[INCH-POUND]
A-A-59590A
March 7, 2003
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COMMERCIAL ITEM DESCRIPTION

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 3 PIECE, SCREW ACTUATED DRIVE, GENERAL REQUIREMENTS FOR

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

1. SCOPE. This CID covers the general requirements for a family of 3 piece card holders that use screw actuated wedge retainers to hold circuit card assemblies into their installed positions in heat sinking devices (cold plates, heat exchanger) or other applications. Card holders covered by this CID are intended to provide maximum contact between thermal paths on the circuit card assemblies and the heat sink surfaces and to provide resistance to shock and vibration. Requirements for specific card holders are covered in the individual CID specification sheet. Items covered by this CID are intended for commercial/industrial applications.

2. CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN). This CID uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see 7.1).

AA59590	/25	*	*	* *	*
CID number	Applicable CID sheet	Finish	Mounting	Length	Options

3. SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. Card holders supplied to this CID shall meet the interface and physical dimensions as specified herein and on the applicable CID specification sheet.

3.2 CID specification sheet. The family of card holders for use on circuit card assemblies shall be in accordance with the requirements specified herein and the applicable CID specification sheet. In the event of conflict between this general CID and the applicable CID specification sheet, the latter shall govern.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: Defense Supply Center, Columbus, ATTN: DSCC/VAC, Post Office Box 3990, Columbus, OH 43216-5000, telephone (614) 692-0526, facsimile (614) 692-6939, or electronic mail at 5998.Documents@dla.mil.

AMSC N/A FSC 5998

3.3 Material. Materials shall be as specified herein and on the applicable CID specification sheet.

3.3.1 Body and wedges. The body and wedge material shall be aluminum alloy in accordance with ASTM B221, AMS-QQ-A-200/8 or equivalent.

3.3.2 Captive nut (when applicable). The captive nut material shall stainless steel in accordance with ASTM A582 or equivalent.

3.3.3 Cup. The cup material for visual indicators shall stainless steel in accordance with ASTM A240, ASTM A582, or equivalent.

3.3.4 Flat washer. The flat washer (included with the locking feature) shall comply with NAS 620 or equivalent.

3.3.6 Lockwasher. The lockwasher (included with the locking feature) shall comply with NAS M35338, NAS 1676 or equivalent.

3.3.7 Lock nut. The lock nut (included with the screw retention feature) shall comply with NAS M21042, NAS M21043 or equivalent.

3.3.8 Screw. The screw material shall be stainless steel in accordance with AMS-QQ-S-763, ASTM A484, ASTM A582 or equivalent.

3.3.9 Screw retention lock nut. When screw retention is specified, the lock nut used shall be stainless steel in accordance with ASTM A582 (type A286) or equivalent.

3.3.10 Spring. The spring material for visual indicators shall be stainless steel in accordance with ASTM A313, ASTM A580 or equivalent.

3.4 Finish. Finish shall be as specified in table I and on the applicable CID specification sheet or equivalent.

3.4.1 Aluminum parts. All aluminum parts shall be finished as specified in the following paragraphs. A finish designator shall be included in the PIN.

3.4.1.1 Chemical film. Chemical film finish provides corrosion prevention on aluminum and aluminum alloys. Chemical film finish shall be in accordance with MIL-C-5541, Class 1A or equivalent. Chemical film finish assemblies shall include a suffix "C" in the PIN.

3.4.1.2 Black anodized. Black anodized finish provides good surface corrosion protection and medium abrasion resistance. Black anodize finish shall be in accordance with MIL-A-8625, Type II, Class 2 or equivalent. Black anodized finish assemblies shall include a suffix "B" in the PIN.

3.4.1.3 Hard black anodized. Hard black anodized finish provides excellent surface corrosion and abrasion resistance under severe service conditions. Hard black anodize finish shall be in accordance with MIL-A-8625, Type III, Class 2 or equivalent. Hard black anodized finish assemblies shall include a suffix "H" in the PIN.

3.4.1.4 Hard black anodized with dry film lubricant. Dry film lubricant applied over hard black anodize is for the reduction of wear and friction. Hard black anodize finish shall be in accordance with MIL-A-8625, Type III, Class 2 or equivalent. Dry film lubricant shall be in accordance with MIL-PRF-46010 or equivalent. Hard black anodized with dry film lubricant finish assemblies shall include a suffix "D" in the PIN.

3.4.1.5 Nickel, electroless. Electroless nickel finish provides a hard and smooth surface and protects aluminum and aluminum alloys from corrosion, oxidation and wear. Electroless nickel finish shall be in accordance with MIL-DTL-26074, Grade B, Class 4 or equivalent. Electroless nickel finish assemblies shall include a suffix "E" in the PIN.

