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MIL-C-29184B is inactive for new design as of 16 April 2001.

INCH-POUND

MIL-C-29184B
9 December 1991
SUPERSEDING
MIL-C-29184A(YD)
3 December 1984

MILITARY SPECIFICATION

CABLE ASSEMBLIES, POWER, ELECTRICAL, FOR PORTABLE PANELBOARDS, GENERAL SPECIFICATION FOR

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers portable electrical power cable assemblies for use with portable power distribution panels.

1.2 Classification. The cable assemblies shall be of the following types and classes as specified (see 6.2):

Type I - Lug terminations or direct conductor terminations on both ends.
Type II - Military type connectors on both ends.
Type IV - Military type connector on one end and lug terminations or direct conductor terminations on the other end.

Class 1 - Three phase, 60 Hertz (Hz) power.
Class 2 - Single phase, 60 Hz power.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commanding Officer (Code 156), Naval Construction Battalion Center, Port Hueneme, CA 93043-5000, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 6150

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

VV-P-236 - Petrolatum, Technical.

MILITARY

MIL-V-173 - Varnish, Moisture and Fungus Resistant (for treatment of Communications, Electronics, and Associated Equipment).
MIL-C-12000 - Cable, Cord, and Wire, Electric; Packaging of.
MIL-P-15024 - Plate, Tags and Bands for Identification of Equipment.
MIL-C-22992 - Connectors, Plugs and Receptacles, Electrical, Waterproof, Quick Disconnect, Heavy Duty Type, General Specification for.
MIL-C-55442 - Cable Assemblies and Cord Assemblies; Packaging of.

STANDARDS

FEDERAL

FED-STD-H28 - Screw-Thread Standards for Federal Services.

MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-147 - Palletized Unit Loads.
MIL-STD-202 - Test Methods for Electronic and Electrical Component Parts.
MIL-STD-810 - Environmental Test Methods and Engineering Guidelines.
MIL-STD-454 - Electronic Equipment, Standard General Requirements for.
MIL-STD-1460 - Soldering for Electrical Connections and Printed Wiring Assemblies, Procedure for.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

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2.2 Non-Government publications. The following document(s) form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of the documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

WC 8 - Ethylene-Propylene. Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.

(Application for copies should be addressed to the National Electrical Manufacturers Association, 2101 L Street, N.W., Washington, DC 20037.)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 - National Electrical Code.

(Application for copies should be addressed to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.)

UNDERWRITERS LABORATORIES INC. (UL)

UL 62 - Flexible Cord and Fixture Wire.

(Application for copies should be addressed to the Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Description. The cable assemblies shall consist of a fixed length of heavy duty, extra flexible, portable electrical power cable containing one or more conductors, with the ends of the cable having connectors or lug terminals, or prepared for single conductor direct termination.

3.1.1 Specification sheets. The individual item requirements shall be as specified herein and in accordance with the applicable specification sheets. In the event of any conflict between requirements of the specification and the specification sheets, the latter shall govern (see 6.2).

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3.1.2 Government part number. The government part number shall consist of the prefix "M" followed by the numerical part of the specification sheet number and, when applicable, an assigned dash number from the specification sheet (see 6.2).

3.2 First article. When specified (see 6.2), the contractor shall furnish a cable assembly for first article inspection and approval (see 4.2.1 and 6.3).

3.3 Codes and standards. The cable assemblies shall conform to the requirements of UL 62, and NEMA WC 8 as applicable (see 4.1.2).

3.3.1 Compliance. Prior to approval of the first shipment, the contractor shall submit to the contracting officer, or his authorized representative, satisfactory evidence that the cable assemblies he proposes to furnish under this specification meet the requirements of UL 62, and NEMA WC 8 as applicable.

3.3.2 Name of industry standard. Acceptable evidence of meeting the requirements of UL 62 shall be the UL certification symbol or label, listed in the UL Electrical Construction Materials List, or a certified test report (see 6.2) from a recognized independent testing laboratory indicating the cable assemblies have been tested and conform to UL 62. Such evidence must be acceptable to the contracting officer.

3.4 Materials. Materials shall be as specified herein and in applicable specifications and standards, and other referenced documents. Materials not specified shall be selected by the contractor and shall be subject to all provisions of this specification. Materials shall be free of defects which adversely affect performance or serviceability of the finished product.

