MILITARY STANDARD

ELECTRICAL CONNECTORS, PLUG-IN SOCKETS AND ASSOCIATED HARDWARE, SELECTION AND USE OF

TO ALL HOLDERS OF MIL-STD-1353B:

1. THE FOLLOWING PAGES OF MIL-STD-1353B ARE NEW OR HAVE BEEN REVISED AND SUPERSEDE THE PAGES LISTED:

NEW PAGES	DATE	SUPERSEDED PAGES	DATE
1 thru 14	7 August 1984	1 thru 14	30 August 1983
101.1 thru 101.3	7 August 1984	101.1 thru 101.3	30 August 1983
101.4	30 August 1983	REPRINTED WITHOUT CHANGE	
101.67	30 August 1983	REPRINTED WITHOUT CHANGE	
101.68 thru 101.69	7 August 1984	101.68 thru 101.69	30 August 1983
101.70 thru 101.72	7 August 1984		
300.1	7 August 1984	300.1	2 July 1980
400.1	7 August 1984	400.1	2 July 1980
401.1 thru 401.9	7 August 1984	401.1 thru 401.12	2 July 1980

2. THE FOLLOWING NEW SECTION HAS BEEN ADDED:

NEW SECTION	DATE
301	7 August 1984

3. RETAIN THIS NOTICE AND INSERT BEFORE THE TABLE OF CONTENTS.

4. Holders of MIL-STD-1353B will verify that page changes indicated above have been entered. This notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by stocking points until the Military Standard is completely revised or canceled.

Custodians:
Army - CR
Navy - EC
Air Force - 85

Review activities:
Army - AT, AV, MI
Navy - AS
Air Force - 10, 11, 99
DLA - ES

User activities:
Army - CR
Navy - CG, MC, SH

Agent:
DLA - ES

Preparing activity:
Navy - EC

(Project 5935-3410)

1. SCOPE

1.1 Scope. This standard establishes requirements for selection of electrical connectors, plug-in sockets, and their associated hardware, shown in detail in sections 100, 200, 300, and 400, for use in military equipment. Included are the following:

a. Selected electrical connector types and associated hardware chosen jointly by the Departments of the Army, the Navy, and the Air Force for use in the design of military equipment.

b. Guides for the choice and application of electrical connectors and associated hardware for use in military equipment.

Complete detailed requirements for electrical connectors, plug-in sockets, and associated hardware listed in this standard are covered in the applicable specification sheets or MS sheets (see 4.2). When it has been determined that equipment requirements cannot be met by using the connector styles or characteristics listed in this standard, the design engineer with the approval of the cognizant military activity, should select from the applicable connector specification, styles or characteristics not listed herein.

1.2 Purpose of standard. The purpose of this standard is to promote the use of standard parts for new equipment design. The standard parts cover the majority of uses and are arranged in a form for quick references and selection. The applicable connector specification shall be used for specific design details.

2. REFERENCED DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified, the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards specified in the solicitation form a part of this standard to the extent specified herein.

SPECIFICATIONS

FEDERAL

W-C-596	-	Connector, Plug, Receptacle and Cable Outlet, Electrical Power, General Specification for.

MILITARY

MIL-C-17	-	Cable, Radio Frequency, Flexible and Semirigid, General Specification for.
MIL-C-3432	-	Cable and Wire, Electrical (Power and Control; Semiflexible, Flexible and Extra-flexible, 300 and 600 Volts).
MIL-C-5015	-	Connectors, Electrical, Circular Threaded, General Specification for.
MIL-S-12883	-	Socket and Accessories For Plug-in Electronic Components, General Specification for.
MIL-C-21097	-	Connector, Electrical, Printed Wiring Board, General Purpose, General Specification for.
MIL-C-22992	-	Connectors, Plugs, and Receptacles, Electrical, Waterproof, Quick Disconnect, Heavy Duty Type, General Specification for.
MIL-C-24308	-	Connectors, Electrical, Rectangular, Miniature Polarized Shell, Rack and Panel, General Specification for.
MIL-C-28731	-	Connectors, Electrical, Rectangular, Removable Contract, Formed Blade, Fork Type (For Rack and Panel and other Applications), General Specification for.
MIL-C-28748	-	Connectors, Electrical, Rectangular, Rack and Panel, Solder Type and Crimp Type Contacts.
MIL-C-28804	-	Connectors, Electric, Rectangular, High Density, Polarized Center Jackscrew, General Specification for.
MIL-C-28840	-	Connector Electrical, Circular Threaded, High Density, High Shock Shipboard, Class D, General Specification for.
MIL-C-38999	-	Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, General Specification for.
DOD-C-38999/20	-	Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Wall Mounting Flange, Triple Start Threaded Coupling, Removable Crimp Contacts, Series III, Metric.
DOD-C-38999/21	-	Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Box Mounting Flange, Hermetic, Triple Start Threaded Coupling, Hermetic Solder Contacts, Series III, Metric.
DOD-C-38999/23	-	Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Jam-Nut Mounting, Hermetic, Triple Start Threaded Coupling, Hermetic Solder Contacts, Series III, Metric.
DOD-C-38999/24	-	Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptable, Jam-Nut Mounting, Triple Start Threaded Coupling, Removable Crimp Contacts, Series III, Metric.

DOD-C-38999/25 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Solder Mounting, Hermetic, Triple Start Threaded Coupling, Hermetic Solder Contacts, Series III, Metric.

DOD-C-38999/26 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Plug, Straight, Triple Start Threaded Coupling, Removable Crimp Contacts, Series III, Metric.

DOD-C-38999/29 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Plug, Lanyard Release, Fail-Safe, Triple Start Threaded Coupling, Removable Crimp Contacts, Pins, Series III, Metric.

DOD-C-38999/30 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Plug, Lanyard Release, Fail-Safe, Triple Start Threaded Coupling, Removable Crimp Contacts, Sockets, Series III, Metric.

DOD-C-38999/40 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Wall Mounting Flange, Breech Coupling, Removable Crimp Contacts, Series IV, Metric.

DOD-C-38999/41 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Box Mounting Flange, Hermetic, Breech Coupling, Hermetic Solder Contacts, Series IV, Metric.

DOD-C-38999/42 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Box Mounting Flange, Breech Coupling, Removable Crimp Contacts, Series IV, Metric.

DOD-C-38999/43 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Jam-Nut Mounting, Hermetic, Breech Coupling, Hermetic Solder Contacts, Series IV, Metric.

DOD-C-38999/44 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Jam-Nut Mounting, Breech Coupling, Removable Crimp Contacts, Series IV, Metric.

DOD-C-38999/45 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Solder Mounting, Hermetic, Breech Coupling, Hermetic Solder Contacts, Series IV, Metric.

DOD-C-38999/46 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Plug, Breech Coupling, EMI Grounding, Removable Crimp Contacts, Series IV, Metric.

DOD-C-38999/47 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Plug, Breech Coupling, Removable Crimp Contacts, Series IV, Metric.

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DOD-C-38999/48 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, Weld Mounting Hermetic, Breech Coupling, Hermetic Solder Contacts Series IV, Metric.

DOD-C-38999/49 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, Receptacle, in Line Cable, Breech Coupling, Removable Crimp Contacts, Series IV, Metric.

MIL-C-39012 - Connectors, Coaxial, Radio Frequency, General Specification for.

MIL-C-39024 - Connectors, Electrical: Jacks, Tip (Test Point, Panel or Printed Wiring Type), General Specification for.

MIL-C-39029/4 - Contacts, Electrical Connector, Pin, Crimp Removable, (For MIL-C-26482 Series 2, MIL-C-81703 Series 3, MIL-C-83733, and MIL-C-83723 Series 3 Connectors).

MIL-C-39029/5 - Contacts, Electrical Connector, Socket, Crimp Removable, (For MIL-C-26482 Series 2, MIL-C-81703 Series 3, MIL-C-83733, and MIL-C-83733 Series 3 Connectors).

MIL-C-39029/11 - Contacts, Electrical Connector, Pin, Crimp Removable, (For MIL-C-81659 Series 2 Connectors).

MIL-C-39029/12 - Contacts, Electrical Connectors, Socket, Crimp Removable, (For MIL-C-81659 Series 2 Connectors).

MIL-C-39029/28 - Contacts, Electrical Connector, Pin, Crimp Removable, Shielded, (For MIL-C-38999 Series I, II, III and IV Connectors).

MIL-C-39029/29 - Contacts, Electrical Connector, Pin, Crimp Removable, (For MIL-C-5015 MS3450 Series and MIL-C-83723 Series 2 Connectors).

MIL-C-39029/30 - Contacts, Electrical Connector, Socket, Crimp Removable, (For MIL-C-5015 MS3450 Series and MIL-C-83723 Series 2 Connectors).

