Nothing Compares
NORTH CAROLINA

2016 State Construction Conference

North Carolina Requirements for Third Party Listing

NC State Electrical Code/National Electrical Code

- 90.7 Examination of Equipment for Safety.

- For specific items of equipment and materials referred to in this *Code*, examinations for safety made under standard conditions provide a basis for approval where the record is made generally available through promulgation by organizations properly equipped and qualified for experimental testing, inspections of the run of goods at factories, and service-value determination through field inspections. This avoids the necessity for repetition of examinations by different examiners, frequently with inadequate facilities for such work, and the confusion that would result from conflicting reports on the suitability of devices and materials examined for a given purpose.
- It is the intent of this *Code* that factory-installed internal wiring or the construction of equipment need not be inspected at the time of installation of the equipment, except to detect alterations or damage, if the equipment has been listed by a qualified electrical testing laboratory that is recognized as having the facilities described in the preceding paragraph and that requires suitability for installation in accordance with this *Code*.

- **Article 110**

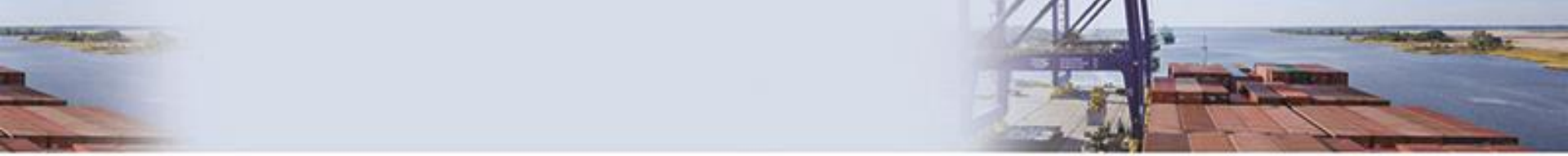
- **110.1 Scope.**
- This article covers general requirements for the examination and approval, installation and use, access to and spaces about electrical conductors and equipment; enclosures intended for personnel entry; and tunnel installations.

- 110.2 Approval
- The conductors and equipment required or permitted by this *Code* shall be acceptable only if approved

- All Equipment, Materials or Services must be Listed, Labeled, and Approved

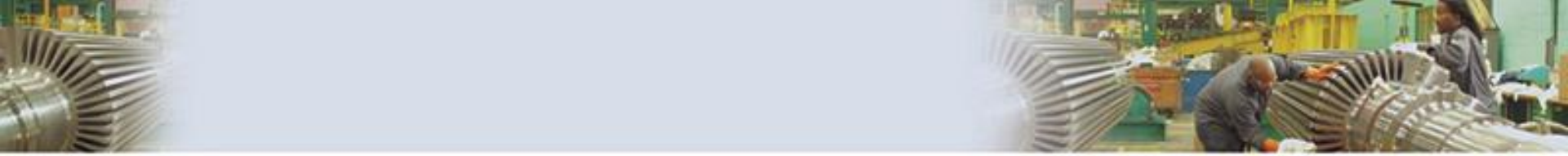
- Product must be evaluated by in accordance to the appropriate Standards

- Examples:
- Panelboards = UL67
- PVC Conduit = UL651
- Molded Case Circuit Breakers = UL489
- Stationary Generators = UL2200
- Additional Standards are available from Product Directories from testing organizations



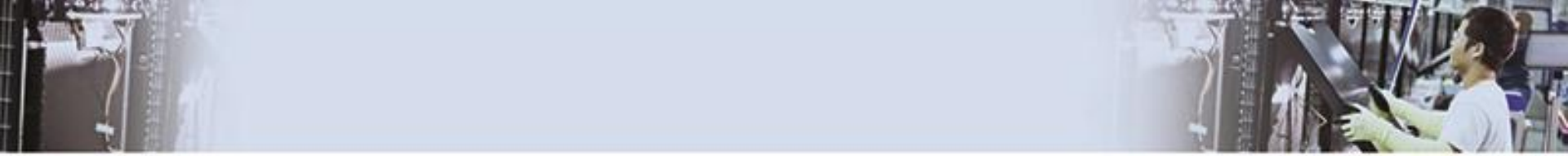
- All Equipment must be Listed, Labeled & Approved

- Equipment, Materials, or Services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services and whose listing states that either the equipment, materials, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.