3.5 Interchangeability. All units of the same classification furnished with similar options under a specific contract shall be identical to the extent necessary to insure interchangeability of component parts, assemblies, accessories, and spare parts.

3.6 Design. The cable assemblies shall be designed to distribute electrical power to or from portable electrical power distribution centers. The cable assemblies shall be designed to be used in a military environment under all types of adverse environmental conditions, including very low and high temperatures, high humidity, water immersion, prolonged exposure to sunlight, ozone, weather, and physical abuse. The connectors shall be designed to mate with each other alone, or with suitable adapters, such that the cable assemblies can be connected in series for longer lengths. The cable assemblies shall be designed to be extra flexible at low temperatures.

3.6.1 General.

3.6.1.1 Length. The finished length of the cable assembly shall be not less than the nominal length specified in the applicable specification sheet, and not more than the nominal length +4.0 percent for cable lengths less than 5 feet, and not more than the nominal length +2.0 percent for cable lengths more than 5 feet.

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3.6.2 Metals. Metals, other than current-carrying parts, shall be of a corrosion-resistant type suitable for operation in a salt laden atmosphere.

3.6.2.1 Dissimilar metals. Intimate contact between dissimilar metals which can be expected to cause galvanic corrosion shall be avoided. When such contact cannot be avoided, an interposing insulating material shall be used to minimize the corrosive effect.

3.6.2.2 Hardware. The different sizes and types of hardware shall be kept to a minimum. All washers, nuts, bolts, screws, and threaded parts shall be made of corrosion-resistant metal and shall be made of corrosion-resistant metal and shall have standard screw threads in accordance with FED-STD-H28. Fasteners with metric threads and heads shall not be used.

3.6.3 Electrical. The installation of all components into the cable wiring design practices shall be in accordance with NFPA 70. Each circuit shall be continuous, electrically and physically, including the neutral and equipment group, when required.

3.6.3.1 Dielectric withstanding voltage. Cable assemblies shall show no evidence of electrical arcing, electrical breakdown, or other damage when tested in accordance with 4.5.4.

3.6.3.2 Insulation resistance. The insulation resistance of all mutually insulated cable assembly parts shall be not less than 100 megohms when tested in accordance with 4.5.5.

3.6.4 Connectors. Connectors shall be the heavy-duty type. Connector bodies shall be made of a material that is resistant to high impacts, ozone, sunlight, oils and solvents, cracking and splitting, salt water, and physical abuse at temperatures from -25 degrees Fahrenheit (^{o}F) (-32° Celsius (C) to 125°F (52°C)). Nonmetallic cable gripping means shall be built into the connector.

3.6.4.1 Military type connectors. Military type connectors shall conform to MIL-C-22992 and shall be furnished with captive plugs or caps, waterproof cable sealing adapter (for class R connectors), and cable clamp or grip.

3.6.4.2 Cable pullout. The cable shall not pull out from the connector, and the cable jacket slippage, relative to the connector cable gripping means, shall not exceed 1/32 inch when an axial force of 100 pounds (lb) is applied to a cable of the cable assembly while the connector being tested is maintained in a fixed position (see 4.5.6).

3.6.5 Cable. Unless otherwise specified in the applicable specification sheet, the electrical cables used in the cable assembly shall conform to the applicable portions of NEMA WC 8 including the requirements for portable single-conductor and multiple-conductor power cables, control cables, cords, and UL 62 as applicable. All portable control cables, as defined in UL 62, shall bear the UL listing mark. All cables shall be of round construction. The cable shall be designed for heavy duty, hard usage, and shall be resistant to ozone, sunlight, oils and solvents, cracking, salt water, and physical abuse. The cable shall be the extra-flexible type.

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3.6.5.1 Cable operating temperature. The cable shall be designed to be flexible at cable temperatures as low as -25°F (-32°C). The cable shall be designed to operate continuously at a cable temperature of 194°F (90°C) in a 104°F (40°C) ambient temperature environment.

3.6.5.2 Inner conductors. The voltage rating of all insulated conductors in the cable shall not be less than 600 volts (V). The inner insulated conductors shall have insulation of ethylene-propylene-rubber. All conductors including the grounding conductors shall be made of copper, and shall have stranding of the extra flexible type. The ends of the conductor shall be tinned in accordance with MIL-STD-1460.

3.6.5.3 Outer jacket. The outer jacket shall be made of acrylonitrile-butadiene/polyvinyl-chloride and shall be black in color.