MIL-C-39029/44 - Contacts, Electrical Connector, Pin, Crimp Removable, (For MIL-C-5015 Series MS3400 Connectors).

MIL-C-39029/45 - Contacts, Electrical Connector, Socket, Crimp Removable, (For MIL-C-5015 Series MS3400 Connectors).

MIL-C-39029/48 - Contacts, Electrical Connector, Pin, Crimp Removable, (For MIL-C-22992 Class L Connectors).

MIL-C-39029/49 - Contacts, Electrical Connector, Socket, Crimp Removable, (For MIL-C-22992 Class L Connectors).

MIL-C-39029/50 - Contacts, Electrical Connector, Pin, Crimp Removable, Shielded, (For MIL-C-83733 Connectors).

MIL-C-39029/51 - Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, (For MIL-C-83733 Connectors).

MIL-C-39029/56 - Contacts, Electrical Connector, Socket, Crimp Removable, (For MIL-C-38999 Series I, III and IV Connectors).

MIL-C-39029/57 - Contacts, Electrical Connector, Socket, Crimp Removable, (For MIL-C-24308, MIL-C-55302/68, /71, /72, /75, MIL-C-38999 Series II and MIL-C-83733 Connectors).

MIL-C-39029/58 - Contacts, Electrical Connector, Pin, Crimp Removable, (For MIL-C-24308, MIL-C-55302/69, MIL-C-38999 Series I, II, III and IV, and MIL-C-83733 Connectors).

MIL-C-39029/59 - Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, (For MIL-C-38999 Series I Connectors).

MIL-C-39029/60 - Contacts, Electrical Connector, Pin, Crimp Removable, Shielded, (For MIL-C-38999 Series I Connectors).

MIL-C-39029/63 - Contacts, Electrical Connector, Socket, Crimp Removable (For MIL-C-24308 Connectors).

MIL-C-39029/64 - Contacts, Electrical Connector, Pin, Crimp Removable, (For MIL-C-24308 Connectors).

MIL-C-39029/75 - Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, Size 12 (For MIL-C-38999 Series I, II, III and IV Connectors).

MIL-C-39029/76 - Contacts, Electrical Connector, Pin, Crimp Removable, Shielded, Size 16 (For MIL-C-38999 Series I, II, III and IV and MIL-C-24308 Connectors).

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MIL-C-39029/77 - Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, Size 16 (For MIL-C-38999 Series I, III and IV Connectors).
MIL-C-39029/78 - Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, Size 16 (For MIL-C-38999 Series II and MIL-C-24308 Connectors).
MIL-C-55302 - Connectors, Printed Circuit Subassembly and Accessories.
MIL-C-81659 - Connectors, Electrical, Rectangular, Environment Resistant, Crimp Contacts, General Specification for.
MIL-S-83502 - Socket, Plug In Electric Components, Round Style, General Specification for.
MIL-S-83505 - Socket, (Lead, Electronic Components) General Specification for.
MIL-C-83723 - Connector, Electric, Circular, Environment Resisting, General Specification for.
MIL-C-83733 - Connectors, Electrical, Miniature, Rectangular Type, Rack to Panel, Environment Resisting, 200°C Total Continuous Operating Temperature, General Specification for.
MIL-S-83734 - Socket, Plug-in, Electronic Components, General Specification for.

STANDARDS

MILITARY

MIL-STD-255 - Electric Voltages Alternating and Direct Current.
MIL-STD-1531 - Insert Arrangements for MIL-C-83733 Rack to Panel Connectors, Shell Size A.
MIL-STD-1532 - Insert Arrangements for MIL-C-83733 Rack to Panel Connectors, Shell Size B.
MIL-STD-1554 - Insert Arrangements for MIL-C-83723 (Series 3 and MIL-C-26500 Environment Resisting, Circular, Electrical Connectors.
MIL-STD-1560 - Insert Arrangements for MIL-C-38999 and MIL-C-27599 Electrical, Circular Connectors.
MIL-STD-1632 - Insert Arrangements for MIL-C-28804, High Density, Rectangular, Electrical Connectors.
MIL-STD-1646 - Servicing Tools for Electric Contacts and Connections, Selection and Use of.
MIL-STD-1651 - Insert Arrangements for MIL-C-5015, MIL-C-22992 (Classes C, J, and R) and MIL-C-83723 (Series II) Electric Connectors.
MS3157 - Insert Arrangements, MIL-C-81659 Electric Connector, Series 1 and 2.
MS3400 - Connectors, Receptacle, Electric, Wall Mounting, Front Release, Crimp Contact, AN Type.
MS3401 - Connectors, Receptacle, Electric, Cable Connecting, Front Release, Crimp Contact, AN Type.
MS3402 - Connectors, Receptacle, Electric, Box Mounting, Front Release, Crimp Contact, AN Type.
MS3404 - Connectors, Receptacle, Electric, Jam Nut Mounting, Front Release, Crimp Contact, AN Type.
MS3406 - Connectors, Plug, Electric, Front Release, Crimp Contact, AN Type.
MS3450 - Connectors, Receptacle, Electric, Wall Mounting, Rear Release, Crimp Contact, AN Type.
MS3451 - Connectors, Receptacle, Electric, Cable Connecting, Rear Release, Crimp Contact, AN Type.
MS3452 - Connectors, Receptacle, Electric, Box Mounting, Rear Release, Crimp Contact, AN Type.
MS3454 - Connectors, Receptacle, Electric, Jam Nut Mounting, Rear Release, Crimp Contact, AN Type.
MS3456 - Connectors, Plug, Electric, Rear Release, Crimp Contact, AN Type.
MS3459 - Connectors, Plug, Electric, Self-Locking Coupling Nut, Rear Release, Crimp Contact, AN Type.
MS14004 - Insert Arrangements, Electrical Connector, Shell Size 6.

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MS14054 - Insert Arrangements, Electrical Connector, Size 28, Class L, 40 Amps.
MS14055 - Insert Arrangements, Electrical Connector, Size 44, Class L, 100 Amps.
MS14057 - Insert Arrangements, Electrical Connector, Size 52, Class L, 200 Amps.
MS14058 - Connector, Electric, Rectangular Miniature, Polarized Shell, Rack and Panel, Shell Receptacle, Socket Contacts Straight Printed Circuit Board Termination Type.
MS14059 - Connector, Electric, Rectangular Miniature, Polarized Shell, Rack, Plug, Pin Contacts, Printed Circuit Board Termination Types.
MS17343 - Connector, Receptacle, Electrical, Wall Mounting.
MS17344 - Connector, Plug, Electrical, Straight.
MS17345 - Connector, Plug, Electrical, Cable Connecting (Female).
MS17346 - Connector, Receptacle, Electrical Box Mounting.
MS17347 - Connector, Receptacle, Electrical Jam-Nut.
MS17348 - Connector, Receptacle, Electrical Jam-Nut (Box).
MS17778 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 104 (Size 16 Crimp Removable) Pin Contacts.
MS17779 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 104 (Size 16 Crimp Removable) Socket Contacts.
MS18155 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 10 (Size 16 Crimp Removable) Pin Contacts.
MS18156 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 10 (Size 16 Crimp Removable) Socket Contacts.
MS18157 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical 20 (Size 16 Crimp Removable) Pin Contacts.
MS18158 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 20 (Size 16 Crimp Removable) Socket Contacts.
MS18159 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 36 (Size 16 Crimp Removable) Pin Contacts.
MS18160 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 36 (Size 16 Crimp Removable) Socket Contacts.
MS18161 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 52 (Size 16 Crimp Removable) Pin Contacts.
MS18162 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 52 (Size 16 Crimp Removable) Socket Contacts.
MS18163 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 80 (Size 16 Crimp Removable) Pin Contacts.
MS18164 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 80 (Size 16 Crimp Removable) Socket Contacts.
MS18165 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 158 (Size 16 Crimp Removable) Pin Contacts.
MS18166 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 158 (Size 16 Crimp Removable) Socket Contacts.
MS18167 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 212 (Size 15 Crimp Removable) Pin Contacts.
MS18169 - Insert (Insulator), Rectangular Connector, Polarized Center Screwlock, Electrical, 212 (Size 16 Crimp Removable) Socket Contacts.

