wire".

American Insulated Wire Corp., Pawtucket, R. I.

Belden Corp., Geneva, Ill. 60134

Carol Cable Co., Pawtucket, R. I. 02862

Cleveland Insulated Wire Co., Cleveland 11, Ohio.

Collyer Insulated Wire Co. Inc., Lincoln, R. I.

→ LOOK FOR THE LISTING MARK ←

Asbestos-Insulated—Continued

Continental Wire & Cable Corp., Subsidiary of The Anaconda Co.,
York, Pa. 17405
Electrical Cable Div., United States Steel Corp., Worcester,
Mass. 01607
General Electric Co., Bridgeport 2, Conn.
Interstate Wire Corp., Minooka, Ill. 60447
Jemco Insulated Wire Co., Joliet, Ill. 60434
Radix Wire Co., The, Cleveland 32, Ohio.
Rockbestos Co., The, New Haven, Conn. 06504
Techbestos, Inc., Moonachie, N. J.
Triangle PWC, Inc., New Brunswick, N. J. 08903
Westlake Insulated Wire Co., Westlake, Ohio.

ASBESTOS-VARNISHED-CLOTH (ZIBT)

Asbestos-varnished-cloth wires are classified as follows:
Type AVA—an asbestos or glass braid, and insulation consisting of varnished cloth and impregnated asbestos. Sizes No. 14 Awg through 2000MCM inclusive, copper.
Type AVB—a flame-retardant cotton braid, and insulation consisting of varnished cloth and impregnated asbestos. Sizes No. 18 Awg through 2000MCM inclusive, copper, and No. 12 Awg through 1000MCM inclusive, aluminum or copper-clad aluminum.
Type AVL—a lead covering, and insulation consisting of varnished cloth and impregnated asbestos. Sizes No. 14 Awg through 2000MCM inclusive, copper.
Wires for use at voltages above 600 are indicated by adding numerical suffixes to the type letters, as follows:

Numerical Designation	Maximum Working Voltage
10	1000
20	2000
30	3000
40	4000
50	5000

All manufacturers are listed for 600-volt wires. As stated in the individual listings, certain manufacturers are also listed for wires with voltage rating up to 5000 volts.

Type AVB wire may employ copper, or aluminum, or copper-clad aluminum conductors. Wires with copper-clad aluminum conductors are surface printed "AL (CU-CLAD)." Wires with aluminum conductors shall be surface printed "AL."

The ampacity of copper-clad aluminum conductors is the same as for aluminum conductors. The wire connectors used with copper-clad aluminum conductors shall be recognized for use with copper and aluminum conductors and shall be marked "AL-CU," except that 12-10 Awg solid copper-clad aluminum conductors may be used with wire binding screws and in pressure-plate and push-in spring-type connecting mechanisms that are recognized for use with copper conductors. Copper-clad aluminum conductors are suitable for intermixing with copper or aluminum conductors in terminals for splicing connections only when the wire connectors are specifically recognized for such use. Such intermixed connections are limited to use in dry locations.

The Listing Mark of Underwriters Laboratories Inc. on the attached tag, the reel, or the smallest unit container in which the product is packaged with or without the UL symbol on the product is the only method provided by UL to identify these products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the name and/or symbol of Underwriters Laboratories Inc. (as illustrated in the Introduction of this Directory) together with the word "Listed", a control number, and the following product name: "Asbestos-Varnished Cloth Wire".

American Insulated Wire Corp., Pawtucket, R. I.
Collyer Insulated Wire Co., Inc., Lincoln, R. I.
Continental Wire & Cable Corp., Subsidiary of The Anaconda Co.,
York, Pa. 17405
Electrical Cable Div., United States Steel Corp., Worcester,
Mass. 01607
General Electric Co., Bridgeport 2, Conn.
Radix Wire Co., The, Cleveland 32, Ohio.
Rockbestos Co., The, New Haven, Conn. 06504
Techbestos, Inc., Moonachie, N. J.
Triangle PWC, Inc., New Brunswick, N. J. 08903
Westlake Insulated Wire Co., Westlake, Ohio 44145

»→ LOOK FOR THE LISTING MARK ←«

FIX

Fixture wires are rated 600 V.
Flexible Cord and Fixture Wire.
All conductors are copper.
90 C may employ nickel.

Thermoplastic compounds in care should be used in hand.
Gasoline resistant wire has considered inherently resistant to of the wire type.

Gasoline resistant TPN or of extruded nylon suitable for vapors at ordinary ambient on the insulation or nylon Oil Resistant 1" if suitable Gasoline and Oil Resistant at 75 C.

Fixture wires are classified 60 C maximum operating Thermoplastic-insulated 600 v. 18-16 AWG size Christmas-tree wires.

125 v. 20-18 AWG size *The maximum voltage insulation on the conductor is 2

75 C maximum operating Rubber-insulated, heat-resistant 300 v. 18 AWG size; 1

600 v. 18-16 AWG size 90 C maximum operating Cotton-insulated wire.

300 v. 18-10 AWG size Thermoplastic-insulated 600 v. 18-16 AWG size

150 C maximum operating Asbestos-insulated wire, 300 v. 18-10 AWG size

Silicone-rubber-insulated 300 v. 18 AWG size; 600 v. 18-14 AWG size

Fluorinated ethylene polymer 600 v. 18-14 AWG size; Polytetrafluoroethylene-1

600 v. 18-14 AWG size 200 C maximum operating Silicone-rubber-insulated

300 v. 18 AWG size; 600 v. 18-14 AWG size Fluorinated ethylene polymer

600 v. 18-14 AWG size 250 C maximum operating Polytetrafluoroethylene-1

600 v. 18-14 AWG size The Listing Mark of Underwriters Laboratories Inc. on the smallest unit container in which the product is the only method provided by UL to identify these products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the name and/or symbol of Underwriters Laboratories Inc. (as illustrated in the Introduction of this Directory) together with the word "Listed", a control number, and the following product name: "Asbestos-Varnished Cloth Wire".

Alpha Wire, Elizabeth, N. J.

Thermoplastic-covered wires:

American Electric Cable Co.

Thermoplastic-insulated wires

American Insulated Wire

Thermoplastic-covered wires:

FXT. Rubber-covered, heat-resistant covered wire: Type AF. Silicone

American Wire & Cable

Thermoplastic covered wires:

Anaconda Wire and Cable

Greenwich, Conn. 06834

Thermoplastic-covered wires:

FXT. Rubber-covered, heat-resistant covered wire: Type CF.

Apex Wire & Cable Corp.

Thermoplastic-covered wires: Type FXT.

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