3.6.5.4 Conductor identification and connector terminal wiring assignments. Multiple-conductor cable shall have inner conductors identified by the color of the insulation of each conductor. The color identification of each conductor shall conform to the applicable specification sheets (see 2.1.1). When the size of conductor necessitates the use of marking bands, the color identification of each conductor shall conform to the applicable specification sheets. Military type connectors conforming to MIL-C-22992, class L only, shall be wired in accordance with the applicable specification sheets with cable conductor colors matched to connector terminal designations.

3.7 Fungus resistance. When specified (see 6.2), electrical components and circuit elements, including terminal and circuit connections, shall be coated with varnish conforming to MIL-V-173, except that:

a. Components and elements inherently inert to fungi or in hermetically sealed enclosures need not be coated.
b. Current-carrying contact surfaces, such as pins, sockets, and terminals shall not be coated.

3.8 Environmental requirements. The cable assemblies shall maintain electrical continuity and a load voltage within 4 percent of rating at specified rated current. Post test examination shall show no evidence of insulation cracking or charring. This criteria defines satisfactory operation.

3.8.1 Low temperature. The cable assemblies shall operate satisfactorily and remain flexible in an ambient temperature of -25°F (-32°C) as tested in accordance with 4.5.1.1.

3.8.2 High temperature. The cable assemblies shall operate satisfactorily in an ambient temperature of 125°F (+52°C) as tested in accordance with 4.5.1.2.

3.8.3 Rain. The cable assemblies shall operate satisfactorily in windblown rain of 2 to 5 inches per hour as tested in accordance with 4.5.1.3 and show no indication of water penetration.

3.8.4 Humidity. The cable assemblies shall operate satisfactorily in a humid atmosphere as tested in accordance with 4.5.1.4 and show no evidence of moisture accumulation in the connector interfaces on post test examination.

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3.8.5 Water immersion.

3.8.5.1 Unjoined connectors. Connectors shall have captive waterproof caps or plugs which are furnished and attached to the connector ends of the cable assemblies. When these caps or plugs are installed, the connector assembly with cable installed shall be waterproof when immersed in water to a depth of 3 feet as tested in accordance with 4.5.1.5.

3.8.5.2 Mated connectors. When two cable assemblies of the same type are joined together by connecting (using adapters if required) the mating connector ends, the connectors, and connector joints shall be waterproof when immersed in water to a depth of 3 feet as tested in accordance with 4.5.1.5.

3.8.6 Shock. The cable assemblies shall operate satisfactorily after being subjected to impact shocks, such as handling and transportation shocks, as tested in accordance with 4.5.1.6. Post test examination shall show no detrimental damage.

3.9 Marking.

3.9.1 Cable assembly. The cable assemblies shall be identified by marking bands consisting of plastic bands or heat shrinkable tubing in accordance with MIL-P-15024 and long enough to contain the information specified herein. One band shall be placed around the cable every 25 feet with one band on each end. Each band, shall show the government part number, voltage, phase, and current rating of the cable assembly. For unbundled cable assemblies consisting of one or more separate, single conductor cable lengths, each single conductor shall have the above marking and, in addition, a marking identifying the electrical function of the conductor color coded, (that is, phase A-black, B-red, C-orange or blue, neutral-white, ground-green).

3.9.2 Cable. The cable shall be durably marked in accordance with NEMA WC 8, NFPA 70, and UL 62, as applicable, and shall include the manufacturer, cable type designation, number, and size of conductors. The marking shall be at intervals not exceeding 2 feet. The marking shall be placed no less than 2-1/2 times the connector length from each end of the cable so to insure seals making contact with the cable will form a waterproof joint with the cable.

3.9.3 Connectors. Connectors shall have the manufacturer's name and part number permanently and legibly marked on these components. Adhesive type labels shall not be used.

3.10 Technical documentation. A wiring diagram assembly drawing, and parts list shall be prepared for each cable assembly. The parts list shall identify each part of the assembly drawing, the manufacturer of the part, the manufacturer's part number, and the government part number, if applicable. Documentation shall be furnished as specified in the contract (see 6.2.1).

3.11 Workmanship. Cable assemblies shall be manufactured in such a manner as to be uniform in quality and shall be free from defects that will affect life, serviceability, or appearance.