MS18269	-	Connector, Electric, Rectangular, Miniature, Polarized Shell, Rack and Panel, Shell Receptacle Socket Contacts, Solder Type.
MS18270	-	Connectors, Electric, Rectangular, Miniature, Polarized Shell, Rack and Panel, Shell Receptacle, Socket Contacts, Crimp Type.
MS18271	-	Connectors, Electric, Rectangular, Miniature, Polarized Shell, Rack and Panel, Shell, Plug, Pin Contacts, Crimp Type.
MS18272	-	Connector, Electric, Rectangular, Miniature Polarized Shell, Rack and Panel, Shell, Plug Hermetic Pin Contacts, Class H.
MS18273	-	Insert Arrangement, Electrical Connector, Shell Size 1.
MS18274	-	Insert Arrangements, Electrical Connector, Shell Size 2.
MS18275	-	Insert Arrangements, Electrical Connector, Shell Size 3.
MS18276	-	Insert Arrangements, Electrical Connector, Shell Size 4.
MS18277	-	Insert Arrangements, Electrical Connector, Shell Size 5.
MS18281	-	Contacts, Pin and Socket Classes G, N, and H Solder Type, Non-Removable.
MS27466	-	Connector, Receptacle, Electrical Wall Mounting Flange, Crimp Type, Bayonet Coupling.
MS27467	-	Connector, Plug, Electrical, Straight, Crimp Type, Bayonet Coupling.
MS27468	-	Connector, Receptacle, Electrical, Jam Nut Mounting, Crimp Type Bayonet Coupling.
MS27469	-	Connector, Receptacle, Electrical, Wall Mounting Flange, Solder Type, Hermetic Seal.
MS27470	-	Connector, Receptacle, Electrical, Jam Nut Mounting, Solder Type, Hermetic Seal.
MS27471	-	Connector, Receptacle, Electrical, Solder Mounting, Solder Type, Hermetic Seal.
MS27496	-	Connector, Receptacle, Electrical, Box Mounting, Crimp Type, Bayonet Coupling.
MS27505	-	Connector, Receptacle, Electrical, Box Mounting Flange, Crimp Type, Bayonet Coupling.
MS27656	-	Connector, Receptacle, Electrical, Back Panel Wall Mounting Flange, Crimp Type, Bayonet Coupling.
MS27661	-	Connector, Plug, Electrical, Crimp Type, Lanyard Release, Fail-Safe, Series I.
MS90555	-	Connector, Receptacle, Electrical Wall Mounting Class L (Power Source Receptacle).
MS90556	-	Connector, Plug, Electrical, Straight, Class L.
MS90557	-	Connector, Plug, Electrical, Cable Connecting (Without Coupling Ring), Class L.
MS90558	-	Connector, Receptacle, Electrical, Wall Mounting (With Coupling Ring), Class L (Equipment Receptacle).
MS90565	-	Insert Arrangements, Electrical Connector, Size 32, Class L, 60 Amps.

(Copies of specifications, standards, handbooks, drawings, and publications required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Order of precedence. In the event of a conflict between the text of this standard and the references cited herein, the text of this standard shall take precedence.

3. DEFINITIONS

3.1 A list of terms used in this standard which are commonly used in electrical connector engineering practice and generally accepted by the electrical and electronic industries are as follows:

a. Adapter. An intermediate device to provide for attaching special accessories or to provide special mounting means.

b. Aerospace. Includes both airborne and space applications (see the definitions of "airborne" and "space").

c. Airborne. Denotes applications peculiar to aircraft and missiles or other systems designed for operation primarily within the earth's atmosphere.

d. Ambient temperature. The temperature of the environment, usually air, surrounding a connector.

e. Back-mounted. A connector mounted from the inside of a panel or box with its mounting flange inside the equipment.

f. Barrel.

(1) Conductor barrel. The section of the terminal, splice or contact that accomodates the stripped conductor.

(2) Insulation barrel. The section of the terminal, splice or contact that accomodates the conductor insulation.

g. Barrel chamfer. Bevel at the end of the conductor barrel for easier entry of the conductor.

h. Basis metal. Metal from which the connector components are made and on which one or more metals or coatings may be deposited.

i. Bayonet coupling, rotary. A quick coupling device for mating connectors utilizing pins on a connector and ramps on the mating connector. Mating and unmating is accomplished by rotating the coupling ring.

j. Belled mouth (bellmouth). The flared or wide entrance of a terminal, splice or contact barrel to permit easier insertion of the conductor.

k. Bifurcated contact. Describes lengthwise slotting of a flat spring contact as used in a printed circuit edge connector.

l. Body, connector. The main portion of a connector to which contacts and other components are attached. This term is not used with connectors incorporating nonintegral shells in their construction.

m. Boot. A form placed around the wire terminations of a multiple contact connector as a protective housing or as a container for potting compound.

n. Braid. Flexible conductor made of a woven or braided assembly of fine wires.

o. Busing. The joining of two or more circuits.

p. Butting dies. Crimping dies so designed that the nest and indentor touch at the end of the crimping cycle. (Also called bottoming dies.)

q. Cable clamp. A mechanical clamp attached to the cable side of the connector to support the cable or wire bundle, provide strain relief, and absorb vibration and shock otherwise transmitted by the cable to the contact/wire connection.

r. Cable sealing clamp. A device consisting of a gland nut and sealing member designed to seal around a single jacket cable.

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s. Cable shielding clamp. A device consisting of a sealing member abd cable support designed to terminate the screen (shield) of an electrical cable.

t. Circumferential crimp. The type of crimp where the crimping dies completely surround a barrel resulting in symmetrical indentations in the barrel.

u. Closed entry. A contact or contact cavity design in the insert or body of the connector which limits the size or position of the mating contact or printed circuit board to a predetermined dimension.

v. Color coding. A system of identification of terminals and related devices.

w. Conductor stop. A device on a terminal, splice, contact or tool used to prevent excessive extension of the conductor barrel.

x. Connector, electrical. A device, either a plug or a receptacle, used to terminate or connect the conductors of individual wires or in cables and which provides a means to continue the conductors to a mating connector or printed circuit board.

y. Connector set, electrical. Two or more separate connectors, plug connector and receptacle connector, designed to be mated together. The set may include mixed connectors mated together, such as one connector plug and one dummy connector receptacle, connector receptacle and one dummy electrical plug.

z. Contact. The conductive element in a connector which makes actual contact for the purpose of transferring electrical energy.

aa. Contact area. The area in contact between two conductors, two contacts, or a conductor and a contact permitting the flow of electricity.

ab. Contact arrangement. The number, spacing and arrangement of contacts in a connector.

ac. Contact engaging and separating force. Force needed to either engage or separate contacts to mating contacts or gage pins.

ad. Contact float. The overall side play axial movement and/or angular displacement of contacts within the insert cavity.

ae. Contact resistance. Electrical resistance of a pair of engaged contacts. Resistance may be measured in ohms or millivolt drop at a specified current over the engaged contacts.

af. Contact retainer. A device either on the contact or in the insert to retain the contact in an insert or body.

ag. Contact retention. The axial load in either direction which a contact can withstand without being dislodge from its normal position within an insert or body.

ah. Contact size. An assigned number denoting the size of the contact engaging end.

ai. Contact wipe. The distance of travel (electrical engagement) made by one contact with another during its engagement or separation or during mating or unmating of the connector halves.

aj. Coupling ring. That portion of a plug which aids in the mating or unmating of a plug and receptacle and holds the plug to the receptacle.

ak. Coupling, self-locking. A device on a plug connector which contains means to automatically secure the coupling to the receptacle, and prevent any coupling rotation during shock and vibration.

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al. Cover, electrical connector. An item which is specifically designed to cover the mating end of a connector for mechanical and/or environmental protection.

am. Creep distance. The shortest distance on the surface of an insulator separating two electrically conductive surfaces.

an. Crimp. The physical compression (deformation) of a contact barrel around a conductor in order to make an electrical connection.

ao. Crimping. A pressure method of mechanically securing a terminal, splice or contact to a conductor.

ap. Crimping dies. Portion of the crimping tool that shapes the crimp.

aq. Crimping tool. Mechanism used for crimping.

ar. Cutout, connector. The hole, usually round or rectangular, cut in a metal panel for mounting a connector. May include holes for mounting screws or bolts.

as. Depth of crimp. The distance the indentor penetrates into the barrel.

at. Dielectric. A material having electrical insulating properties.

au. Dummy connector assembly, electrical. Two or more electrical dummy connectors having a common mounting or mounted on each other, each one capable of being independently replaced. Excludes items which are furnished as mated pairs or sets.

av. Dummy connector, receptacle. A connector receptacle which does not have provisions for attaching conductors. It is generally used for storage of a cable assembly connector plug.

aw. Dust cover. (See cover, electrical connector.)

ax. Environmentally sealed. A device that is provided with gaskets, seals, grommets, potting or other means to keep out moisture, dirt, air or dust which might reduce its performance. Does not include nonphysical environments such as RF and radiation.

ay. Extraction tool. A device used for removing removable contacts from a connector. A device used for removing taper pins from taper pin receptacles.

az. Ferrule. A short tube. Used to make connections to shielded or coaxial cables. Also used in connectors to reduce transmission of torque to grommet.

ba. Flange, connector. A projection extending from or around the periphery of a connector with provisions to permit mounting the connector to a panel.

bb. Front mounted. A connector mounted on the outside of a panel or box with its mounting flange outside the equipment.

bc. Full cycling control. Controls placed on the crimping cycle of crimping tools forcing the tool to be closed to its fullest extent completing the crimping cycle before the tool can be opened.

bd. Gang disconnect. A connector that permits tha rapid and simultaneous disconnection of two or more electrical circuits.

be. Grid spaced. When contacts in a multiple contact connector are spaced in a geometric pattern.

bf. Grommet, connector. An elastomeric seal used on the cable side of a connector to seal the connector against moisture, dirt and air.

