

INCH-POUND

A-A-59590/16A
9 November 2005
SUPERSEDING
A-A-59590/16
24 May 2002

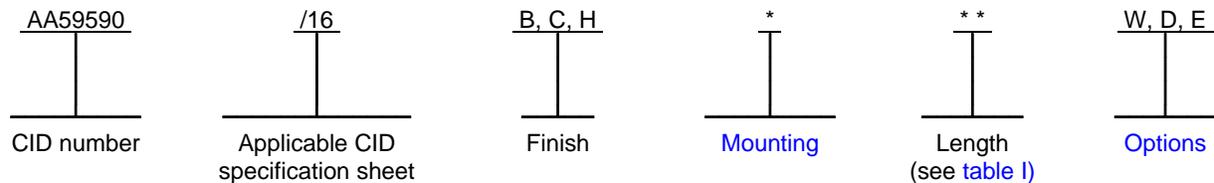
COMMERCIAL ITEM DESCRIPTION SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 3 PIECE, SCREW ACTUATED DRIVE,
.375 X .375 INCH BODY SIZE, WITH VISUAL LOCK INDICATION AND SCREW RETENTION

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

The complete requirements for procuring electrical card holders described herein shall consist of this document and the latest issue in effect of [A-A-59590](#).

CLASSIFICATION/PART IDENTIFICATION NUMBER (PIN). This commercial item description (CID) specification sheet uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see [NOTES](#)).



Example: AA59590/16CG58 is the PIN for a chemical film finished, 5.8 inch (147.3 mm) long visual lock indicating card holder with a lock nut on the screw for captivation. The card holder also features three tapped mounting holes for use with metric M2.5 x 0.45 fasteners .

SALIENT CHARACTERISTICS.

Performance. Card holders shall hold the circuit card assembly firmly in its installed position. When the card holder is installed properly, it is capable of withstanding 60g/6ms of shock, 25 G-rms of vibration, and provides from 2 to 4 degrees C/W/inch thermal resistance transfer between the circuit card assembly and the heat sink surfaces.

Interface and physical dimensions. The card holders supplied to this CID specification sheet shall be as specified on [figures 1, 2, 3, 4, and 5](#), in [table I](#), and [A-A-59590](#).

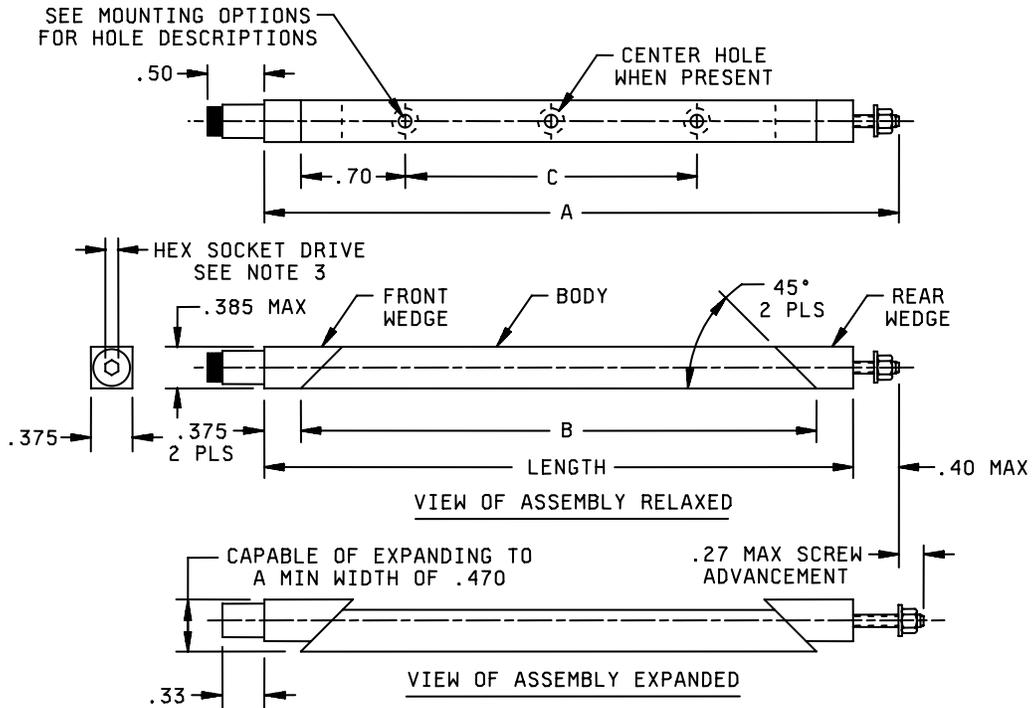
Visual lock indicator (see [figure 2](#)). Card holders shall have a visual indicator to show when the card holder is in its relaxed (unlocked) state. When the card holder is in the unlocked (relaxed) state, the actuating end of the screw shall display a red band on the side of the screw. When the actuating screw on the card holder has been tightened (assembly expanded) so that the assembly is in the locked position, this red band shall be concealed.