3.11.1 Connector assembly. Conductor ends shall be properly stripped of insulation without damage to the conductor strands. When screw type connector

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terminals are used, the stranded conductor ends shall be solder dipped before assembly to the screw type terminals in accordance with MIL-STD-454. Only the minimum amount of insulation shall be removed for assembly of the conductors to the connector contacts. Conductors shall be free of strain or sharp bends. The cable jacket shall be properly secured to the connector for strain relief.

3.11.2 Waterproof seals. Waterproof seals shall fit properly. Any ridge on the connector end of the cable jacket shall be removed for a distance of not less than two times the connector length. The cavity formed between the connector and the conductor shall be backfield with lubrication in accordance with V-V-P236A, to insure the sealing gland or other seals making contact with the cable will form a water proof joint with the cable.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Component and material inspection. Components and materials shall be inspected in accordance with all the requirements specified herein and in applicable referenced documents.

4.1.2 Standards compliance. The contractor shall make available to the contracting officer or his authorized representative evidence of compliance with the applicable standards cited in 3.3. The Government reserves the right to examine and test all cable assemblies to determine the validity of the certification.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. First article inspection (see 4.2.1).
b. Quality conformance inspection (see 4.2.2).

4.2.1 First article inspection. The first article inspection shall be performed on one cable assembly when a first article is required (see 3.2 and 6.2). This inspection shall include the examination of 4.4 and the tests of 4.5. The first article may be either a first production item or a standard production item from the supplier's current inventory provided the item meets the requirements of the specification and is representative of the design, construction, and manufacturing technique applicable to the remaining items to be furnished under the contract.

4.2.2 Quality conformance inspection. The quality conformance inspection shall include the examination of 4.4, the tests of 4.5.2 through 4.5.5, and the packaging inspection of 4.6. This inspection shall be performed on the samples selected in accordance with 4.3.

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4.3 Sampling. Sampling and inspection procedures shall be in accordance with MIL-STD-105. The unit of product shall be one cable assembly. All cable assemblies offered for delivery at one time shall be considered a lot for the purpose of inspection. If an inspection lot is rejected, the contractor may rework it to correct the defects, or screen out the defective units and resubmit for a complete reinspection. Resubmitted lots shall be reinspected using tightened inspection. If the rejected lot was screened, reinspection shall be limited to the defect causing rejection. If the lot was reprocessed, reinspection shall be performed for all defects. Rejected lots shall be separate from new lots, and shall be clearly identified as reinspected lots.

4.3.1 Sampling for examination. Guidance for inspection level and an Acceptable Quality Level (AQL) as specified (see 6.3.1).

4.3.2 Sampling for tests. Guidance for inspection level and an Acceptable Quality Level (AQL) as specified (see 6.3.2).

4.4 Examination. Each cable assembly shall be examined for compliance with the requirements in section 3 of this specification. This element of inspection shall encompass all visual examinations and dimensional measurements. Noncompliance with any specified requirement shall constitute one defect.

4.5 Tests. The first article, when furnished, and each cable assembly or each sample selected in accordance with 4.3, shall be tested in accordance with the applicable tests herein. Failure of the cable assembly to meet the applicable tests shall be cause for rejection.

4.5.1 Environmental tests. Unless otherwise specified herein, the cable assemblies shall be energized with rated current, voltage, and frequency during the tests specified in 4.5.1.1 through 4.5.1.5. For cable assemblies with mating connectors on each end, or for cable assemblies having a connector on one end only, the environmental tests shall be conducted on two pairs of cable assemblies: One pair energized, but carrying no load current, and which has the mating end connectors from each cable unjoined and with protective covers installed on each connector face, and the other pair of cables having the end connectors joined together to form one cable having a joined center section. For cable assemblies having only one connector, or for cable assemblies having non-mating connectors, adapters shall be used to join the two cable assemblies.

4.5.1.1 Low temperature test. The low temperature test shall be conducted in accordance with MIL-STD-810, method 502.3, procedure II, at a minimum temperature of -25°F (-32°C). After the test sample is stabilized, it shall be maintained at this temperature for 24 hours prior to conducting tests. Cable pull-out test (see 4.5.6) shall be performed during or immediately after step 7, before the cable assembly returns to ambient conditions. The cable assembly shall operate satisfactorily as specified in 3.8.1.