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bg. Guide pin. A pin or rod extending beyond the mating faces of a connector designed to guide the closing or mating of the connector to ensure proper engagement of contacts.

bh. Head assembly. A positioner designed to attach to a crimping tool in place of a turret head.

bi. Hermaphroditic connector. A connector design which utilizes contacts in a balanced arrangement such that both mating connectors are identical. The contacts may also be hermaphroditic, and may be arranged as male and female contacts as for pins and sockets. Hermaphroditic contacts may also be used in a manner such that one half of each contact mating surface protrudes beyond the connector interface and both mating connectors are identical.

bj. Hermaphroditic contacts. A contact design which is neither pin nor socket and which mates with other contacts of the same design.

bk. Housing, connector, electrical. Connector less insert, but with insert-retaining and positioning hardware required by standard construction.

bl. Indentor. The part of a crimping tool, usually the moving part, that compresses identations in the contact conductor barrel.

bm. Insert, electrical connector. An insulating element with or without contact(s), designed to position and support contacts in a connector.

bn. Insertion tool. A device used to insert contacts into a connector. A device used to insert taper pins into taper pin receptacles.

bo. Inspection hole. A hole placed at one end of a barrel to permit visual inspection to see that the conductor has been inserted to the proper depth in the barrel prior to crimping.

bp. Insulation support. The portion of a barrel similar to an insulation grip except that it is not compressed around the conductor insulation.

bq. Interface. The two surfaces on the contact side of mating connectors or plug-in component (e.g., relay) and receptacle, which face each other when mated.

br. Interfacial seal. A sealing of mated connectors over the whole area of the interface to provide sealing around each contact.

bs. Jacket. The outermost layer of insulating Material of a cable or wire.

bt. Jackscrew (screwlock). A screw attached to one-half of a two piece multiple contact connector used to draw and hold both halves together and to separate them.

bu. Key. A short pin or other projection that slides in a mating slot, hole, groove or keyway to guide two parts being assembled. Generally used in shell-enclosed connectors to obtain polarization.

bv. Keyway. A slot or groove in which a key slides.

bw. Lanyard release. A plug connector which may be separated from a counterpart receptacle by axial pull of an attached lanyard.

bx. Locking springs. (See contact retainer).

by. Locator. The part of the crimping die, positioner or turret head that places the terminal, splice or contact in the correct crimping area of the crimping tool or die.

bz. Mate. The joining of two connectors.

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ca. Mold, potting, electrical connector. An item, solid or split, designed to be used as a hollow form into which potting compound is injected and allowed to cure or set to seal the back of an electrical connector. The potting may eliminate the need for a back shell of the connector. The form may or may not be removable after potting.

cb. Nest. The portion of a crimping die which supports the barrel during crimping.

cc. Nick (notch). A cut or notch in conductor strands or insulation.

cd. Operating temperature. The maximum internal temperature resistant capabilities of a connector in continuous service.

ce. Panel. The side or front of a piece of equipment, usually metal, on which connectors are mounted.

cf. Pigtail. A short wire extending from an electric or electronic device to serve as a jumper or ground connection.

cg. Pin contact. A contact having an engagement end that enters the socket contact.

ch. Plating. The overlaying of a thin coating of metal on metallic components to improve conductivity, provide for easy soldering or prevent rusting or corrosion.

ci. Plug connector. An electrical fitting with pin, socket, or pin and socket contacts, constructed to be affixed to the end of a cable, conduit, coaxial line, cord, or wire for convenience in joining with another electrical connector(s), and not designed to be mounted on a bulkhead, chassis or panel.

cj. Polarize. The arrangement of mating connectors such that the connector can be mated in only one way.

ck. Polarizing pin, key or keyway. A device incorporated in a connector to accomplish polarization.

cl. Positioner. A device that is attached to a crimping tool and locates the contact in the correct location for crimping. It is usually interchangeable with other positioners.

cm. Post insulate. To insulate a connection after assembly.

cn. Potting. The permanent sealing of the cable end of a connector with a compound or material to exclude moisture and/or to provide a strain relief.

co. Potting form. (Not preferred - see mold, potting, electrical connector.)

cp. Pre-insulate. The insulation of a connector prior to assembly of the contact or terminal on the conductor.

cq. Pre-tinned. Solder applied to either or both the contact and conductor prior to soldering.

cr. Pull-out force. Force necessary to separate a conductor from a contact or terminal, or a contact from a connector, by exerting a tensile pull.

cs. Quick disconnect. A type of connector or splice which permits relatively rapid locking and unlocking of mating parts.

ct. Rack. A type of structure used to house electronic components which permits convenient removal of portions of equipment.

cu. Ram. The moving portion in the head of a crimping tool.

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cv. Range, wire. The sizes of conductors accomodated by a particular barrel. Also the diameters of wires accommodated by a sealing grommet.

cw. Ratchet control. A device to ensure the full crimping cycle of a crimping tool.

cx. Receptacle, connector. An electrical fitting with contacts constructed to be electrically connected to a cable, coaxial line, cord or wire to join with another electrical connector(s), and is designed to be mounted on a bulkhead, wall, chassis, or panel.

cy. Scoop-proof. Scoop-proof means that because of the connector long shell design, it is impossible for the mating plug connector to inadvertently be cocked into the mating receptacle and damage the pins or electrically short the contacts.

cz. Screwlock. (See jackscrew).

da. Seamless terminal or splice. Terminal or splice conductor barrel made without an open seam.

db. Serrations. Deformation of the inside surface of a conductor barrel to provide better gripping of the conductor or on the outside of the connector body to provide better gripping of the connector.

dc. Service life. A period of time which a device is expected to perform satisfactorily.

dd. Service rating. The maximum voltage or current which a connector is designed to carry continuously.

de. Shell, electrical connector. The outside case of a connector into which the dielectric material and contacts are assembled.

df. Shield, electrical connector. An item especially designed to be placed around that portion of a connector which contains the facilities for attaching wires or cables. It is used for shielding against electrical interference or mechanical injury and usually has provisions for passage of the wire or cable.

dg. Shroud, insulation. (See insulation support).

dh. Slotted tongue. A slotted tongue for sliding onto the screw or stud so that neither screw nor unit needs removing.

di. Sockets. For plug in devices, for use on panel boards, printed circuit boards, and microelectronic components.

dj. Socket contact. A contact having an engagement end that will accept entry of a pin contact.

dk. Solder cup. The end of a terminal or contact in which the conductor is inserted prior to being soldered.

dl. Solder eye. A solder type contact provided with a hole at its end through which a wire can be inserted prior to being soldered.

dm. Solderless connection. The joining of two metals by pressure means without the use of solder, braze or any method requiring heat.

dn. Solderless wrap. A technique of connecting stripped solid wire to a terminal post containing a series of sharp edges by winding the wire around the terminal.

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do. Space. Denotes applications peculiar to spacecraft and systems designed for operation near or beyond the upper reaches of the earth's atmosphere.

dp. Spade tongue terminal. Slotted tongue terminal designed to slip around a screw or stud without removing the nut.

dq. Splice. Device used to join two or more conductors to each other.

dr. Stop plate (see locator). A device attached to a crimping tool to properly locate a terminal, splice or contact in the tool prior to crimping.

ds. Strain relief clamp. (See cable clamp).

dt. Strip. To remove insulation from a conductor.

du. Threaded coupling. A means of coupling mating connectors by engaging threads in a coupling ring with threads on a receptacle shell.

dv. Turret head. A device that is attached to a crimping tool which contains more than one locator and allows the locators to be rotated to hold a contact in the correct position for crimping. It is usually interchangeable with other turret heads and head assemblies.

dw. Umbilical connector. A connector used to connect cables to a rocket or missile prior to launching and which is unmated from the missile at the time of launching.

dx. Wiping action (see contact wipe). Action of two electrical contacts which come in contact by sliding against each other.

dy. Work curve. A graph which plots the pull out force and relative conductivity of a crimp joint as a function of various depths of crimping.

dz. Working voltage (see service rating). Maximum voltage at which a connector is rated to operate.