Screw retention (see [figure 3](#)). Card holders shall have a screw retention feature intended to prevent unintentional disassembly of the card holder. The locknut shall be fabricated of a corrosion resistant material.

Nominal installation torque. When card holders are used in cold plate applications, the nominal installation torque of each card holder shall be as follows: 16 to 20 inch-pounds (1.8 to 2.3 N-m) for assemblies using no options or option "W" and 17 to 21 inch-pounds (1.9 to 2.5 N-m) for assemblies using options "E" or "D".

AMSC N/A

FSC 5998



| Inches | mm | Inches | mm | Inches | mm | Inches | mm |
|--------|-----|--------|-----|--------|------|--------|------|
| .27 | 6.9 | .33 | 8.3 | .385 | 9.8 | .50 | 12.7 |
| .30 | 7.6 | .375 | 9.5 | .470 | 11.9 | .70 | 17.8 |

NOTES:

1. Dimensions are in inches. Millimeters are given for information only.
2. Unless otherwise specified, tolerances are for $\pm .02$ inch (0.51 mm) for two place decimals and $\pm .010$ (0.25 mm) for three place decimals.
3. The across flats dimension for hex drive socket shall be .140 inch (3.57 mm) for mounting options "J", "K", "N", "R", "T", "S", and "V". The across flats dimension for hex drive socket shall be a metric dimension of 3.0 mm (.118 inch) across flats for mounting option "G" and "M".

FIGURE 1. Relaxed and expanded dimensions.

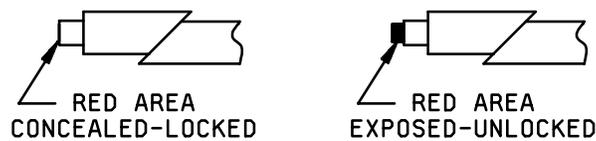


FIGURE 2. Visual lock indicator.



FIGURE 3. Screw retaining self-locking nut (corrosion resistant) details.

Cold plate dimensions. Recommend cold plate slot width to accommodate the circuit card assembly with attached card holder is .425 inch (10.80 mm) plus the thickness of the printed board of the circuit card assembly (see [A-A-59590](#)).

Finish. The finish options shall be as specified in [A-A-59590](#). The finish options available for this specification sheet are as follows: “B” (black anodize), “C” (chemical film), or “H” (hard black anodize).

Mounting. The mounting options shall be as specified in [A-A-59590](#). The mounting options available for this specification sheet are as follows: “J” or “K” (rivet mounting holes), “N” (no mounting holes), “R” or “T” (tapped 0-80 UNF 2B holes), “V” or “S” (tapped 2-56 UNC 2B holes), or “G” or “M” (tapped M2.5 x.45 metric holes). See [figure 1](#) and table I for mounting hole spacing requirements. Card holders using mounting option “J” or “K” may be shipped unassembled.

Rivet mounting holes. The holes used for rivet mounting shall be .136 inch (3.45 mm) diameter through holes, countersunk 100 degrees by .190 to .200 inch (4.83 to 5.08 mm) diameter with an access/clearance counterbore hole of .190 to .200 inch (4.83 to 5.08 mm) diameter by .300 inch (7.62 mm) deep.

Mounting hole locations (when specified). Two mounting holes are required on card holders less than 5.30 inches (134.6 mm) in length. Three mounting holes are required on card holders 5.30 inches (134.6 mm) or greater in length. The third mounting hole, when present, shall be centered on the mounting body. See [figure 1](#) and table I for mounting hole locations and spacing requirements.

Length, expanded, and relaxed dimensions. The length, expanded, and relaxed dimensions shall be as specified on [figure 1](#). The length designator shall be as specified in [A-A-59590](#) and the available lengths are listed in table I.