- All Equipment, Materials or Services must be Listed, Labeled, and Approved

- Equipment or Materials to which has been attached a label, symbol or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by those whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

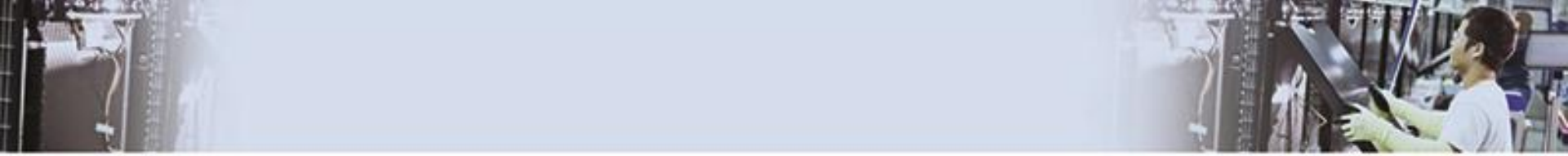


- All Equipment, Materials or Services must be Listed, Labeled, and Approved

- Acceptable to the authority having jurisdiction

- Authority Having Jurisdiction (AHJ).

An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.



NEC Article 110.3 (B)

- Listed or labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling.

- These instructions are found either on the “Label”, Instructions furnished with the Materials or in the “UL White Book

ELECTRICAL METALLIC TUBING (FJMX)

GENERAL

This category covers electrical metallic tubing (EMT), including lengths of straight tubing and elbows, with or without integral couplings or other integral fittings, manufactured in trade sizes 1/2 to 4 (metric designators 16 to 103) inclusive. EMT is for installation of conductors in circuits rated above or below 600 V, nominal, and in accordance with Article 358 of ANSI/NFPA 70, "National Electrical Code" (NEC). This tubing is intended for installation and use in accordance with the following information.

Galvanized steel electrical metallic tubing installed in concrete on grade or above generally requires no supplementary corrosion protection. Galvanized steel electrical metallic tubing in concrete slab below grade level may require supplementary corrosion protection.

In general, galvanized steel electrical metallic tubing in contact with soil requires supplementary corrosion protection. Where galvanized steel electrical metallic tubing without supplementary corrosion protection extends directly from concrete encasement to soil burial, severe corrosive effects are likely to occur on the metal in contact with the soil.

Galvanized steel electrical metallic tubing that is provided with a metallic or nonmetallic coating, or a combination of both, has been investigated for resistance to atmospheric corrosion. Nonmetallic outer coatings that are part of the required resistance to corrosion have been additionally investigated for resistance to the effects of sunlight.

Nonmetallic outer coatings of greater than 0.010-in. thickness are investigated with respect to flame propagation detrimental effects to any underlying corrosion protection, the fit of fittings and electrical continuity of the connection of tubing to fittings.

Galvanized steel electrical metallic tubing with nonmetallic coatings has not been investigated for use in ducts, plenums, or other environmental air spaces in accordance with the NEC.

Galvanized steel electrical metallic tubing with or without a nonmetallic coating has not been investigated for severely corrosive conditions.

Aluminum electrical metallic tubing used in concrete or in contact with soil requires supplementary corrosion protection.

ADDITIONAL INFORMATION

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

REQUIREMENTS

The basic standards used to investigate products in this category are ANSI/UL 797, "Electrical Metallic Tubing – Steel," and ANSI/UL 797A, "Electrical Metallic Tubing – Aluminum."

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


Coca-Cola
Drink
Coca-Cola
UNLEADED
NO SMOKING
CENEX

•GS 66-23

• Article 4.

• Electrical Materials, Devices, Appliances and Equipment.

• § 66-23. Sale of electrical goods regulated.

• Every person, firm or corporation before selling, offering for sale, assigning, or disposing of by gift as premiums or in any similar manner any electrical material, devices, appliances or equipment shall first determine if such electrical materials, devices, appliances and equipment comply with the provision of this Article. (1933, c. 555, s. 1; 1989, c. 681, s. 1.)