SECTION 101

CONNECTORS, CYLINDRICAL, GENERAL DUTY

(Applicable specifications: MIL-C-5015, MIL-C-38999, MIL-C-83723 and MIL-C-28840)

Applicable documents		Applicable characteristics	Applicable restrictions	Page
MIL-C-5015	-	This specification covers "AN" type electrical connectors, plugs, and receptacles.		101.4
MS3400's	-	Crimp contacts, front release Contact sizes: 0, 4, 8, 12, 16 Temperature range: -55°C to +175°C Coupling: Threaded Hi-impact shock shell.	ARMY: Not for use. NAVY: For shipboard jacketed cable applications only. AIR FORCE: Not for use.	101.6
MS3450's	-	Crimp contacts, rear release Contact sizes: 0, 4, 8, 12, 16 Temperature range: Class: L: -55°C to +200°C electroless nickel. For "space" applications only. W: -55°C to +175°C cadmium over suitable underplate. K: -55°C to +200°C firewall Coupling: Threaded.	NAVY: Classes W and K are only acceptable for hookup wire applications. Not for shipboard jacketed cable applications. AIR FORCE: Not for use except where 0, 4, and 8 size contacts are required.	101.11
MIL-C-38999	-	This specification covers miniature, high density, quick disconnect, bayonet, threaded, or breech coupling, circular, environment resistant, electrical connectors using removable crimp or fixed hermetic solder contacts, and are capable of continuous operation within a temperature range of -65°C (-85°F) to +200°C (392°F) for electroless nickel finish and -65°C (-85°F) to +175°C (347°F) for cadmium finish. EMI shielding capabilities are also included.		101.25
Series I	-	Crimp contacts, rear release. Solder contacts, hermetics only. Scoop proof. Contact sizes: 12, 16, 20, 220 Temperature ranges: Finish: B: -65°C to +175°C, Olive drab cadmium plate over a suitable underplate (conductive). D: -65°C to 150°C, Fused tin, carbon steel (conductive). F: -65°C to +200°C, Electroless nickel coating (conductive) For "space" applications only. Coupling: Bayonet.	ARMY: For ground equipment only. NAVY: Not for use.	101.31

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Applicable documents	Applicable characteristics	Applicable restrictions	Page
Series III -	Crimp contacts, rear release. Solder contacts - hermetics only. Scoop-proof. Contact sizes: 12, 16, 20, 22D Temperature ranges: Class: F: -65°C to +200°C Electroless nickel coating (conductive). For "space" applications only. K: -65°C to +200°C Corrosion resistant steel passivated (conductive). W: -65°C to +175°C Olive drab cadmium plate over a suitable underplate (conductive). Y: -65°C to +200°C Corrosion resistant steel passivated (conductive). Coupling: Threaded, triple start, self locking.	NAVY: Not for shipboard jacketed cable applications. Connectors with finish "W" are acceptable for hookup wire applications.	101.39
Series IV -	Crimp contacts, rear release. Solder contacts, hermetics only. Scoop-proof. Contact sizes: 12, 16, 20, 22D Temperature ranges: Class: F: -65°C to +200°C Electroless nickel coating (conductive). For "space" applications only. W: -65°C to +175°C. Olive drab cadmium plate over a suitable underplate (conductive) Y: -65°C to +200°C Corrosion resistant steel passivated (conductive). Coupling: Self-locking breech coupling.	Navy: Not shipboard jacketed cable applications.	101.49
MIL-C-83723 -	This specification covers the general requirements for environment resisting, circular, electrical connectors and their associated contacts and accessories. These connectors shall utilize crimp or solder (class H only) contacts and be capable of continuous operation within the temperature range of -65°C (-85°F) to +200°C (392°F).		101.57

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Applicable documents	Applicable characteristics	Applicable restrictions	Page
Series III -	Crimp contacts, rear release Solder contacts - hermetics only. Contact sizes: 12, 16, 20 Temperature ranges: Class: H: -65°C to +150°C (Hermetic) tin/cold rolled steel. K: -65°C to +200°C (Firewall) stainless steel passivated. R: -65°C to +200°C Electroless nickel/aluminum For "space" applications only. S: -65°C to +200°C (Firewall) plug and receptacle, RFI grounding self locking plug) Stainless steel passivated. W: -65°C to +175°C Cadmium over suitable underplate aluminum Coupling: Threaded and bayonet	ARMY: Not for use. NAVY: Not for use.	101.59
MIL-C-28840	This specification covers circular electrical connectors with removable crimp front release contacts. These connectors are for use with jacketed cable in shipboard applications. Class code A — Class 0 — 125°C to 200°C Hot spot wrought aluminum		101.70

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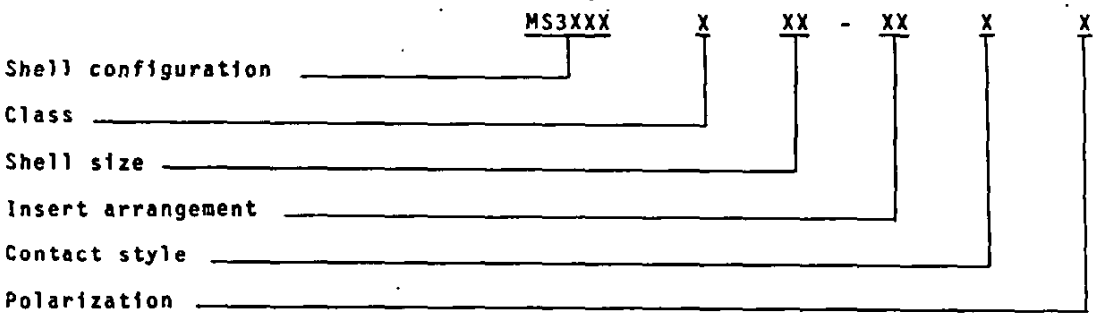
MIL-C-5015 PART NUMBER SYSTEM

Part No. example: MS3400D22-22S



Shell configuration:	Front release crimp	Rear release crimp
Wall mounting receptacle	MS3400	MS3450
Box mounting receptacle	MS3402	MS3452
Jam nut mounting receptacle	MS3404	MS3454
Straight plug	MS3406	MS3456
Self-locking plug	-	MS3459
Cable connecting receptacle	MS3401	MS3451

Class:

D - Environment resisting - High impact shock MS3400
L - Environment resisting - Fluid resistant (electroless N) For "space" applications only.
W - Environment resisting - Fluid resistant (Cad OD over suitable underplate)
KS - Firewall, self-locking, stainless steel
KT - Firewall, self-locking, cadmium plated ferrous alloy

L, W, KS, KT: MS3450

Shell size: Shell size in 16th of an inch.

Insert arrangements: See MIL-STD-1651.

Contact style:

P - Pin contact - MIL-C-39029/29 and /44.
S - Socket contact - MIL-C-39029/30 and /45.

Polarization: Normal polarization is considered preferred; however, alternate polarizations, when required by a system, do not require nonstandard part approval.

Standard connectors: See table 101-I.

TABLE 101-III. Standard connectors, MIL-C-83723, series III - Continued.

Number of contacts	Contact size (number)	MIL-C-83723 part number
24	20	M83723/96R1624N
"	"	M83723/96K1624N
"	"	M83723/97S1624N
"	"	M83723/98S1624N
31	"	M83723/65H1831N
"	"	M83723/68R1831N
"	"	M83723/68W1831N
"	"	M83723/69R1831N
"	"	M83723/69W1831N
"	"	M83723/72R1831N
"	"	M83723/72W1831N
"	"	M83723/71R1831N
"	"	M83723/71W1831N
"	"	M83723/83R1831N
"	"	M83723/83S1831N
"	"	M83723/83W1831N
"	"	M83723/82R1814N
"	"	M83723/82S1831N
"	"	M83723/82W1831N
"	"	M83723/74R1831N
"	"	M83723/74W1831N
"	"	M83723/73R1831N
"	"	M83723/73W1831N
"	"	M83723/85R1831N
"	"	M83723/85S1831N
"	"	M83723/85W1831N
"	"	M83723/84R1831N
"	"	M83723/84S1831N
"	"	M83723/84W1831N
"	"	M83723/76R1831N
"	"	M83723/76W1831N
"	"	M83723/75R1831N
"	"	M83723/75W1831N
"	"	M83723/87R1831N
"	"	M83723/87W1831N
31	"	M83723/86R1831N
"	"	M83723/86W1831N
"	"	M83723/77R1831N
"	"	M83723/77W1831N
"	"	M83723/78R1831N
"	"	M83723/78W1831N
"	"	M83723/79H1831N
"	"	M83723/80H1831N
"	"	M83723/81H1831N
"	"	M83723/88H1831N
"	"	M83723/89H1831N
"	"	M83723/90H1831N
"	"	M83723/91R1831N
"	"	M83723/91W1831N
"	"	M83723/92R1831N
"	"	M83723/92W1831N
"	"	M83723/93H1831N
"	"	M83723/94H1831N
"	"	M83723/95R1831N
"	"	M83723/95K1831N
"	"	M83723/96R1831N
"	"	M83723/96K1831N
"	"	M83723/97S1831N
"	"	M83723/98S1831N

TABLE 101-III. Standard connectors, MIL-C-83723, series III - Continued.