TABLE I. Assembly dimensions (see [figure 1](#)). 1/

| PIN length designator | Dimension “LENGTH” ± .02 (0.5) | Dimension “A” (maximum) | Dimension “B” ± .03 (0.8) | Dimension “C” ± .005 (0.13) |
|-----------------------|-----------------------------------|----------------------------|------------------------------|--------------------------------|
| 28 | 2.8 (71.1) | 3.45 (87.6) | 2.05 (52.1) | .65 (16.5) |
| 33 | 3.3 (83.8) | 3.95 (100.3) | 2.55 (64.8) | 1.15 (29.2) |
| 38 | 3.8 (96.5) | 4.45 (113.0) | 3.05 (77.5) | 1.65 (41.9) |
| 43 | 4.3 (109.2) | 4.95 (125.7) | 3.55 (90.2) | 2.15 (54.6) |
| 48 | 4.8 (121.9) | 5.45 (138.4) | 4.05 (102.9) | 2.65 (67.3) |
| 53 | 5.3 (134.6) | 5.95 (151.1) | 4.55 (115.6) | 3.15 (80.0) |
| 58 | 5.8 (147.3) | 6.45 (163.8) | 5.05 (128.3) | 3.65 (92.7) |

1/ Dimensions are in inches. Millimeters, in parenthesis, are given for information only.

Options. Card holders can have the following options. Card holders not requiring the following option shall leave the options position in the PIN blank.

Lockwasher and flat washer (see figure 4). 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 (see classification and notes).

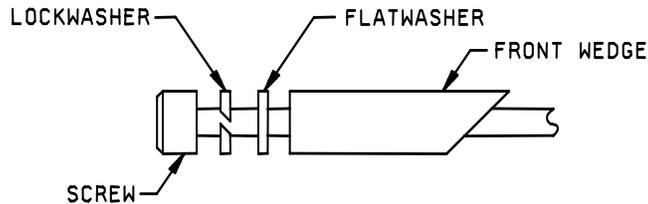


FIGURE 4. Lockwasher and flat washer details.

Screw self-locking element (see figure 5). The use of a screw self-locking element will provide prevailing torque for resistance to loosening from shock and vibration. Card holders requiring a screw self-locking element shall include a suffix "E" in the PIN (see classification and notes).



FIGURE 5. Screw self-locking element details.

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 (see classification and notes).

NOTES.

PIN. The PIN should be used for Government purposes to buy commercial products to this CID specification sheet. See the classification section for PIN format example.

Source of documents.

Commercial Item Description

A-A-59590 – Holder, Electrical Card, Wedge Retainers, 3 Piece, Screw Actuated Drive, General Requirements For.

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

Ordering data. Ordering data is as specified in A-A-59590.

Commercial products. As part of the market analysis and research effort, this CID specification sheet was coordinated with the following manufacturers of commercial products. At the time of CID specification sheet preparation and coordination, these manufacturers were known to have commercial products that would meet the requirements of this CID specification sheet. (NOTE: This information should not be considered as a list of approved manufacturers or be used to restrict procurement to only the manufacturers shown.)

| <u>Manufacturer CAGE</u> | <u>Manufacturer name and address</u> | <u>Manufacturer contact information</u> |
|--------------------------|---|---|
| 18915 | APW Electronic Solutions 14100 Danielson Street Poway, CA 92064-6898 | Telephone: (858) 679-4550 Facsimile: (858) 679-4555 Electronic mail: sales.electronicsolutions@apw.com Uniform Resource Locator (URL): www.apw.com |
| 52094 | Calmark Corporation 4915 Walnut Grove Avenue San Gabriel, CA 91776-2099 | Telephone: (626) 287-0451 Facsimile: (626) 287-7350 Electronic mail: sales@calmark.com URL: www.calmark.com |

Part number supersession data. These CID specification sheet PINs supersedes the following manufacturer's part numbers as shown in table II. The CID PINs listed in table II are only for length designator "28". See [table III](#) for CID PIN construction using other available lengths for this specification sheet. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE II. Commercial part number supersession data.