- GS 66-24

- § 66-24. Identification marks required.
- All electrical materials, devices, appliances and equipment shall have the maker's name, trademark, or other identification symbol placed thereon, together with such other markings giving voltage, current, wattage, or other appropriate ratings as may be necessary to determine the character of the material, device, appliance or equipment and the use for which it is intended; and it shall be unlawful for any person, firm or corporation to remove, alter, change or deface the maker's name, trademark or other identification symbol. (1933, c. 555, s. 2; 1989, c. 681, s. 1.)

GS 66-25

- § 66-25. Acceptable listings as to safety of goods.
- All electrical materials, devices, appliances, and equipment shall be evaluated for safety and suitability for intended use. This evaluation shall be conducted in accordance with nationally recognized standards and shall be conducted by a qualified testing laboratory. The Commissioner of Insurance, through the Engineering Division of the Department of Insurance, shall implement the procedures necessary to approve suitable national standards and to approve suitable qualified testing laboratories. The Commissioner may assign his authority to implement the procedures for specific materials, devices, appliances, or equipment to other agencies or bodies when they would be uniquely qualified to implement those procedures.
- In the event that the Commissioner determines that electrical materials, devices, appliances, or equipment in question cannot be adequately evaluated through the use of approved national standards or by approved qualified testing laboratories, the Engineering Division of the Department of Insurance shall specify any alternative evaluations which safety requires.
- The Engineering Division of the Department of Insurance shall keep in file, where practical, copies of all approved national standards and resumes of approved qualified testing laboratories. (1933, c. 555, s. 3; 1989, c. 681, s. 1.)

GS 66-26

- § 66-26. Legal responsibility of proper installations unaffected.

• This Article shall not be construed to relieve from or to lessen the responsibility or liability of any party owning, operating, controlling or installing any electrical materials, devices, appliances or equipment for damages to persons or property caused by any defect therein, nor shall the electrical inspector, the Commissioner, or agents of the Commissioner be held as assuming any such liability by reason of the approval of any material, device, appliance or equipment authorized herein. (1933, c. 555, s. 4; 1989, c. 681, s. 1.)

- GS 66-27

§ 66-27. Violation made misdemeanor.

Any person, firm or corporation who shall violate any of the provisions of this Article shall be guilty of a Class 2 misdemeanor. (1933, c. 555, s. 5; 1989, c. 681, s. 1; 1993, c. 539, s. 509; 1994, Ex. Sess., c. 24, s. 14(c).)

National Technical Systems

Consumer Testing Services

Examples of some of the recognized Third Party Label for North Ca

NRTL Listing Marks

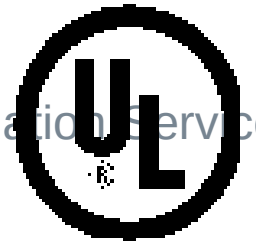
- TUV Rheinland of No. America

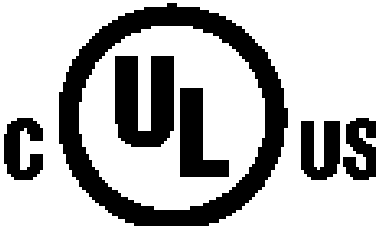
- TUV Rhe 

.C 

NRTL Listing Marks

- Underwriters Laboratories, Inc





- QPS Evaluation Services Inc (QPS)

Classification Service

With the Third Party's Classification Service, They determines that a manufacturer has demonstrated the ability to produce a product that complies with its requirements for the purpose of classification or evaluation regarding one or more of the following: (1) specific risks only, such as casualty, fire or shock; (2) performance under specified conditions; (3) regulatory codes; (4) other standards, including international or regional standards; or (5) other conditions the Agency may consider desirable, they conducts Follow-Up Service as an audit of the means the manufacturer uses to determine continued compliance of the product with Third Party's requirements.

