

INCH-POUND

MIL-DTL-24558B
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SUPERSEDING
MIL-DTL-24558A
17 February 2006

DETAIL SPECIFICATION

TERMINAL BOXES, CONNECTION, FOR ELECTRICAL AND ELECTRONIC SYSTEMS, 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 the general requirements for terminal connection boxes for electrical and electronic systems.

1.2 Classification. The terminal connection boxes are of the symbol numbers specified in the individual specification sheets (see [6.2](#) and [6.4.2](#)).

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of the documents cited in sections 3 and 4 of this specification, whether or not they are listed.

Comments, suggestions, or questions on this document should be addressed to DLA Aviation VEB, 8000 Jefferson Davis Highway, Richmond, VA 23297-5616, or e-mailed to STDZNMGT@dla.mil . Since contact information can change, you may want to verify the currency of this address information using the ASSIST database at https://assist.daps.dla.mil/ .

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2.2 Government documents.

2.2.1 Specifications, standards, and handbook. The following specifications, standards, and handbook form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

FEDERAL STANDARDS

FED-STD-595/17875	- Miscellaneous, Gloss
FED-STD-595/17886	- Miscellaneous, Gloss
FED-STD-595/17925	- Miscellaneous, Gloss
FED-STD-595/21105	- Red, Semigloss
FED-STD-H28	- Screw-Thread Standards for Federal Services
FED-STD-H28/2	- Screw-Thread Standards for Federal Services Section 2 Unified Inch Screw Threads - UN and UNR Thread Forms

COMMERCIAL ITEM DESCRIPTION

A-A-59125	- Terminal Boards, Molded, Barrier Screw and Stud Types and Associated Accessories
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DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-S-901	- Shock Tests, H.I. (High-Impact) Shipboard Machinery, Equipment, and Systems, Requirements for
MIL-DTL-15024	- Plates, Tags, and Bands for Identification of Equipment, General Specification for
MIL-P-15024/5	- Plates, Identification
MIL-E-24142	- Enclosures for Electrical Fittings and Fixtures, General Specification for
MIL-PRF-24712	- Coatings, Powder (Metric)

(See Supplement 1 for list of specification sheets.)

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-108	- Definitions of and Basic Requirements for Enclosures for Electric and Electronic Equipment
MIL-STD-167-1	- Mechanical Vibrations of Shipboard Equipment (Type I - Environmental and Type II - Internally Excited)
MIL-STD-202	- Electronic and Electrical Component Parts

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DEPARTMENT OF DEFENSE HANDBOOK

MIL-HDBK-454 - General Guidelines for Electronic Equipment

(Copies of these documents are available online at <https://assist.daps.dla.mil/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3 Non-government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

AEROSPACE INDUSTRIES ASSOCIATION

NASM45938 - Nut, Plain, Clinch and Nut, Self-Locking, Clinch General Specification for

(Copies of this document are available at <http://www.aia-aerospace.org/> or from Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928.)

ASTM INTERNATIONAL

ASTM B36/B36M - Standard Specification for Brass Plate, Sheet, Strip, and Rolled Bar
 ASTM B139/B139M - Standard Specification for Phosphor Bronze Rod, Bar, and Shapes
 ASTM B152/B152M - Standard Specification for Copper Sheet, Strip, Plate, and Rolled Bar
 ASTM D5948 - Standard Specification for Molding Compounds, Thermosetting

(Copies of these documents are available at <http://www.astm.org/> or from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.)

AMERICAN SOCIETY FOR QUALITY (ASQ)

ASQ Z1.4 - Sampling Procedures and Tables for Inspection by Attributes

(Copies of this document are available online at <http://www.asq.org/> or from American Society of Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203.)

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MASTER PAINTERS INSTITUTE (MPI)

MPI #48

- Interior Alkyd, Gloss (MPI Gloss Level 6)

(Copies of this document are available at <http://www.specifypaint.us/> or from the Painting & Decorating Contractors of America - National Office (PDCA), 3913 Old Lee Highway, Suite 33-B, Fairfax, VA 22030-2433.)

2.4 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein (except for related specification sheets), 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 Specification sheets. The individual item requirements shall be as specified herein and in accordance with the applicable specification sheet. In the event of any conflict between the requirements of this specification and the specification sheet, the latter shall govern.

3.2 First article. Prior to beginning production, a first article sample consisting of one terminal connection box manufactured using production tooling and processes shall be inspected as specified in 4.3. Test results in the first article report shall show the exact data value of each inspection test and examination. (See 6.2 and 6.3.)

3.3 Materials. Materials shall be as specified herein and in accordance with the applicable specification sheets.

3.3.1 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.3.2 Metals. Metals shall be corrosion-resistant. Copper, brass, and phosphor bronze materials shall be in accordance with ASTM B152/B152M, ASTM B36/B36M, and ASTM B139/B139M, respectively. Metal parts susceptible to stress-corrosion cracking shall be stress relieved (see 3.4.3.3 and 6.4.1).

3.3.3 Non-metallic materials. Non-metallic materials shall be fungus-inert. Guideline 4 of MIL-HDBK-454 may be used as guidance for the identification of non-metallic materials that are not a nutrient to fungi. Plastic materials shall be in accordance with ASTM D5948. Adequate measures shall be taken in molding or processing plastics to ensure that stress build-up does not occur or is satisfactorily treated to relieve these stresses to prevent deterioration or failure of a part or assembly. The stress-relieving process shall be as required by the technical data furnished by the supplier of the raw material.

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3.3.4 Hardware. Unless otherwise specified in the applicable specification sheet, all hardware (bolts, nuts, screws, washers, press-fit fasteners, and miscellaneous hardware) shall be of good commercial grade material compatible with that of the basic fixture. Unless otherwise specified in the applicable specification sheet, stainless steel hardware may be substituted for steel hardware.

3.4 Design and construction.

3.4.1 Electrical rating. The electrical rating shall be as specified in the applicable specification sheet.

3.4.2 Wire terminating facilities. Wire terminating facilities shall be as specified in the applicable specification sheet.

3.4.3 Enclosure. The enclosure shall be as specified in the applicable specification sheet.

3.4.3.1 Submersible. Submersible (15-foot) enclosures shall be in accordance with MIL-E-24142 and as specified herein.

3.4.3.2 Watertight. Watertight enclosures shall be as specified in the applicable specification sheet.

3.4.3.3 Stress relief. Metal enclosures shall be stress relieved and marked in accordance with MIL-E-24142.

3.4.3.4 Cleaning. The enclosure shall be furnished thoroughly cleaned of all brazing and welding flux and other corrosive agents. Cleaning agent shall be neutralized after cleaning.