4.5.1.2 High temperature test. The high temperature test shall be conducted in accordance with MIL-STD-810 method 501.3, procedure II, operation, constant temperature exposure. The cable assembly shall be maintained at a stabilized temperature of 125°F (52°C) for a duration of 24 hours prior to testing. The cable assembly shall operate satisfactorily during the high temperature exposure and after returning to room ambient as specified in 3.8.2.

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4.5.1.3 Rain test. The rain test shall be conducted in accordance with MIL-STD-810, method 506.3, procedure I, with a simulated rainfall at a constant rate of 2 plus or minus 0.5 inches per hour. Leakage currents between conductors to ground shall not exceed 0.5 milliamperes maximum change between wet and dry conditions throughout the test. The cable assemblies shall operate satisfactorily in accordance with 3.8.3 prior to and after removal from the chamber. After returning to room environment the cable connectors shall be disconnected and examined. There shall be no evidence of water penetration.

4.5.1.4 Humidity test. The cable assembly humidity test shall be conducted in accordance with MIL-STD-810, method 507.3, induced, non-hazardous, cycle 4, except the maximum temperature shall be 125°F (52°C) maintained in the time period of 1100 to 1900 hours shown in table 507.3-I. After completion of the test, the covered, unmated connectors, and the joined connectors shall be examined for moisture condensation internally. There shall be no moisture accumulation. The cable assembly shall meet the requirements of 3.8.4.

4.5.1.5 Waterproofness test. The covered, unmated connectors, and the joined connectors shall be tested in accordance with MIL-STD-202, method 104A, test condition B, except that the temperature of the hot bath shall be 125°F (52°C), the temperature of the cold bath 35°F (2°C), and the depth of immersion shall be not less than 3 feet. During each immersion, the immersed cable assemblies shall be flexed back and forth as specified in 4.5.2. Leakage currents from the cable assembly current-carrying conductors to the grounding conductors and the conductive salt bath shall be continuously monitored throughout the test. No leakage current shall exceed 0.5 milliampere maximum change in leakage of wet conditions over dry conditions throughout the test. The cable assemblies shall then be removed from the water bath and the exterior surfaces of the cable assemblies wiped dry. The covered unmated connectors and the joined connectors shall then be disassembled and examined for evidence of water leakage both on the connector face and internal to the connector body where the inner cable conductors are exposed. No evidence of water leakage shall be seen as specified in 3.8.5.1.

4.5.1.6 Shock test. The cable assembly shall be shock tested in accordance with MIL-STD-810, method 516.4, procedure IV, transit drop. Post test examination and load current test shall conform to 3.8.6 requirements.

4.5.2 Performance test. Only cable assemblies with connectors or lug terminals shall undergo this performance test. Prior to being tested, each cable assembly shall be energized for not less than 5 minutes to rated current, voltage, and frequency by properly terminating the ends of the cable assembly to a power source and load. The source and the load terminations shall be by means of mating connectors connected to the source and load. While energized, the cable assembly shall be flexed back and forth near each connector at a distance from the back of the connector of 20 times the cable outside diameter. The flexing shall be about the connector through an angle of ±45° from the axis of the connector. The flexing shall be performed first in a vertical plane and then in horizontal plane at a rate of not less than 10 cycles per minute for a period of not less than 1 minute in each plane. During and after the time the cable is being flexed, the connector shall be examined for defects including unusual or excessive heating, arcing, and intermittent operation.

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4.5.3. Wiring accuracy test. Corresponding connection point at each end of the cable assembly shall be tested for electrical continuity. The connection points shall be the same for each connector end when matching pin and socket connectors are used on the cable ends. Continuity shall exist between the same identified terminals of each connector, or between the terminals of one connector and the color coded conductor lead on the other end of the cable assembly, when only one connector is installed on the cable assembly, or between each end of each single conductor which comprises a cable assembly consisting of groups of single conductors not terminated in connectors.

4.5.4 Dielectric withstand voltage. Cable assemblies shall be tested by applying rated cable assembly operating frequency at twice the rate cable assembly root mean square (rms) voltage plus 1,000V rms. The test voltage shall be maintained at this value for 1 minute. The cable assembly shall be examined to determine conformance to 3.6.3.1.

4.5.5 Insulation resistance. The insulation resistance shall be measured between mutually insulated terminals and, if applicable, between each terminal and the metal shell of the connector except where by design, the terminal is electrically continuous with armor or shell. Measurements shall be made by means of megohm bridge or another approved method at a direct current potential of at least 500V to determine conformance to 3.6.3.2.