Third Party Classification Mark

Third Party Classification Mark for Canada and the United States

Third Party Classification Mark for Canada

Third Party's Classification Mark includes a qualifying statement designated by the Third Party. A Classification Mark for Canada is used for products intended for the Canadian marketplace. It indicates that the Third Party Agency has used Canadian standards to investigate the product for specific hazards or properties. A Third Party Classification Mark for Canada and the U.S. is used for products intended for the Canadian and U.S. marketplaces. This Mark indicates that the Agency has used the requirements of both countries to investigate the product for specific hazards or properties.


Karp Associates, Inc. - 54-54 43rd Street - Maspeth, NY 11378
Tel: 800-888-4212 - www.karpinc.com
CLASSIFIED
UL
R-10806
KARP ASSOCIATES, INC.
ACCESS FRAME AND FIRE DOOR ASSEMBLY
FIRE RESISTANCE CLASSIFICATION
RATING: 1½ HR (B)
NO. D - 661,662

Component Recognition Service

Many UL investigations of equipment involve an evaluation of the suitability of components such as relays, thermostats, switches, etc. for specific applications. Where such components are designed to comply with all the construction and performance requirements of the category, they are eligible for UL Listing and suitable for either field or factory installation.

In some situations, components of special design may be incomplete in construction or restricted in performance capabilities and not Recognized for use as field-installed components. These components may be entirely suitable for factory installation on other equipment where the limitations of use are known to the manufacturer and where their use within such limitations may be investigated by UL.

With UL's Component Recognition Service, UL determines that a manufacturer has demonstrated the ability to produce a component for use in an end product that complies with UL's requirements. This type of investigation takes into account the performance and construction characteristics of the end product and how the component will be used in that product. UL conducts Follow-Up Service as an audit of the means the manufacturer uses to determine continued compliance.

Labeling Requirements

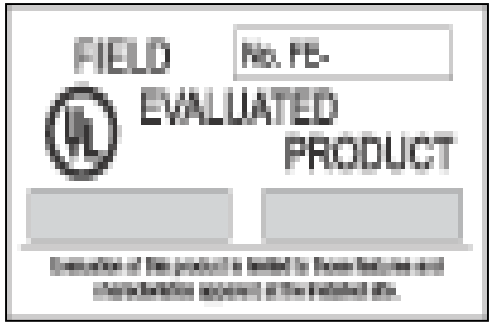
- The Manufacture must apply the “Label” at the time the product is manufactured
- The Manufacture cannot apply a “Label” to the item after they ship the item from their Manufacturing facility
- If it is a Listed Product but for whatever reason they missed applying the Label before shipping the product, the product must either replaced or Field Evaluated by the Listing Agency

Field Evaluation Labels

- MET Laboratories, Inc.
- TUV SUD America Inc.

Field Evaluation Labels

- Underwriters Laboratories



What is a CE Mark?

CE Marking Information

A CE Marking is a European marking of conformity that indicates that a product complies with the essential requirements of the applicable European laws or Directives with respect to safety, health, environment and consumer protection. Generally, this conformity to the applicable directives is done through self-declaration. The CE Marking is required on products in the countries of the European Economic Area (EEA) to facilitate trade between the member countries. The manufacturer or his authorized representative established in the EEA is responsible for affixing the CE Marking to his product. The CE Marking provides a means for a manufacturer to demonstrate that his product complies with a common set of laws required by all of the countries in the EEA to allow free movement of trade within the EEA countries.

Unlike the North Carolina recognized Third Party Mark, the CE Marking:

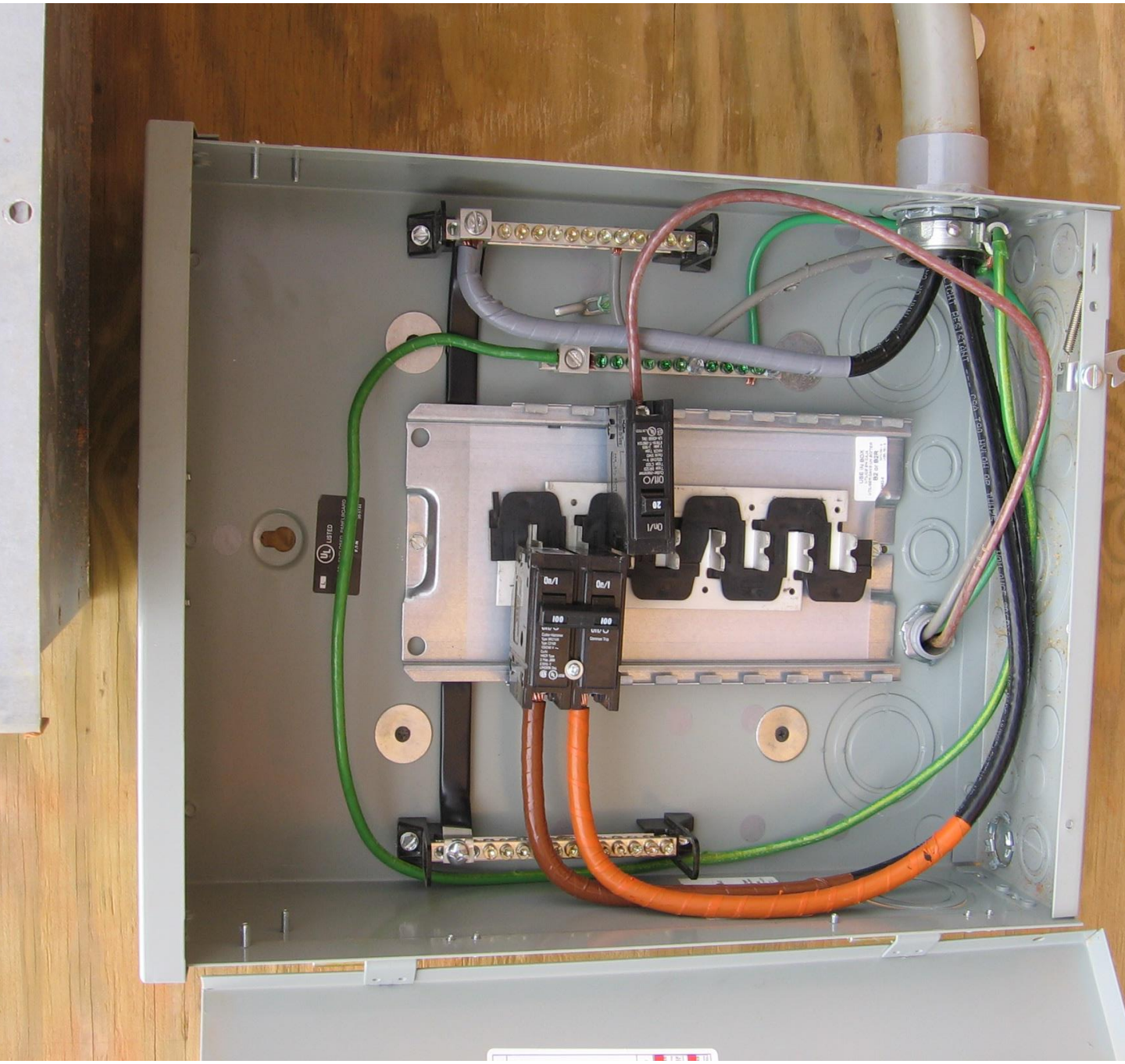
Is not a safety certification mark,

Is generally based on self-declaration rather than third-party certification, and