3.4.3.5 Finish. Unless otherwise specified in the applicable specification sheet, the interior of the enclosures (covers optional) shall be primed and shall be painted using white enamel that complies with MPI #48. Unless otherwise specified (see 6.2), the exterior of the enclosures shall not be primed or painted.

3.4.3.6 Alternate finish. If specified (see 6.2), the interior of the terminal connection boxes may be finished with a powder coating in accordance with MIL-PRF-24712. Powder coating finish shall be gloss white in accordance with one of the following color numbers:

- a. FED-STD-595/17875
- b. FED-STD-595/17886
- c. FED-STD-595/17925

3.4.4 Terminals. Terminal boards shall be in accordance with A-A-59125 and of the type specified in the applicable specification sheet. Terminal lug assemblies and terminal lug bases shall be as specified in the applicable specification sheet.

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3.4.4.1 Mounting brackets. Unless otherwise specified (see 6.2), the terminal board mounting brackets and pads shall be of brass and shall be as shown on figures 1 through 5. Mounting bracket and pad installation shall be as specified in the applicable specification sheet.

3.4.4.2 Alternate mounting bracket. If specified (see 6.2), an alternate type terminal board mounting bracket that utilizes stainless steel press-fit type fasteners with self-locking clinch nuts in accordance with NASM45938 may be used in place of the typical brass barrel nuts that are typically brazed into the bracket.

3.4.5 Threaded parts. Threads for all threaded fastening devices shall conform to FED-STD-H28 and FED-STD-H28/2. The threads shall be right hand, coarse thread series, unified thread form, class 2A or 2B, or American National thread form, class 2. Other thread series and classes, such as fine thread, may be used where it is necessary to assure functional operation of the equipment. Threads shall be checked during production with go-no go gages to insure conformance to FED-STD-H28 and FED-STD-H28/2.

3.4.6 Gaskets. Cover sealing gaskets shall be furnished and installed in accordance with MIL-E-24142.

3.4.7 Brazing and welding. Brazing and welding shall be in accordance with best commercial practices and performed in a manner that will pass all required tests. Gas tungsten arc welding is an acceptable alternate to brazing.

3.4.8 Dimensions and tolerances. Dimensions shall be as shown in the applicable specification sheet. Unless otherwise specified in the applicable specification sheet, the following tolerances shall apply:

- a. Decimal dimensions - ± 0.016 inch.
- b. Angular dimensions - ± 0.25 degree.

Unless otherwise specified in the applicable specification sheet, a tolerance of ± 0.031 inch is acceptable on decimal dimensions that are controlled by brazing or welding provided that this wider tolerance will not interfere with the interchangeability of assemblies or parts.

3.4.9 Drilling, countersinking, and tapping. All drilling, countersinking, and tapping shall be completed before plating or finish is applied. Tapped holes that are used for normal replacement of parts shall be countersunk.

3.4.10 Sharp edges. All sharp edges and corners shall be given a slight radius.

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3.5 Designation and marking.

3.5.1 Equipment identification plates. Identification plates shall conform to types A, B, or C of MIL-DTL-15024 and to the requirements for normal service of MIL-P-15024/5. Material, marking, and installation shall be as shown on [figure 6](#) and as specified in the applicable specification sheet. As an option, identification marking may be molded (plastic enclosures only), engraved, or stamped directly on the covers of the enclosures to provide a permanent identification. Marking shall not be located on gasketed surfaces of covers.

3.5.1.1 Filling. Filling of stamped, engraved, or molded marking with paint is not required.

3.5.1.2 Sharp edges. Sharp edges of plates shall be removed and corners shall be given a slight radius.

3.5.1.3 Enclosure manufacturer. The enclosure manufacturer, if other than the terminal connection box supplier, shall be identified by appropriate marking on the interior surface of the cover.

3.5.2 Information plates. Unless otherwise specified (see [6.2](#)), information plates shall be as specified in [3.5.1](#) except that they shall be blank. The option of molding, depressing, or embossing the inscriptions or markings on the cover is not applicable for information plates.

3.5.3 Warning plates. Warning plates shall be as specified in the applicable specification sheet. Material shall be brass. Depressed lettering shall be filled in with red enamel in accordance with FED-STD-595/21105. The face of warning plates shall not be primed or painted. Warning plates shall be brazed on the cover as shown in the applicable specification sheet. All sharp edges and corners shall be given a slight radius.

3.6 Workmanship. The workmanship shall be in accordance with [3.6.1](#) through [3.6.5](#).

3.6.1 Mounting of parts. Parts or hardware shall be assembled and secured or mounted in the specified manner to satisfactorily accomplish the purpose for which intended. Equipment having missing, inoperative, defective, bent, broken, or otherwise damaged parts will not be acceptable.

3.6.2 Cleaning. After fabrication, and prior to assembly in the terminal connection boxes, parts shall be cleaned of smudges, weld metal, metal chips, and mold release agents or any other foreign material that might impair the intended operation, function, or appearance of the terminal connection boxes. All corrosive material shall be removed. All assembled terminal connection boxes shall be cleaned of contaminants such as lubricating oils, mold release agents, waxes, sand, corrosion products, solder fluxes, and dust. The nature of the contaminant shall be determined to the extent that a suitable cleaning solvent can be selected for its removal. The inertness of the materials of construction to the solvent shall be determined to prevent damage to electrical and mechanical properties. Cleaning processes shall have no harmful effect on the terminal connection boxes or parts.

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3.6.3 Threaded parts or devices. Screws, nuts, bolts, and press-fit fasteners shall show no evidence of cross threading, mutilation, or detrimental or hazardous burrs.

3.6.3.1 Tightness. All screw-type fasteners shall be tight. The word tight means that the screw shall be firmly secured and that there shall be no relative movement possible between the attached parts.

3.6.4 Riveting. The riveting operation shall be carefully performed in order to assure that rivets are tight and satisfactorily headed with the rivet heads tightly seated against their bearing surface.

3.6.5 Brazing and welding. All brazing and welding shall be free from any harmful defects such as cracks, porosity, undercuts, voids, and gaps. There shall be no burn-through. Fillets shall be uniform and smooth. Angular or thickness misalignment, warping, or dimensional change due to heat from the brazing and welding operation shall be within permitted tolerances. There shall be no damage to adjacent parts resulting from the brazing and welding.