Number of contacts	Contact size (number)	MIL-C-83723 part number
55	20	M83723/65H2255N
"	"	M83723/68R2255N
"	"	M83723/68W2255N
"	"	M83723/69R2255N
"	"	M83723/69W2255N
"	"	M83723/72R2255N
"	"	M83723/72W2255N
"	"	M83723/71R2255N
"	"	M83723/71W2255N
"	"	M83723/83R2255N
"	"	M83723/83S2255N
"	"	M83723/83W2255N
"	"	M83723/82R2255N
"	"	M83723/82S2255N
"	"	M83723/82W2255N
"	"	M83723/74R2255N
"	"	M83723/74W2255N
"	"	M83723/73R2255N
"	"	M83723/73W2255N
"	"	M83723/85R2255N
"	"	M83723/85S2255N
"	"	M83723/85W2255N
"	"	M83723/84R2255N
"	"	M83723/84S2255N
"	"	M83723/84W2255N
"	"	M83723/76R2255N
"	"	M83723/76W2255N
"	"	M83723/75R2255N
"	"	M83723/75W2255N
"	"	M83723/87R2255N
"	"	M83723/87W2255N
"	"	M83723/86R2255N
"	"	M83723/86W2255N
"	"	M83723/77R2255N
"	"	M83723/77W2255N
"	"	M83723/78R2255N
"	"	M83723/78W2255N
"	"	M83723/91R2255N
"	"	M83723/91W2255N
"	"	M83723/92R2255N
"	"	M83723/92W2255N
"	"	M83723/93H2255N
"	"	M83723/94H2255N
61	"	M83723/65H2461N
"	"	M83723/68R2461N
"	"	M83723/68W2461N
"	"	M83723/69R2461N
"	"	M83723/69W2461N
"	"	M83723/72R2461N
"	"	M83723/72W2461N
"	"	M83723/71R2461N
"	"	M83723/71W2461N
"	"	M83723/74R2461N
"	"	M83723/74W2461N
"	"	M83723/73R2461N
"	"	M83723/73W2461N
"	"	M83723/76R2461N
"	"	M83723/76W2461N
"	"	M83723/75R2461N
"	"	M83723/75W2461N
"	"	M83723/77R2461N

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TABLE 101-III. Standard connectors, MIL-C-83723, series III --Continued.

Number of contacts	Contact size (number)	MIL-C-83723 part number
61	20	M83723/77W2461N
"	"	M83723/78R2461N
"	"	M83723/78W2461N
"	"	M83723/79H2461N
"	"	M83723/80H2461N
"	"	M83723/81H2461N
"	"	M83723/91R2461N
"	"	M83723/91W2461N
"	"	M83723/92R2461N
"	"	M83723/92W2461N
"	"	M83723/93H2461N
"	"	M83723/94H2461N
28	(24)-20, (4)-12	M83723/68R2028N
"	"	M83723/68W2028N
"	"	M83723/69R2028N
"	"	M83723/69W2028N
"	"	M83723/72R2028N
"	"	M83723/72W2028N
"	"	M83723/71R2028N
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"	"	M83723/83S2028N
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"	"	M83723/82S2028N
"	"	M83723/82W2028N
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"	"	M83723/87R2028N
"	"	M83723/87W2028N
"	"	M83723/86R2028N
"	"	M83723/86W2028N
"	"	M83723/77R2028N
"	"	M83723/77W2028N
"	"	M83723/78R2028N
"	"	M83723/78W2028N
"	"	M83723/79H2028N
"	"	M83723/80H2028N
"	"	M83723/81H2028N
"	"	M83723/91R2028N
"	"	M83723/91W2028N
"	"	M83723/92R2028N
"	"	M83723/92W2028N
"	"	M83723/93H2028N
"	"	M83723/95R2028N
"	"	M83723/95K2028N
"	"	M83723/95W2028N
"	"	M83723/96R2028N
"	"	M83723/96K2028N
"	"	M83723/96W2028N

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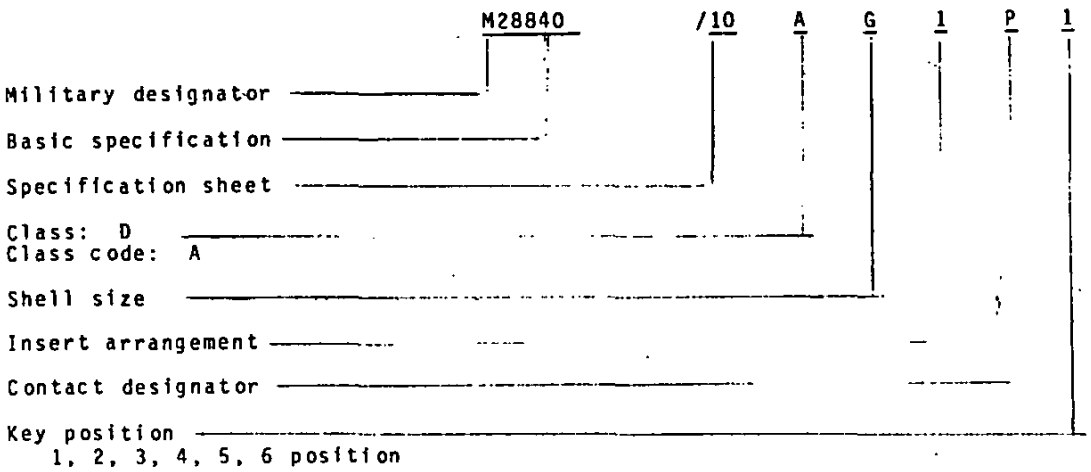
MIL-C-28840 part number system

Part Number example: M28840/10AG1P1



Number of contacts	Contact size (numbers)	MIL-C-28840 part number
7	20/22	M28840/ 10 A A 1 P 1
"	"	" 10 A A 1 S 1
"	"	" 11 A A 1 P 1
"	"	" 11 A A 1 S 1
"	"	" 12 A A 1 P 1
"	"	" 12 A A 1 S 1
"	"	" 14 A A 1 P 1
"	"	" 14 A A 1 S 1
"	"	" 16 A A 1 P 1
"	"	" 16 A A 1 S 1
12	"	" 10 A B 1 P 1
"	"	" 10 A B 1 S 1
"	"	" 11 A B 1 P 1
"	"	" 11 A B 1 S 1
"	"	" 12 A B 1 P 1
"	"	" 12 A B 1 S 1
"	"	" 14 A B 1 P 1
"	"	" 14 A B 1 S 1
"	"	" 16 A B 1 P 1
"	"	" 16 A B 1 S 1
21	"	" 10 A C 1 P 1
"	"	" 10 A C 1 S 1
"	"	" 11 A C 1 P 1
"	"	" 11 A C 1 S 1
"	"	" 12 A C 1 P 1
"	"	" 12 A C 1 S 1
"	"	" 14 A C 1 P 1
"	"	" 14 A C 1 S 1
"	"	" 16 A C 1 P 1
"	"	" 16 A C 1 S 1
"	20/20	" 10 A C 1 F 1
"	"	" 10 A C 1 G 1
"	"	" 11 A C 1 F 1
"	"	" 11 A C 1 G 1
"	"	" 12 A C 1 F 1
"	"	" 12 A C 1 G 1
"	"	" 14 A C 1 F 1
"	"	" 14 A C 1 G 1
"	"	" 16 A C 1 F 1
"	"	" 16 A C 1 G 1
31	20/22	" 10 A D 1 P 1
"	"	" 10 A D 1 S 1
"	"	" 11 A D 1 P 1
"	"	" 11 A D 1 S 1
"	"	" 12 A D 1 P 1
"	"	" 12 A D 1 S 1
"	"	" 14 A D 1 P 1
"	"	" 14 A D 1 S 1
"	"	" 16 A D 1 P 1
"	"	" 16 A D 1 S 1
42	"	" 10 A E 1 P 1
"	"	" 10 A E 1 S 1
"	"	" 11 A E 1 P 1
"	"	" 11 A E 1 S 1
"	"	" 12 A E 1 P 1
"	"	" 12 A E 1 S 1
"	"	" 14 A E 1 P 1
"	"	" 14 A E 1 S 1
"	"	" 16 A E 1 P 1
"	"	" 16 A E 1 S 1
64	"	" 10 A F 1 P 1
"	"	" 10 A F 1 S 1