4.5.6 Cable pullout test. This test shall be performed immediately after the low temperature test (see 4.5.1.1), and high temperature test (see 4.5.1.2). With the connector held securely in place, a tensile force of 100 lb shall be applied to the cable for 1 minute. Movement of the outer jacket shall not exceed 1/32 of an inch as specified in 3.6.4.2. The cable conductors shall not pull out from the connector terminations.

4.6 Packaging inspection. The inspection of the preservation, packing, palletization, and marking shall be in accordance with the requirements of section 4 of MIL-C-12000 and MIL-C-55442.

5. PACKAGING

5.1 Preservation, packing, and marking. Preservation, packing, and marking shall be in accordance with the requirements of MIL-C-55442 for terminated cable and MIL-C-12000 for unterminated cable with the level of preservation and the level of packing specified (see 6.2).

5.2 Palletization. When specified (see 6.2), material shall be palletized in accordance with MIL-STD-147 when the following criteria are met:

a. Load to consist of four or more unskidded containers; and,
b. Load shall utilize a minimum of 80 percent of the pallet base.

6. NOTES

6.1 Intended use. These cable assemblies are intended to be used with portable electrical power distribution center.

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6.2 Ordering data. Acquisition documents should specify the following:

a. Title, number, and date of this specification.
b. Type and class of cable assembly required (see 1.2).
c. Specifications, standards, and handbooks (see 2.1.1).
d. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
e. Title, number, and date of the applicable specification sheet with the government part number, if applicable (see 3.1.1 and 3.1.2).
f. When a first article is required for inspection and approval (see 3.2, 4.2.1, and 6.3).
g. When a certified test report is required (see 3.3.2).
h. When fungus resistance is required (see 3.7).
i. Level of preservation and level of packing required (see 5.1).
j. When palletization is required (see 5.2).

6.2.1 Data requirements. When this specification is used in an acquisition which incorporates a DD Form 1423, Contract Data Requirements List (CDRL), the data requirements identified below shall be developed as specified by an approved DD Form 1664, Data Item Description (DID), and delivered in accordance with the approved CDRL incorporated into the contract. When the provisions of paragraph 52.227-7031 of the Federal Acquisition Regulations are invoked and the DD Form 1423 is not used, the data specified below shall be delivered by the contractor in accordance with the contract or purchase order requirements. Deliverable data required by this specification are cited in the following paragraphs:

Paragraph No.	Data Requirement Title	Applicable DID No.	Option
3.10	Literature, descriptive	DI-M-24037A	
3.3.2	Certificate of compliance	DI-E-2121	

(DIDs related to this specification, and identified in section 6 will be approved and listed as such in DoD 5000.19L, Vol. II, Acquisition Management Systems and Data Requirements Control List. Copies of DIDs required by the contractors in connection with specific acquisition functions should be obtained from the Naval Publications and Forms Center or as directed by the contracting officer.)

6.3 First article. When a first article inspection is required (see 3.2 and 6.2), the item will be tested and should be a first production item or it may be a standard production item from the contractor's current inventory as specified in 4.2.1. The first article should consist of one complete cable assembly. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examination, test, and approval of the first article (see 3.2).

6.3.1 Sampling for examination. Recommended Inspection Level is S-2 and Acceptable Quality Level is 2.5 (see 4.3.1).

6.3.2 Sampling for tests. Recommended Inspection Level is S-2 and Acceptable Quality level is 2.5 (see 4.3.2).

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6.4 Part or Identifying number (PIN). The PIN is an identifying number which identifies the type and class of cable assembly (see 1.2). The PIN's are assigned as follows:

```
M 29184 - X - X
|  |      |   |
|  |      |   |__  Class 1 or 2.
|  |      |
|  |      |______  1, 2, or 4 - for types I, II, or IV.
|  |
|  |_____________  Specification number.
|
|________________  M Prefix, an item defined by inch-pound units.
```

6.5 Keyword listing.

Cable
Electrical
Assembly
Power distribution
Portable

6.6 Changes from previous issue. Marginal notations are not used in this revision to identify with respect to the previous issue due to the extensiveness of the changes.

Custodians:
Navy - YD
Air Force - 99
Army - ME

Review Activities:
Navy - MC, MS
Air Force - 80
DLA - GS

Preparing Activity:
Navy - YD

(Project 6150-0187)