3.7 Performance characteristics.

3.7.1 Dielectric withstanding voltage. The terminal connection boxes shall conform to a dielectric withstanding voltage requirement of twice the rated voltage, plus 1,000 volts alternating current (AC) applied between isolated circuits and live parts and ground. Any evidence of arcing (other than at test probes), corona (visible, audible, or smell), flashover, or punctured insulation shall be interpreted as failure to pass the test (see [4.5.2](#)).

3.7.2 Insulation resistance. The insulation resistance between all current carrying and noncurrent carrying parts of the terminal connection boxes or parts shall be not less than 10 megohm when tested as specified in [4.5.3](#).

3.7.3 Effectiveness of enclosure. The terminal connection boxes shall show no signs of water leakage when subjected to the test specified in [4.5.4](#).

3.7.4 Vibration. The terminal connection boxes shall conform to the vibration requirements of type I of MIL-STD-167-1. These tests may be conducted with the terminal connection boxes in the de-energized condition. The terminal connection boxes shall show no evidence of mechanical or electrical damage or loosening of parts following the tests specified in [4.5.5](#).

3.7.5 Shock. The terminal connection boxes shall conform to the shock requirements of grade A, class I, type C of MIL-S-901. These tests may be conducted with the terminal connection boxes in the de-energized condition. Following the test specified in [4.5.6](#), there shall be no signs of mechanical or electrical damage, breakage, or loosening of parts and distortion of sides, bottom, or cover of the enclosure.

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4. VERIFICATION

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

- a. First article inspection (see 4.3).
- b. Conformance inspection (see 4.4).

4.2 Inspection conditions. Unless otherwise specified (see 6.2), all inspections shall be performed in accordance with the test conditions specified in the general requirements of MIL-STD-202.

4.3 First article inspection. The sample(s) for first article inspection shall be subjected to the examinations and tests specified in table I in the numerical sequence shown.

TABLE I. First article inspection.

Sequence	Inspection	Requirement paragraph	Test method paragraph
1	Examination	3.3, 3.4, 3.5, 3.6	4.5.1
2	Dielectric withstanding voltage	3.7.1	4.5.2
3	Insulation Resistance	3.7.2	4.5.3
4	Effectiveness of enclosure	3.7.3	4.5.4
5	Vibration	3.7.4	4.5.5
6	Shock	3.7.5	4.5.6
7	Effectiveness of enclosure	3.7.3	4.5.4
8	Dielectric withstanding voltage	3.7.1	4.5.2
9	Insulation Resistance	3.7.2	4.5.3

4.4 Conformance inspection. Sampling for conformance inspection shall be in accordance with 4.4.2.

4.4.1 Inspection lot. An inspection lot shall consist of all terminal connection boxes of the same symbol produced under essentially the same conditions and offered for inspection at one time.

4.4.2 Sampling plan. Sampling for all testing other than that described in 4.4.2.1 shall be in accordance with ASQ Z1.4, inspection level II, with the acceptance quality limit (AQL) as specified in the contract (see 6.2).

4.4.2.1 Degree of enclosure test sampling. Samples shall have previously passed all other tests or inspections. For degree of enclosure testing, sampling shall be in accordance with ASQ Z1.4, special inspection level S-4, with the AQL as specified in the contract (see 6.2). The sample size shall be based on the inspection lot size from which the sample was selected.

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4.5 Methods of inspection.4.5.1 Examination. Examination shall be as specified in [4.5.1.1](#) and [4.5.1.2](#).

4.5.1.1 Visual and mechanical inspection. Each sample terminal connection box shall be subjected to a thorough examination to ascertain that the design and construction (see [3.4](#)), designation and marking (see [3.5](#)), and workmanship (see [3.6](#)) conform to the requirements of this specification.

4.5.1.2 Materials inspection. During first article inspection (see [4.3](#)), the contractor shall make available to the government inspector satisfactory evidence that the parts and materials used in the fabrication of the terminal connection box comply with all requirements of this specification. Satisfactory evidence shall consist of purchasing documents specifying applicable requirements or specifications, inspection and test reports, or contractor certification. If certification is submitted, this certification shall contain a statement to the effect that inspection and test records are available upon request for government inspection at any time within a time frame of not less than one year from date of contract.

4.5.2 Dielectric withstanding voltage. Terminal connection boxes shall be tested in accordance with method 301 of MIL-STD-202. The following details and exceptions shall apply:

- a. Magnitude of test voltage - twice the rated voltage plus 1,000 volts root mean square.
- b. Nature of potential - AC.
- c. Points of applications - between isolated circuits and live parts and ground.
- d. Examination after test - equipment shall be in accordance with requirements specified in [3.7.1](#).

4.5.3 Insulation resistance. After the dielectric withstanding voltage test (see [4.5.2](#)), insulation resistance of the first article sample terminal connection box or parts shall be measured between all current carrying parts and noncurrent carrying parts with a megohmmeter at a voltage not less than 500 volts direct current at 25 °C (77 °F). This test is not required for unwired fixtures wherein plastic parts approved by Naval Sea Systems Command are certified by the manufacturer as meeting the requirements of [3.7.2](#).

4.5.4 Effectiveness of enclosure. Terminal connection boxes shall be tested in accordance with MIL-STD-108 for submersible (15-foot) or watertight enclosures as required for the enclosure ratings designated in the applicable specification sheets. Performance during and after the test shall be as specified in [3.7.3](#).

4.5.5 Vibration. Equipment shall be tested in accordance with type I vibration of MIL-STD-167-1, except that the variable frequency test shall be omitted. Performance requirements shall be as specified in [3.7.4](#).

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4.5.6 Shock. Equipment shall be tested in accordance with the high-impact shock test for grade A, class I, type C of MIL-S-901. Performance requirements shall be as specified in [3.7.5](#).

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see [6.2](#)). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The terminal connection boxes covered by this specification are intended for use in electrical and electronic systems primarily on naval ships.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Symbol number of terminal connection box required and title, number, and date of the applicable specification sheet (see [1.2](#)).
- c. First article inspection and test results, when required (see [3.2](#) and [6.3](#)).
- d. Priming or painting of the enclosure exterior, if required (see [3.4.3.5](#)).
- e. Alternate white powder coating finish, if required (see [3.4.3.6](#)).
- f. Type of mounting bracket, if different (see [3.4.4.1](#)).
- g. Alternate mounting bracket, if required (see [3.4.4.2](#)).
- h. Type of information plate required, if other than specified (see [3.5.2](#)).
- i. Inspection test conditions, if other than specified (see [4.2](#)).
- j. AQL (see [4.4.2](#) and [4.4.2.1](#)).
- k. Packaging requirements (see [5.1](#)).