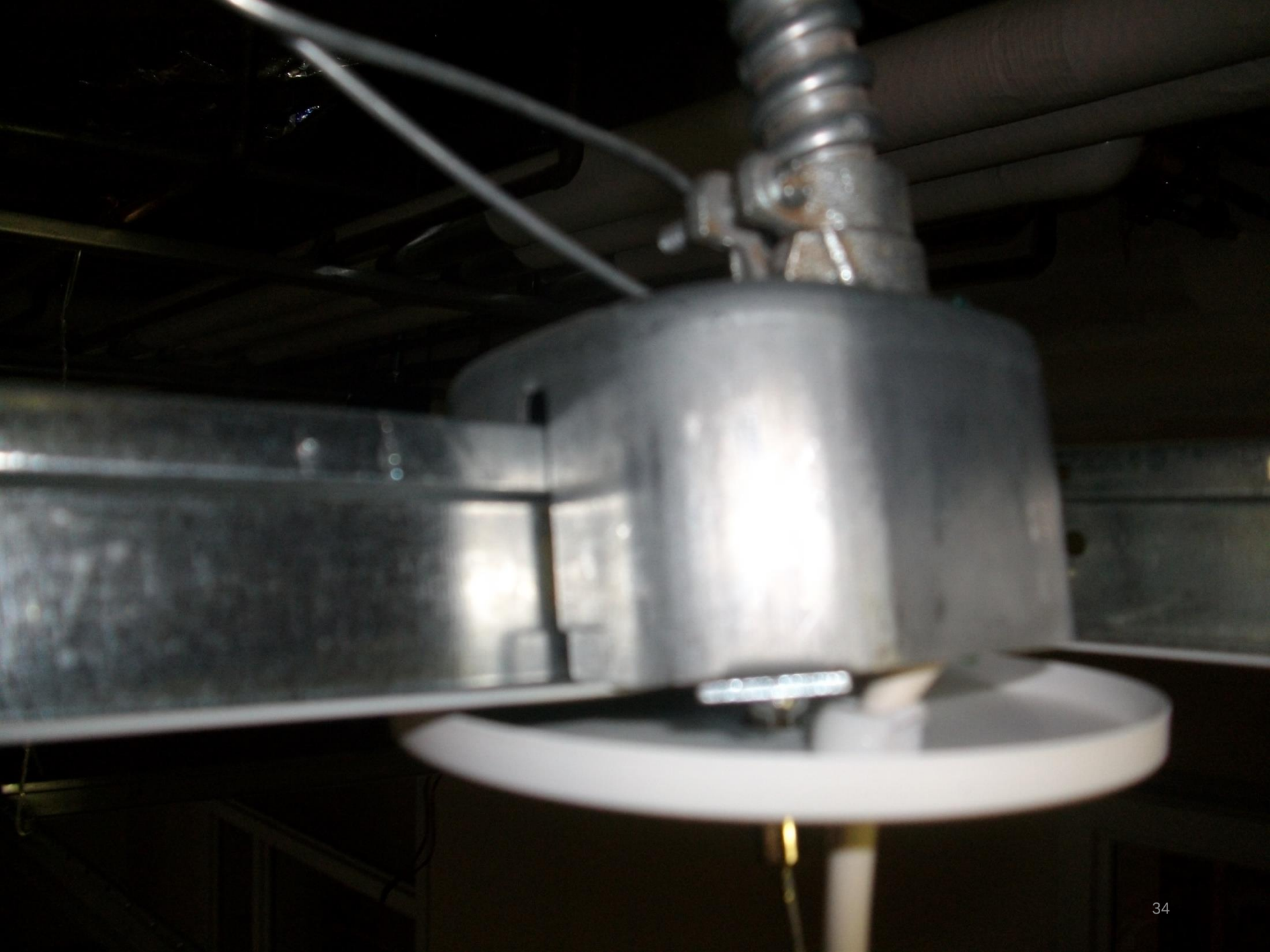
Does not demonstrate compliance to North American safety standards or installation codes.

A product that bears a CE Marking may also bear a certification mark, such as Third Parties Listing Mark; however, the CE Marking and the Third Party Mark have no association. The Third Party Mark indicates compliance with the applicable safety requirements in effect in North America and is evidence of UL certification, which is accepted by model North American installation codes, such as the National Electrical Code® and the Canadian Electrical Code® .

The CE Marking on products is not a certification mark. AHJs should continue to look for



PS-3
PENDANT
BAR
SSG
715 JOIN




MODEL: ETD1000
ELECTRONIC TANK DISPLAY
INSTALL IN ACCORDANCE WITH PNEUMERCATOR
WIRING DRAWING NUMBER 50377 OR 50444.
RATED VOLTAGE: 115/230VAC, 10W, 50/60Hz
(SWITCH SELECTABLE)
ENCLOSURE RATED: NEMA 4X
SERIAL NUMBER
P03658-1
P/N 313161-1 REV. C

RECTORSEAL METACAULK® FIRE RATED PUTTY PADS

Product Code No. 66335 7" x 7" x 1/8" (18cm x 18cm x 0.3cm)

APPLICATIONS: RECTORSEAL® Metacaulk® Fire Rated Putty Pads are used to seal around electrical boxes to reduce sound transmission and to maintain the hourly rating of fire resistive walls restricting the passage of smoke, flame and toxic gases.