Number of contacts	Contact size (numbers)	MIL-C-28840 part number						
64	20/22	M28840/	11	A	F	1	P	1
"	"	"	11	A	F	1	S	1
"	"	"	12	A	F	1	P	1
"	"	"	12	A	F	1	S	1
"	"	"	14	A	F	1	P	1
"	"	"	14	A	F	1	S	1
"	"	"	16	A	F	1	P	1
"	"	"	16	A	F	1	S	1
92	"	"	10	A	G	1	P	1
"	"	"	10	A	G	1	S	1
"	"	"	11	A	G	1	P	1
"	"	"	11	A	G	1	S	1
"	"	"	12	A	G	1	P	1
"	"	"	12	A	G	1	S	1
"	"	"	14	A	G	1	P	1
"	"	"	14	A	G	1	S	1
"	"	"	16	A	G	1	P	1
"	"	"	16	A	G	1	S	1
"	20/20	"	10	A	G	1	F	1
"	"	"	10	A	G	1	G	1
"	"	"	11	A	G	1	F	1
"	"	"	11	A	G	1	G	1
"	"	"	12	A	G	1	F	1
"	"	"	12	A	G	1	G	1
"	"	"	14	A	G	1	F	1
"	"	"	14	A	G	1	G	1
"	"	"	16	A	G	1	F	1
"	"	"	16	A	G	1	G	1
121	20/22	"	10	A	H	1	P	1
"	"	"	10	A	H	1	S	1
"	"	"	11	A	H	1	P	1
"	"	"	11	A	H	1	S	1
"	"	"	12	A	H	1	P	1
"	"	"	12	A	H	1	S	1
"	"	"	14	A	H	1	P	1
"	"	"	14	A	H	1	S	1
"	"	"	16	A	H	1	P	1
"	"	"	16	A	H	1	S	1
155	"	"	10	A	J	1	P	1
"	"	"	10	A	J	1	S	1
"	"	"	11	A	J	1	P	1
"	"	"	11	A	J	1	S	1
"	"	"	12	A	J	1	P	1
"	"	"	12	A	J	1	S	1
"	"	"	14	A	J	1	P	1
"	"	"	14	A	J	1	S	1
"	"	"	16	A	J	1	P	1
"	"	"	16	A	J	1	S	1

SECTION 300

ASSOCIATED CONNECTOR HARDWARE

Section		Page
301	Connector, associated hardware	301.1

Supersedes page 300.1 of 2 July 1980.

SECTION 301

CONNECTOR, ASSOCIATED HARDWARE

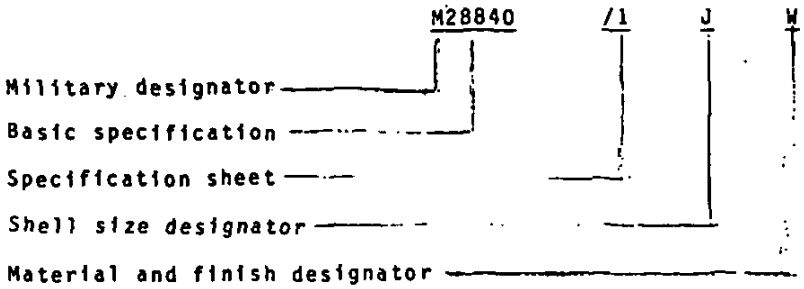
(Applicable specification: MIL-C-28840(EC))

Applicable documents	Applicable characteristics	Applicable restrictions	Page
MIL-C-28840	This specification covers circular electrical connectors with removable crimp front release contacts. These connectors are for use with jacketed cable in shipboard applications.		301.2

Class code	Class	
A	D	125°C to 200°C hot spot wrought aluminum

MIL-C-28840/X hardware part number system (strain relief)

Part number example: M22840/1JW (/2 and /3 part number systems are similar)



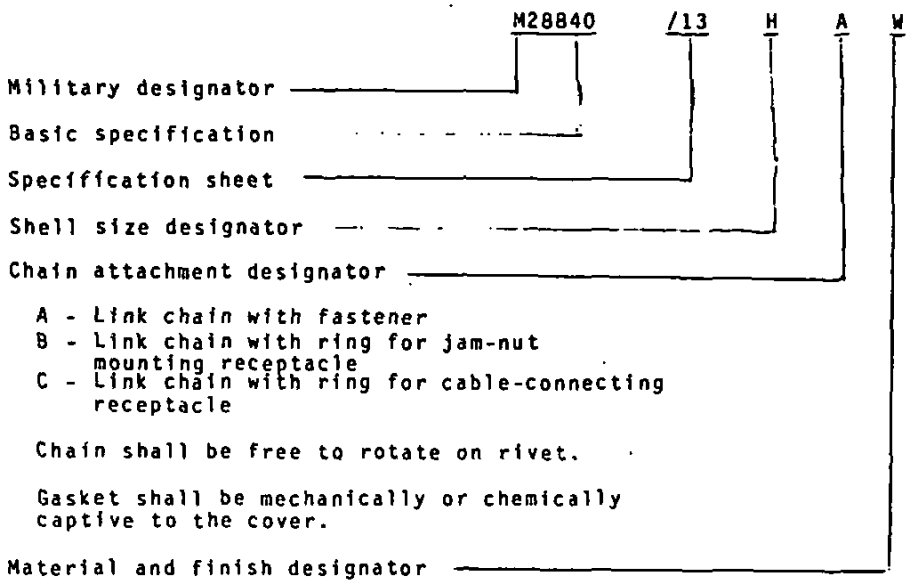
W - Aluminum, cadmium plate, olive drab over electroless nickel

Associated connector hardware

Strain relief, straight	Strain relief, 90°	Strain relief 45°
M28840/1AW	M28840/2AW	M28840/3AW
BW	BW	BW
CW	CW	CW
DW	DW	DW
EW	EW	EW
FW	FW	FW
GW	GW	GW
HW	HW	HW
JW	JW	JW

MIL-C-28840/XX hardware part number system (dust cover)

Part number example: M28840/13HAW

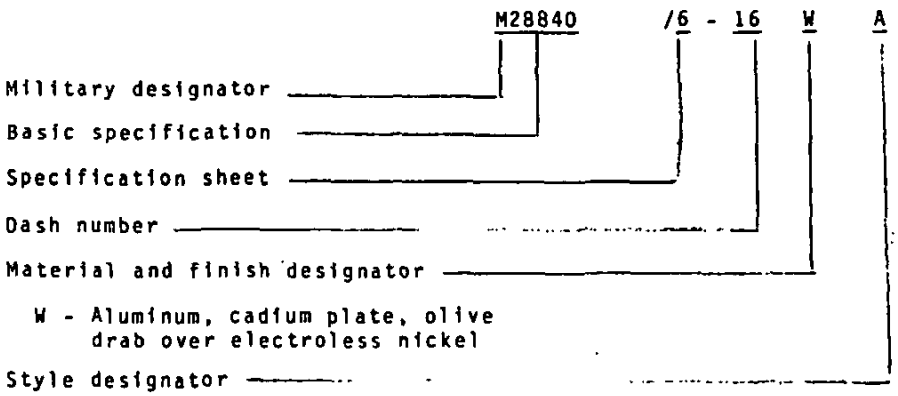


Associated connector hardware

Cover, receptacle	Cover, plug
M28840/13AAW	M28840/15AAW
BAW	BAW
CAW	CAW
DAW	DAW
EAW	EAW
FAW	FAW
GAW	GAW
HAW	HAW
JAW	JAW
13ABW	15ABW
BBW	BBW
CBW	CBW
DBW	DBW
EBW	EBW
FBW	FBW
GBW	GBW
HBW	HBW
JBW	JBW
13ACW	
BCW	
CCW	
DCW	
ECW	
FCW	
GCW	
HCW	
JCW	

MIL-C-28840/X - Backshell part number system

Part number example M28840/6-16WA



MIL-C-28840 part number

Backshell, straight	Backshell, 90°	Backshell, 45°
M28840/601WB	M28840/801WB	M28840/901WB
603WB	803WB	903WB
606WA	806WA	906WA
606WB	806WB	906WB
607WA	807WA	907WA
607WB	807WB	907WB
607WA	808WA	908WA
608WB	808WB	908WB
609WB	809WB	909WB
611WA	811WA	911WA
611WB	911WB	911WB
612WA	812WA	912WA
612WB	812WB	912WB
613WA	813WA	913WA
613WB	813WB	913WB
615WA	815WA	915WA
615WB	815WB	915WB
616WA	816WA	916WA
616WB	816WB	916WB
617WA	817WA	917WA
617WB	817WB	917WB
619WA	819WA	919WA
619WB	819WB	919WB
620WA	820WA	920WA
620WB	820WB	920WB
621WA	821WA	921WA
621WB	821WB	921WB
623WA	823WA	923WA
623WB	823WB	923WB
626WA	826WA	926WA
626WB	826WB	926WB
627WA	827WA	927WA
627WB	827WB	927WB

SECTION 400

PLUG-IN SOCKETS

Section		Page
401	Sockets, Plug-in	401.1

Supersedes 400.1 of 2 July 1980.