6.3 First article inspection. Invitations for bid should provide that the government reserves the right to waive the requirement for first article samples and test report results for first article inspection for those bidders offering a product that has been previously acquired or tested by the government, and that bidders offering such products who wish to rely on such production or test, must furnish evidence with the bid that prior government approval is appropriate for the pending contract.

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6.3.1 Approval of the first article inspection report. The contracting officer or his authorized representative will, by written notice to the contractor, waive, approve, conditionally approve, or disapprove the first article inspection report.

6.4 Definitions.

6.4.1 Stress-corrosion cracking. Stress-corrosion cracking characteristics are of primary concern in material selection for marine service. High residual stresses in tension in certain materials can cause stress-corrosion cracking when it is exposed to a corrosive environment. Stress-corrosion cracking occurs under tensile stresses that are induced into metal parts that are formed by bending or drawing, or that are fabricated by welding.

6.4.2 Symbol number. The symbol number is a standard equipment designation. Symbol numbers are listed for guidance in publication MIL-HDBK-290.

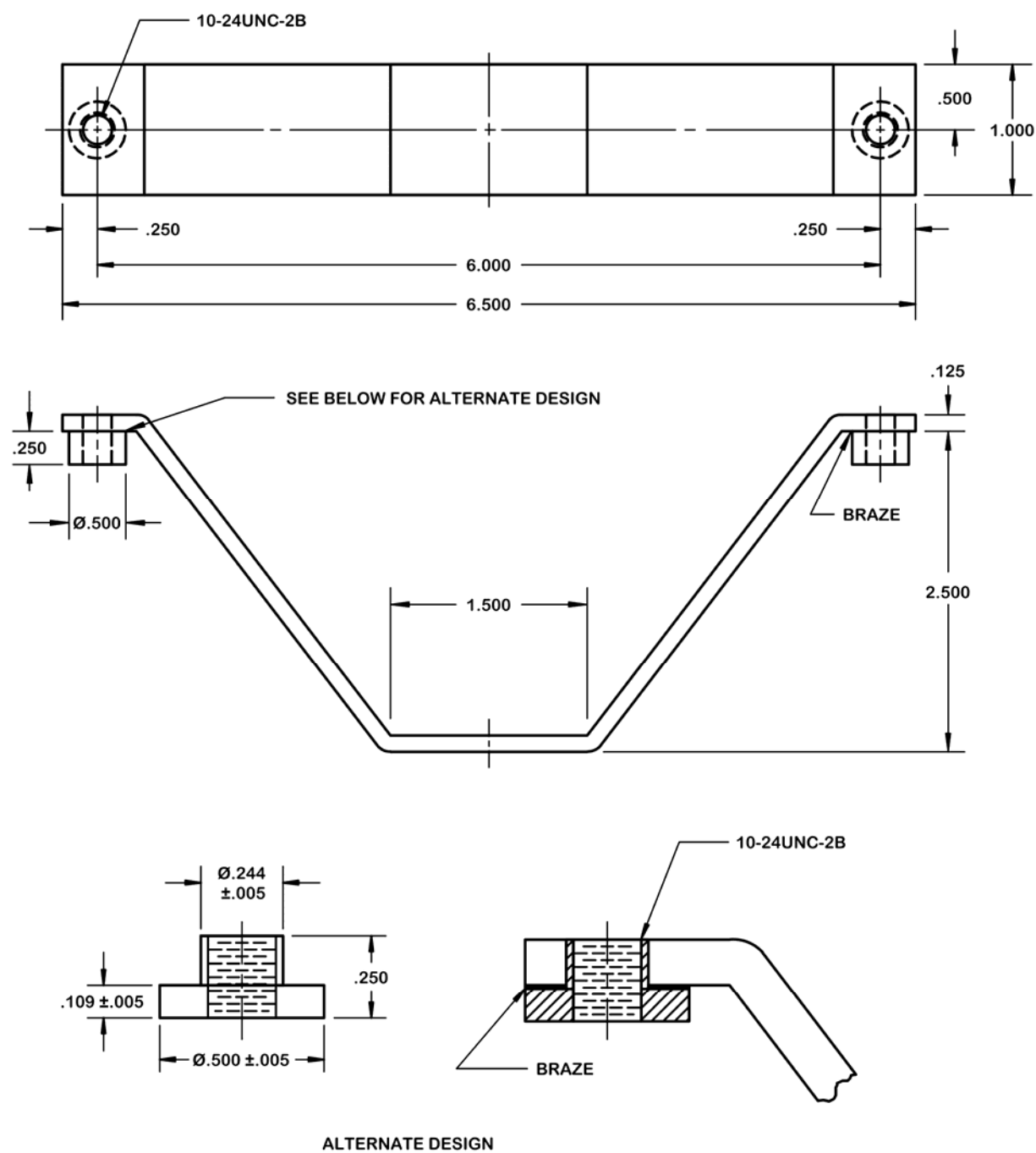
6.5 Sub-contracted material and parts. The preparation for delivery requirements of referenced documents listed in section 2 does not apply when material and parts are acquired by the contractor for incorporation into the equipment. A list of their separate identity is required when the equipment is shipped.

6.6 Subject term (key word) listing.

Brazing
Corrosion resistant
Enclosure
Interconnect
Junction
Metallic
Mounting brackets
Sealing gaskets
Sound-powered
Submersible
Voltage
Watertight
Welding
Wire

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

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FIGURE 1. Terminal board mounting bracket, V-configuration.