INSTRUCTIONS: (1) Remove liner from one side of pad. Align with the side of the box partially overlapping the stud and adhere. Work pad to the opposite side of the box and over the edges. (2) If wall membrane is in place, pack putty into gaps between box and gypsum board slightly overlapping inner wallboard surface. If membrane is to be installed after pad installation, overlap front edge of box so that putty will be compressed around edges of box as wallboard is installed. Cut slits in pad to fit around conduits or cables. (3) Press pad to surface of top, bottom, and sides of box. (4) Trim excess at corners and apply to conduit fittings connected to the box. Remove exposed liner. Optionally, putty may be packed into inside of conduit fittings to restrict passage of smoke. NOTE: Only one pad thickness required for 1 or 2 hour fire rating.

FOR TECHNICAL INFORMATION, CALL TOLL FREE 1-800-231-3345.
For additional information, refer to Material Safety Data Sheet.
For Limited Warranty, refer to Product Data Sheet.

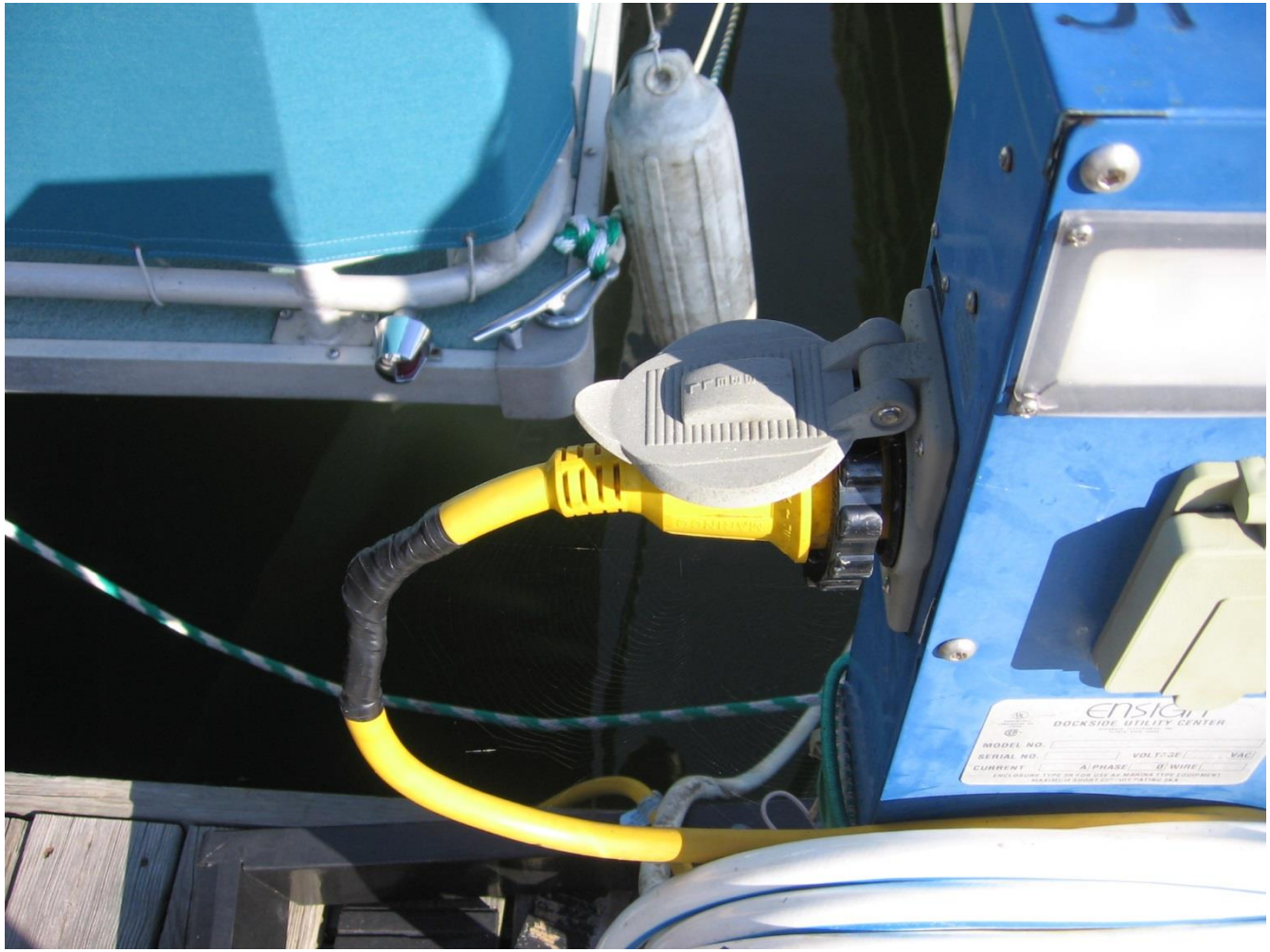
FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT - 1-800-424-9300