TABLE I. Card holder finishes.

Finish designator	Finish	Reference document (or equivalent)	Paragraph
C	Chemical film	MIL-C-5541, Class 1A	3.4.1.1
B	Anodize, black	MIL-A-8625, Type II, Class 2	3.4.1.2
H	Anodize, hard black	MIL-A-8625, Type III, Class 2	3.4.1.3
D	Anodize, hard black, with dry film lubricant	MIL-A-8625, Type III, Class 2 and MIL-PRF-46010 (for dry film lubricant)	3.4.1.4
E	Nickel, electroless	MIL-DTL-26074, Grade B, Class 4	3.4.1.5
P	Nickel, electrodeposited	AMS-QQ-N-290, Class 1, Grade G, Bright	3.4.1.6

3.4.1.6 Nickel, electrodeposited. Electrodeposited nickel finish protects metals against corrosive attack in rural, industrial, and marine atmospheres and offers high hardness for wear and low friction. Electrodeposited nickel finish shall be in accordance with AMS-QQ-N-290, Class 1, Grade G, Bright or equivalent. Electrodeposited nickel finish assemblies shall include a suffix "M" in the PIN.

3.4.2 Stainless steel parts (when applicable). Stainless steel parts shall be subjected to passivation treatment in accordance with AMS-QQ-P-35, MIL-S-5002 or equivalent.

3.5 Interface and physical dimensions. The card holders shall be as specified herein and the applicable CID specification sheet. Tolerances, unless otherwise specified on the applicable CID specification sheet, shall be ±.010 (0.25 mm) for three place decimal and ±.02 (0.5 mm) for two place decimals.

3.5.1 Screw. The screw shall have a internal hex socket head for tool engagement and shall turn clockwise to secure the card holder and circuit card assembly into the applicable fixture. Unless otherwise specified, the internal hex socket head shall be .094 inch (2.38 mm) across flats.

3.5.2 Mounting options. The mounting options shall be as specified in the following paragraphs. Mounting option designators shall be included in the PIN (see table II).

3.5.2.1 No mounting holes. No mounting holes option is intended to be used when card holders are to be mounted with adhesives. Card holders not having mounting holes shall include a suffix "N" in the PIN (see table II).

3.5.2.2 Mounting holes. When two mounting holes are required, the holes shall be spaced as indicated in the applicable CID specification sheet. When specified on the applicable CID specification sheet, holder assemblies greater than 6.00 inches (152.4 mm) in length require additional mounting holes.

3.5.2.2.1 Counterbore through holes. Unless otherwise specified on the applicable CID specification sheet, counterbore holes shall be .066 to .073 inch (1.68 to 1.85 mm) diameter countersunk 100° by .140 inch (3.56 mm) diameter through holes with an access/clearance hole of .156 inch (3.97 mm) diameter by .200 inch (5.08 mm) deep. Card holders using counterbore holes shall include a suffix "J" or “K” in the PIN (see table II).

3.5.2.2.2 Tapped holes. Tapped holes shall be 0-80 UNF or 2-56 UNC through holes. Card holders using tapped holes shall include a suffix "T", “V”, “R”, or “S”, respectively in the PIN (see table II).

3.5.2.2.2 Tapped holes, metric. Metric tapped holes shall be metric 2 x 0.4 or metric 2.5 x 0.45 through holes. Card holders using metric tapped holes shall include a suffix "F", “G”, “L”, or “M”, respectively in the PIN (see table II).

TABLE II. Mounting options.

PIN designation	Hole description
N	No mounting holes
J	Counterbore through holes, 2 places
T	Tapped 0-80 UNF holes, 2 places
V	Tapped 2-56 UNC holes, 2 places
K	Counterbore through holes, 3 places
R	Tapped 0-80 UNF holes, 3 places
S	Tapped 2-56 UNC holes, 3 places
F	Tapped, metric 2 x 0.4 holes, 2 places
G	Tapped, metric 2.5 x 0.45 holes, 2 places
L	Tapped, metric 2 x 0.4 holes, 3 places
M	Tapped, metric 2.5 x 0.45 holes, 3 places

3.5.3 Expanded and relaxed dimensions. Expanded and relaxed dimensions shall be as specified in the applicable CID specification sheet.

3.5.4 Length. Card holders length shall be the length of the body and wedge assembly (not to include hardware protrusion) in its relaxed state. Card holders length designator shall be included in the PIN. Examples of length designation (13^{th} and 14^{th} characters of PIN):

2.80 inch card holder = AA59590/01CN28W;

5.00 inch card holder = AA59590/01CN50W;

6.70 inch card holder = AA59590/01CN67W.