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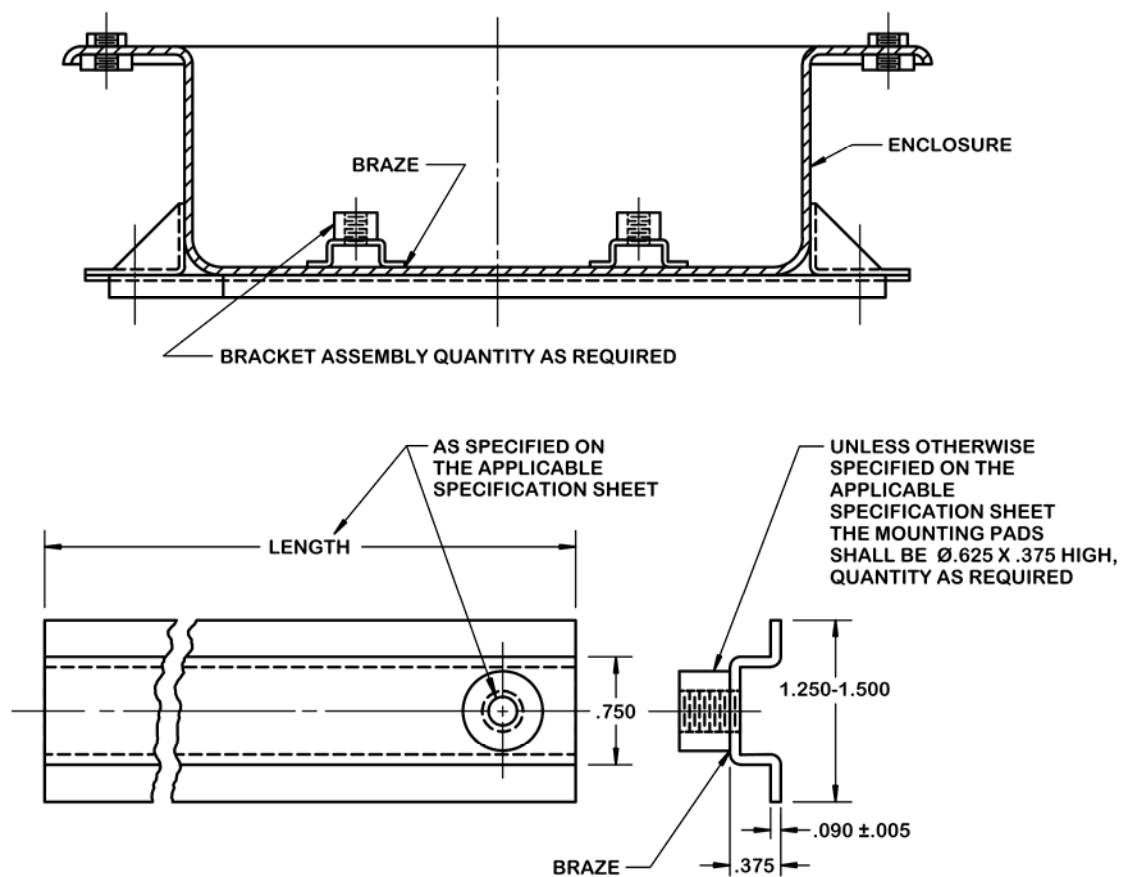


FIGURE 2. Terminal board mounting bracket, rail configuration.

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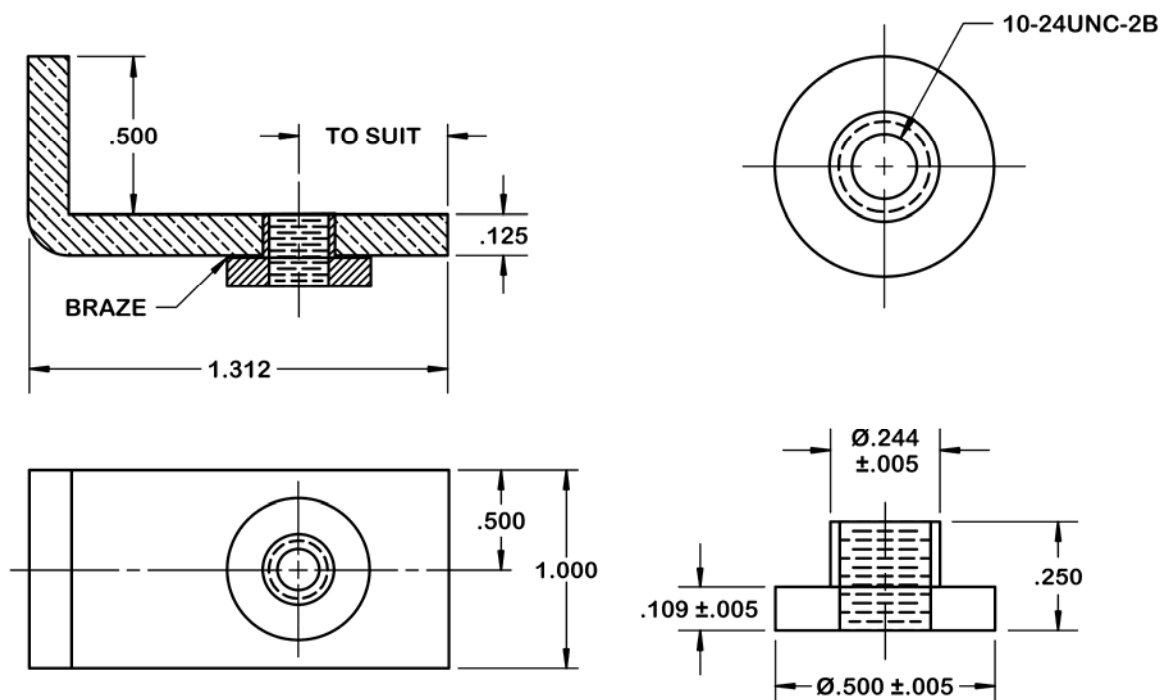


FIGURE 3. Terminal board mounting bracket, L-configuration, long.