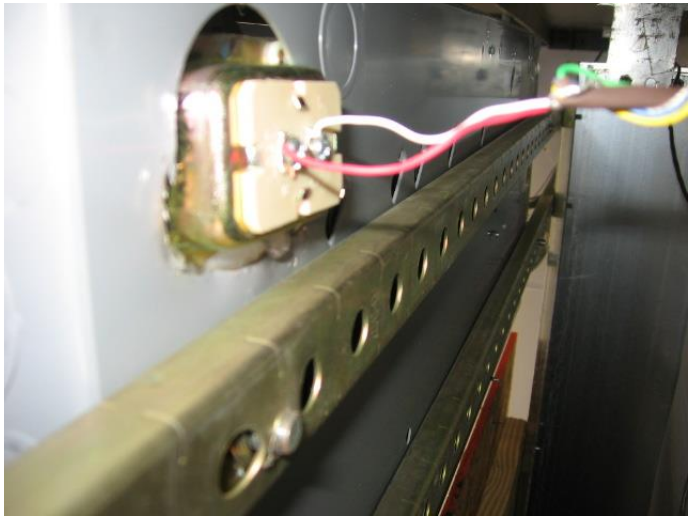
RECTORSEAL
2601 Spenwick Drive, Houston, TX 77055-1035
Phone: (800) 231-3345 • Fax: (800) 441-0051
www.rectorseal.com

0 21449 66335 9

CLASSIFIED C UL US
CLASSIFIED
FILL, VOID OR CAVITY MATERIALS
FOR USE IN THROUGH-PENETRATION
FIRESTOP SYSTEMS SEE UL DIRECTORY
OF PRODUCTS CERTIFIED FOR CANADA
AND UL FIRE RESISTANCE DIRECTORY
12Y3

FM APPROVED
Subject to the conditions of Approval as a Wall and Floor Penetration Fire Stop when installed as described in the current edition of the FM Approval Guide.
H-02


DOCKSIDE UTILITY CENTER
MODEL NO.
SERIAL NO.
CURRENT




Underwriters Laboratories Inc.
POWER OUTLET
NO.M 322977
ARLINCO


SMART"Y" 50
INSTRUCTIONS
1. Turn off dockside circuit breakers for 30A/125V receptacles.
2. Secure 50 AMP connector to yacht's 50A/250V plug.
3. Plug SMART"Y" 30 AMP cords into dockside 30A/125V receptacles.
4. Turn ON dockside circuit breakers.
• Power Light ON - 30 AMPS at 208/240 Volts available to yacht.
• Power Light OFF - Voltage phases incompatible for 208/240 Volts. Try a different 30A/125V receptacle.
To Disconnect - First turn off dockside circuit breakers then remove 30 amp cords.
30A 125V
30A 125V
To 50A 250V Inlet
Power
Charles Marine Products
A Charles Industries Company
Rolling Meadows, Illinois 60008 U.S.A.
38-200228-4-D

HUBBELL