3.5.5 Options. Card holders may have the following options.

3.5.5.1 Lockwasher and flat washer. A lockwasher and flat washer located under the screw head will provide for additional resistance to loosening from shock and vibration. Card holders requiring a lockwasher and flat washer option shall include a suffix “W” in the PIN.

3.5.5.2 Screw self-locking element. The use of a screw self-locking element will provide prevailing torque for resistance to loosening from shock vibration. Card holders requiring a screw self-locking element shall include a suffix “E” in the PIN.

3.5.5.3 Lockwasher, flat washer, and screw self-locking element. Card holders requiring a lockwasher, flat washer, and screw self-locking element option shall include a suffix “D” in the PIN.

3.5.6 Disassembly. Unless otherwise specified by the CID specification sheet, card holders shall have the capability of being disassembled before or after mounting.

3.6 Marking. Card holders supplied to this CID can be marked with the manufacturer’s standard commercial PIN when applicable.

4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. PRODUCT CONFORMANCE PROVISIONS.

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, quality assurances practices, and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

5.2 Market acceptance. The following market acceptance criteria are necessary to document the quality of the product to be provided under this CID.

a. The company producing the item must have been producing a product meeting the requirements of this CID for at least 18 months.

b. The company producing the item must have sold 1,000 units meeting the requirements of this CID in the commercial marketplace over the past 18 months.

5.3 Inspection requirements. Inspection and acceptance of material shall be in accordance with the requirements cited in the contract or purchase request.

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order.

7. NOTES

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID. See section 2 for PIN format example.

7.2 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these card holders to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.3 Source of documents.

Department of Defense

MIL-S-5002	-	Surface Treatments and Inorganic Coatings for Metal Surfaces of Weapon Systems.
MIL-C-5541	-	Chemical Conversion Coatings On Aluminum And Aluminum Alloys.
MIL-A-8625	-	Anodic Coatings For Aluminum And Aluminum Alloys.
MIL-DTL-26074	-	Coatings, Electroless Nickel.
MIL-PRF-46010	-	Lubricant, Solid Film, Heat Cured, Corrosion Inhibiting.

(Copies of Department of Defense specifications are available from the Document Automation and Production Service (DAPS), Building 4D (DAPS-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

Other Publications

AEROSPACE INDUSTRIES ASSOCIATION (AIA)

AIA/NAS NAS 620	-	Washer, Flat - Reduced Outside Diameter.
AIA/NAS NAS 1676	-	Washer, Lock-Spring, Helical, Hi-Collar.
AIA/NAS NAS M35338	-	Washer, Lock-Spring, Helical, Regular (Medium) Series.
AIA/NAS M21042	-	Nut, Self-Locking, 450 Degrees F, Reduced Hexagon, Reduced Height, Ring Base, Non-Corrosion Resistant Steel
AIA/NAS M21043	-	Nut, Self-Locking, 800 Degrees F, Reduced Hexagon, Reduced Height, Ring Base, Corrosion Resistant Steel.

(Application for copies should be addressed to the Aerospace Industries Association, 1250 Eye Street, NW, Suite 1200, Washington, DC 20005-3924.)

ASTM INTERNATIONAL (ASTM)

ASTM A240	-	Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM A313	-	Standard Specification for Stainless Steel Spring Wire.
ASTM A484	-	Standard Specification for General Requirements for Stainless Steel Bars, Billets and Forgings.
ASTM A580	-	Standard Specification for Stainless Steel Wire.
ASTM A582	-	Standard Specification for Free-Machining Stainless Steel Bars.
ASTM B221	-	Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.

(Application for copies should be addressed to the ASTM International, 100 Barr Harbor Drive, West Coshohocken, PA 19428-2959.)

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE AMS-QQ-P-35	-	Passivation Treatments for Corrosion-Resistant Steel.
SAE AMS-QQ-A-200/8	-	Aluminum Alloy 6061, Bar, Rod, Shapes, Tube, and Wire, Extruded.
SAE AMS-QQ-N-290	-	Nickel Plating (Electrodeposited).
SAE AMS-QQ-S-763	-	Steel Bars, Wire, Shapes, and Forgings, Corrosion Resistant.

(Application for copies should be addressed to the SAE World Headquaters, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

(Industry association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

7.4 Ordering data. The contract or order should specify the following:

a. CID document number, revision, and CID PIN.

b. Product conformance provisions.

c. Packaging requirements.

7.5 Government users. To acquire information on obtaining these card holders from the Government inventory system, contact Defense Supply Center, Columbus, ATTN: DSCC-CAC, Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-7444/7435.

MILITARY INTERESTS:

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA – CC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - 7FXE

Preparing Activity

DLA - CC

Project 5998-0134