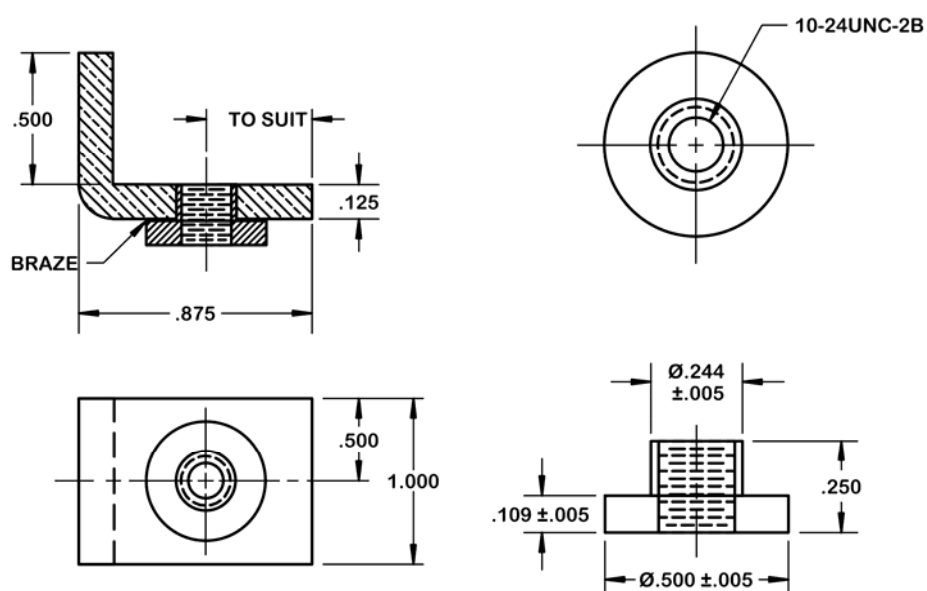
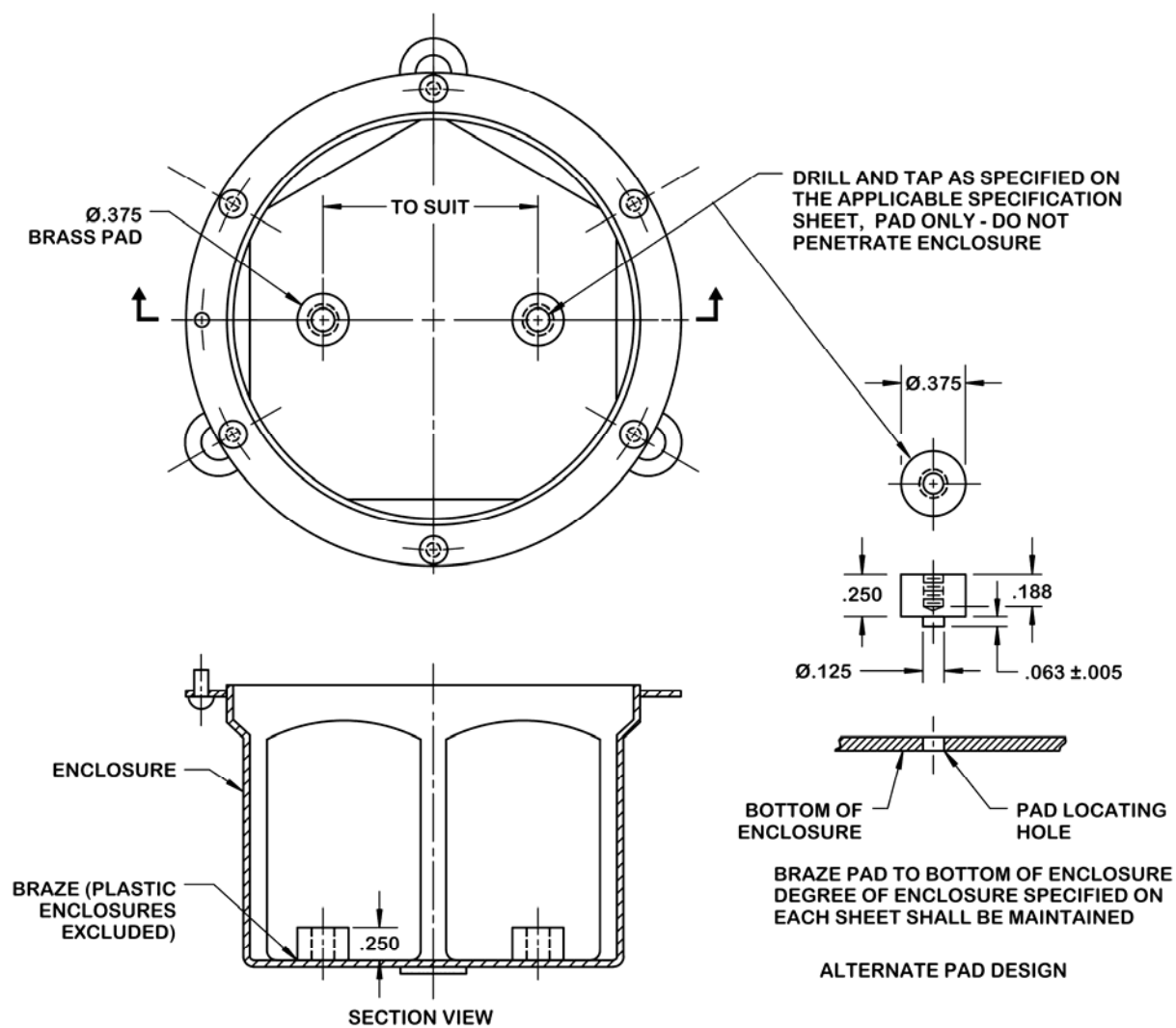
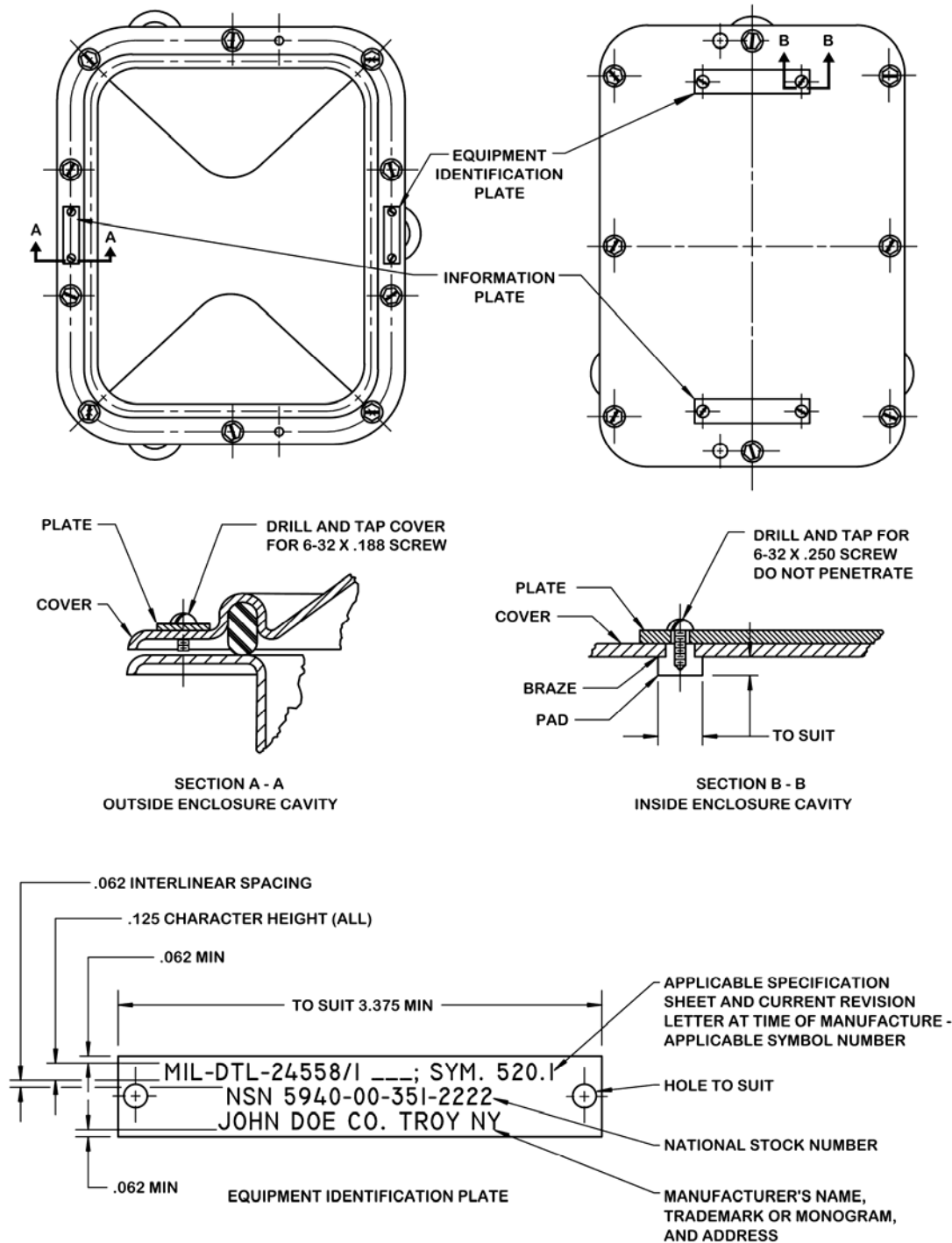