SECTION 401

SOCKETS, PLUG-IN

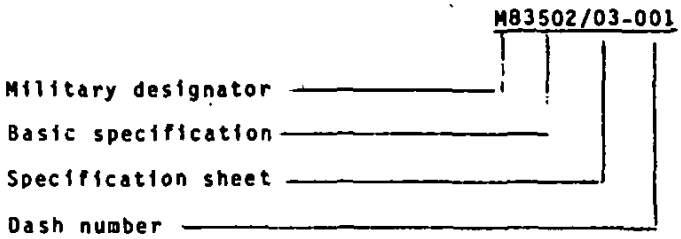
(Applicable specifications: MIL-S-83502(USAF), MIL-S-83505(USAF), MIL-S-83734, MIL-S-12883)

Applicable documents		Applicable characteristics	Applicable restrictions	Page
MIL-S-83502	-	This specification covers round, TO, plug-in electronic component sockets; for use on panel boards, printed circuit boards, and micro-electronic components. Terminals: Type I - Solderless wrap Type II - Printed circuit Type III - Solder wire turret Type IV - Solder cup Type V - Other		401.2
MIL-S-83505	-	This specification covers the general requirements for individual lead sockets; for insertion through mounting boards or panels. Terminals: Type I - Solderless wrap Type II - Printed circuit Type III - Solder wire turret Type IV - Solder cup Type V - Other		401.4
MIL-S-83734	-	This specification covers plug-in electronic component sockets; for use on panel boards, printed circuit boards, and microelectronic components. Terminals: Type I - Solderless wrap Type II - Printed circuit Type III - Solder cup		401.6
MIL-S-12883	-	This specification covers the general requirements for sockets and socket accessories for plug-in electronic components, such as electron tubes and related electronic devices, plug-in capacitors, crystal units, batteries, vibrators, relays, coils, etc.		401.8

Supersedes section 401 of 2 July 1980.

MIL-S-83502 part number system

Part number example: M83502/03-001



Criteria:
Socket terminations: I - solderless wrap, II - printed circuit, III - solder wire turret, IV - solder cup, V - other.

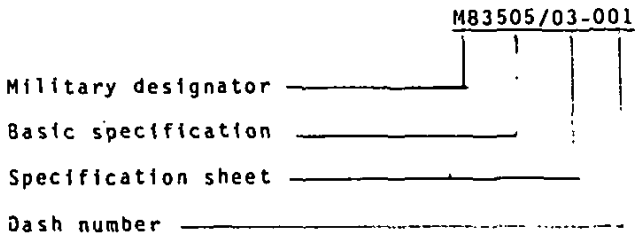
Standard connectors: See table 401-I.

TABLE 401-I. Standard sockets, MIL-S-83502 type.

Number of contacts	To type	Terminations type	Part number M83502/
3	TO7, low profile	II	1-002
4	"	II	1-005
8	"	II	1-011
8	"	II	1-014
10	"	II	1-017
3	"	II	1-021
4	"	II	1-024
8	"	II	1-030
8	"	II	1-033
10	"	II	1-036
3	TO5, press to fit	II	2-002
3	"	III	2-003
3	"	IV	2-004
4	"	II	2-006
4	"	III	2-007
4	"	IV	2-008
6	"	II	2-010
6	"	III	2-011
6	"	IV	2-012
8	"	II	2-014
8	"	III	2-015
8	"	IV	2-016
10	"	II	2-018
10	"	III	2-019
10	"	II	2-022
3	TO8	III	3-001
3	RO52	II	5-003
3	TO18	II	6-003
3	"	III	6-005
3	"	IV	6-007
4	"	II	6-011
4	"	III	6-013
4	"	IV	6-015

MIL-S-83505 part number system

Part number example: M83505/03-001



Criteria:
Socket terminations: I - solderless wrap, II - printed circuit, III - solder wire turret, IV - solder cup, V - other.

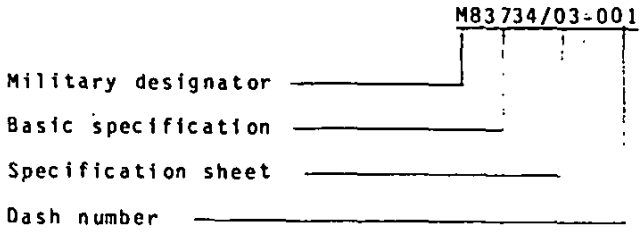
Standard connectors: See table 401-II.

TABLE 401-II. Standard sockets, MIL-S-83505 type.

Socket terminations	Pin acceptance				Sleeve plating	Part number M83505/
	Length		Diameter			
	Max	Min	Max	Min		
I	.175	.125	.021	.016	Gold	1-001
I	.175	.125	.021	.016	Tin-Lead	1-002
I	.175	.125	.021	.016	Gold	1-003
I	.175	.125	.021	.016	Tin-Lead	1-004
I	.175	.125	.021	.016	Gold	1-005
I	.175	.125	.021	.016	Tin-Lead	1-006
II	.143	.125	.021	.016	Gold	2-001
II	.143	.125	.021	.016	Tin-Lead	2-002
II	.148	.105	.021	.016	Gold	2-003
II	.148	.105	.021	.016	Tin-Lead	2-004
III	.281	.170	.050	.040	Gold	3-005
III	.281	.170	.050	.040	Tin-Lead	3-006
III	.175	.125	.021	.016	Gold	3-007
III	.175	.125	.021	.016	Tin-Lead	3-008
IV	.175	.140	.021	.016	Gold	4-001
IV	.175	.140	.021	.016	Tin-Lead	4-002
V	.175	.125	.021	.016	Gold	5-001
V	.175	.125	.021	.016	Tin-Lead	5-002
V	.281	.187	.040	.030	Tin-Lead	5-004
V	.281	.187	.050	.040	Gold	5-005
V	.281	.187	.050	.040	Tin-Lead	5-006
V	.116	.100	.021	.016	Gold	5-007
V	.116	.100	.021	.016	Tin-Lead	5-008
V	.185	.120	.021	.016	Gold	5-009
V	.185	.120	.021	.016	Tin-Lead	5-010
V	.155	.125	.021	.016	Gold	5-013
V	.155	.125	.021	.016	Tin-Lead	5-014
V	.170	.100	.021	.016	Gold	5-023
VI		.100	.021	.016	Gold	6-001
VI		.140	.030	.021	Gold	6-002
VI		.140	.035	.030	Gold	6-003

MIL-S-83734 part number system

Part number example: M83734/03-001



Criteria:
Socket terminations: I - solderless wrap, II - printed circuit, III - solder cup.

Standard connectors: See table 401-III.

TABLE 401-III. Standard sockets, MIL-S-83734 type.

Number of contacts	Termination type	Profile	Part number M83734/
6	II	Low	1-013
6	II	"	1-014
8	I	"	2-010
8	II	"	2-013
8	II	"	2-014
14	II	"	3-013
14	II	"	3-014
16	II	"	4-013
16	II	"	4-014
18	II	"	5-013
18	II	"	5-014
22	II	"	6-013
22	II	"	6-014
28	II	"	7-013
28	II	"	7-014
24	II	"	8-013
24	II	"	8-014
36	II	"	9-013
36	II	"	9-014
40	II	"	10-013
40	II	"	10-014
20	II	"	13-013
20	II	"	13-014

TABLE 401-IV. Sockets, plug-in, MIL-S-12883 type.

MIL-S-12883 P/N	Device	No. of contacts/current rating
M12883/01-02	Socket, electron tube	8/5 amperes
M12883/10-01	Socket, electron tube	7/1 ampere
M12883/11-01	Socket, electron tube	9/1 ampere
M12883/40-01	Relay	14/10 amperes
M12883/40-02	Relay	14/10 amperes
M12883/41-01	Relay	8/10 amperes
M12883/41-02	Relay	8/10 amperes
M12883/41-03	Relay	8/10 amperes
M12883/42-01	Power transistor	2/10 amperes
M12883/42-02	Power transistor	2/10 amperes
M12883/42-03	Power transistor	2/10 amperes
M12883/42-04	Power transistor	2/10 amperes

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