FIGURE 4. Terminal board mounting bracket, L-configuration, short.

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FIGURE 5. Terminal board mounting pads.

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NOTES:

1. All dimensions are in inches.
2. Material shall be brass, 0.062 thick.
3. Identification plate markings shall be as shown. Markings shall be depressed, embossed or etched in the metal.
4. Information plate shall be blank. It will be marked at the time of installation by the installing activity.

FIGURE 6. Typical equipment identification and information plates design and installation details.

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APPENDIX A

A.1 SCOPE

A.1.1 This appendix is not a mandatory part of the specification. The information contained herein is intended for guidance only.

A.1.2 This appendix describes the selection and uses of the various terminal connection boxes.

A.2 APPLICABLE DOCUMENTS

A.2.1 General. The documents listed in this section are specified in section A.3 of this appendix. This section does not include documents cited in other sections of this appendix or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of the documents cited in section A.3 of this appendix, whether or not they are listed.

A.2.2 Government document.

A.2.2.1 Specification. The following specification forms a part of this document to the extent specified herein. Unless otherwise specified, the issue of this document is that cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATION

MIL-T-16366	- Terminals, Electrical Lug and Conductor Splices, Crimp-Style
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(Copies of this document are available online at <https://assist.daps.dla.mil/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

A.2.3 Non-government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

SAE INTERNATIONAL

SAE AS7928	- Terminals, Lug: Splices, Conductor: Crimp Style, Copper, General Specification for
SAE AS17143	- Terminal, Lug, Crimp Style, Copper, Insulated, Rectangular Tongue, Type II, Class 1 for 105°C Total Conductor Temperature

(Copies of these documents are available online at <http://www.sae.org/> or from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

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APPENDIX A

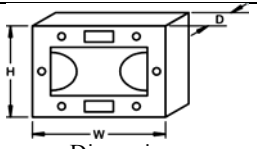
A.2.4 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

A.3 USAGE

A.3.1 [Table A-I](#) lists the terminal connection boxes used in electrical but primarily electronic systems, such as communications and telephone service.

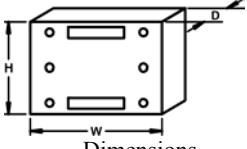
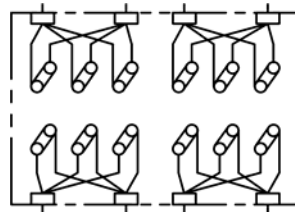
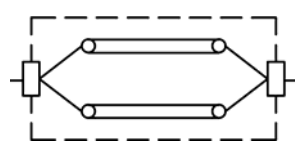
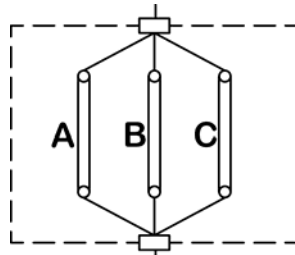
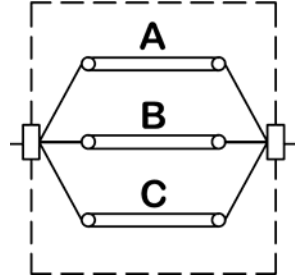
A.3.2 [Table A-II](#) lists terminal connection boxes used for connecting electrical power cables.

TABLE A-I. Terminal connection boxes for electrical and electronic systems.

Detail specification sheet MIL-DTL-24558/	Symbol number	 Dimensions height X width X depth (inches)	Max. weight (lbs.)	Number of terminals	Max. number of wires	Recommended wire terminal list		Max. number of wires connected to a single terminal
						MIL-T-16366 type	SAE AS7928 SAE AS17143 dash no.	
1	520.1	Ø4.625 X 2.750	2.0	6	18	L-81	-4, -5, -6	3
2	435.1	Ø6.750 X 4.125	4.0	8	32	L-80	-1, -2, -3	4
3	528	Ø5.750 X 3.500	3.0	10	30	L-81	-4, -5, -6	3
4	432.1	11.000 X 8.000 X 5.125	9.0	20	80	L-80	-1, -2, -3	4
5	434	9.000 X 6.000 X 5.125	6.0	30	90	L-81	-4, -5, -6	3
6	433.1	11.375 X 13.375 X 7.625	18.0	40	160	L-80	-1, -2, -3	4
7	522.1	11.375 X 13.375 X 7.625	18.0	48	144	L-81	-4, -5, -6	3
8	446	13.375 X 16.375 X 7.625	25.0	60	240	L-80	-1, -2, -3	4
9	525	11.375 X 13.375 X 7.625	19.0	72	216	L-81	-4, -5, -6	3
10	438	15.375 X 20.375 X 7.625	33.0	80	320	L-80	-1, -2, -3	4
11	523.1	13.375 X 16.375 X 7.625	25.0	96	288	L-81	-4, -5, -6	3
12	450	15.375 X 27.375 X 7.625	44.0	120	480	L-80	-1, -2, -3	4
13	524.1	15.375 X 20.375 X 7.625	33.5	144	432	L-81	-4, -5, -6	3
14	451	17.375 X 23.375 X 7.625	44.5	192	576	L-81	-4, -5, -6	3
15	452	27.625 X 23.625 X 6.875	90.0	200	800	L-80	-1, -2, -3	4
16	453	17.375 X 29.375 X 7.625	58.0	288	864	L-81	-4, -5, -6	3
17	454	27.625 X 23.625 X 6.875	94.0	384	1152	L-81	-4, -5, -6	3
18	400.1	Ø4.625 X 2.750	2.0	4	8	L-80	-1, -2, -3	2
18	400.2	Ø5.750 X 3.500	3.0	4	12	L-80	-1, -2, -3	3
18	400.3	Ø5.750 X 3.500	3.0	4	12	L-80	-1, -2, -3	3
18	400.4	Ø4.625 X 2.750	2.0	4	8	L-80	-1, -2, -3	2
19	444	Ø6.750 X 4.125	3.25	4	8	L-80	-1, -2, -3	4
20	529	11.000 X 8.000 X 5.125	9.0	10	20	L-80	-1, -2, -3	4

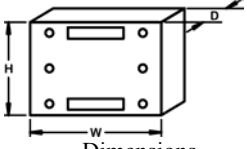
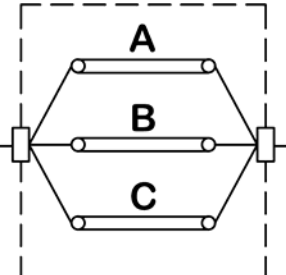
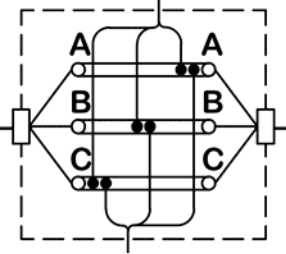
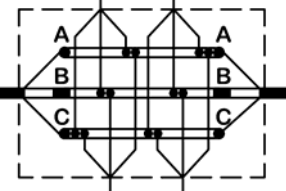
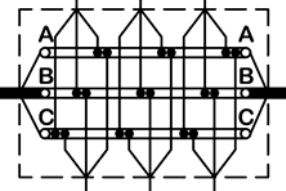
MIL-DTL-24558B
APPENDIX A

TABLE A-II. Terminal connection boxes for electrical systems (500 volt maximum).

Detail specification sheet MIL-DTL-24558/	Symbol number	 Dimensions height X width X depth (inches)	Wiring diagram (note entry of cables)	Cable size MCM - maximum		Max. weight (lbs.)
				Bus	Branch	
21	476.1	11.375 X 13.375 X 7.625		23/23		21.0
22	415 415.1 415.2 415.3 415.4	11.375 X 13.375 X 7.625		75/75 100/100 125/125 150/150 200/200		23.0
23	403.1	9.000 X 6.000 X 5.125		75/75		7.0
24	416	11.000 X 8.000 X 5.125		75/75		10.0

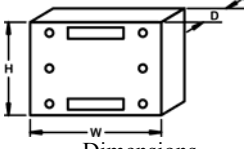
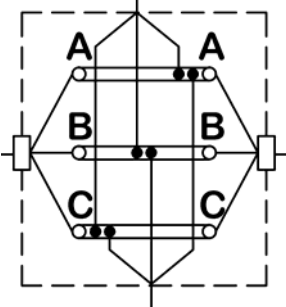
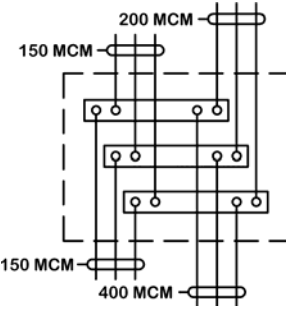
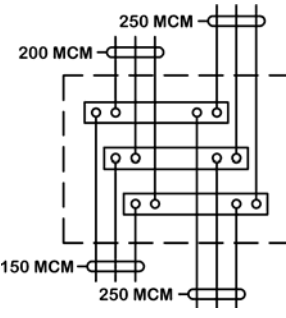
MIL-DTL-24558B
APPENDIX A

TABLE A-II. Terminal connection boxes for electrical systems (500 volt maximum) - Continued.

Detail specification sheet MIL-DTL-24558/	Symbol number	 Dimensions height X width X depth (inches)	Wiring diagram (note entry of cables)	Cable size MCM - maximum		Max. weight (lbs.)
				Bus	Branch	
25	418.1 418.2 418.3	16.375 X 15.375 X 7.625		250/250 300/300 400/400		34.5
26	572.1	13.375 X 16.375 X 7.625		75/75	40/40	29.9
27	573.1	13.375 X 19.375 X 7.625		75/75	40	36.8
28	574.1	13.375 X 23.375 X 7.625		75/75	40	36.8

MIL-DTL-24558B
APPENDIX A

TABLE A-II. Terminal connection boxes for electrical systems (500 volt maximum) - Continued.

Detail specification sheet MIL-DTL-24558/	Symbol number	 Dimensions height X width X depth (inches)	Wiring diagram (note entry of cables)	Cable size MCM - maximum		Max. weight (lbs.)
				Bus	Branch	
29	575.1	13.375 X 16.375 X 7.625		200/200	75/75	32.0
30	576.1	23.625 X 27.625 X 6.875		See wiring diagram		81.4
	577.1					81.4

MIL-DTL-24558B

Custodians:

Navy - SH

DLA - GS

Preparing Activity:

DLA - GS4

(Project 5940-2011-026)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST database at <https://assist.daps.dla.mil/>