| PIN designator AA59590/16 | Vendor similar designator or type part number <u>1/</u> CAGE 18915 | PIN designator AA59590/16 | Vendor similar designator or type part number <u>1/</u> CAGE 52094 |
|------------------------------|--|------------------------------|--|
| CJ28 | 44VI-6-LN | CJ28 | V250CR2.80HR |
| CN28 | 44VI-6-LN-A | CN28 | V250CR2.80R |
| CT28 | 44VI-6-LN-T | CT28 | V250CR2.80T0R |
| CV28 | 44VI-6-LN-S | CV28 | V250CR2.80T2R |
| CG28 | 44VI-6-LN-M | CG28 | MV250CR2.80TM2.5R |
| CJ28E | 44VI-6-LN-L | CJ28E | V250CR2.80HLR |
| CN28E | 44VI-6-LN-A-L | CN28E | V250CR2.80LR |
| CT28E | 44VI-6-LN-T-L | CT28E | V250CR2.80T0LR |
| CV28E | 44VI-6-LN-S-L | CV28E | V250CR2.80T2LR |
| CG28E | 44VI-6-LN-M-L | CG28E | MV250CR2.80TM2.5LR |
| CJ28W | 44VI-6-LF-LN | CJ28W | WV250CR2.80HR |
| CN28W | 44VI-6-LF-LN-A | CN28W | WV250CR2.80R |
| CT28W | 44VI-6-LF-LN-T | CT28W | WV250CR2.80T0R |
| CV28W | 44VI-6-LF-LN-S | CV28W | WV250CR2.80T2R |
| CG28W | 44VI-6-LF-LN-M | CG28W | MWV250CR2.80TM2.5R |

See footnote at end of table.

TABLE II. Commercial part number supersession data – Continued.

| PIN designator AA59590/16 | Vendor similar designator or type part number ^{1/} CAGE 18915 | PIN designator AA59590/16 | Vendor similar designator or type part number ^{1/} CAGE 52094 |
|------------------------------|--|------------------------------|--|
| CJ28D | 44VI-6-LF-LN-L | CJ28D | WV250CR2.80HLR |
| CN28D | 44VI-6-LF-LN-AL | CN28D | WV250CR2.80LR |
| CT28D | 44VI-6-LF-LN-TL | CT28D | WV250CR2.80T0LR |
| CV28D | 44VI-6-LF-LN-SL | CV28D | WV250CR2.80T2LR |
| CG28D | 44VI-6-LF-LN-ML | CG28D | MWV250CR2.80TM2.5LR |
| BJ28 | 44VI-6-B-LN | BJ28 | VA250CR2.80HR |
| BN28 | 44VI-6-B-LN-A | BN28 | VA250CR2.80R |
| BT28 | 44VI-6-B-LN-T | BT28 | VA250CR2.80T0R |
| BV28 | 44VI-6-B-LN-S | BV28 | VA250CR2.80T2R |
| BG28 | 44VI-6-B-LN-M | BG28 | MVA250CR2.80TM2.5R |
| BJ28E | 44VI-6-B-LN-L | BJ28E | VA250CR2.80HLR |
| BN28E | 44VI-6-B-LN-A-L | BN28E | VA250CR2.80LR |
| BT28E | 44VI-6-B-LN-T-L | BT28E | VA250CR2.80T0LR |
| BV28E | 44VI-6-B-LN-S-L | BV28E | VA250CR2.80T2LR |
| BG28E | 44VI-6-B-LN-M-L | BG28E | MVA250CR2.80TM2.5LR |
| BJ28W | 44VI-6-B-LF-LN | BJ28W | WVA250CR2.80HR |
| BN28W | 44VI-6-B-LF-LNA | BN28W | WVA250CR2.80R |
| BT28W | 44VI-6-B-LF-LNT | BT28W | WVA250CR2.80T0R |
| BV28W | 44VI-6-B-LF-LNS | BV28W | WVA250CR2.80T2R |
| BG28W | 44VI-6-B-LF-LNM | BG28W | MWVA250CR2.80TM2.5R |
| BJ28D | 44VI-6-B-LF-LNL | BJ28D | WVA250CR2.80HLR |
| BN28D | 44VI-6-B-LFLNAL | BN28D | WVA250CR2.80LR |
| BT28D | 44VI-6-B-LFLNLT | BT28D | WVA250CR2.80T0LR |
| BV28D | 44VI-6-B-LFLNSL | BV28D | WVA250CR2.80T2LR |
| BG28D | 44VI-6-B-LFLNML | BG28D | MWVA250CR2.80TM2.5LR |
| HJ28 | 44VI-6-B3-LN | HJ28 | VHA250CR2.80HR |
| HN28 | 44VI-6-B3-LN-A | HN28 | VHA250CR2.80R |
| HT28 | 44VI-6-B3-LN-T | HT28 | VHA250CR2.80T0R |
| HV28 | 44VI-6-B3-LN-S | HV28 | VHA250CR2.80T2R |
| HG28 | 44VI-6-B3-LN-M | HG28 | MVHA250CR2.80TM2.5R |

See footnote at end of table.

TABLE II. Commercial part number supersession data – Continued.

| PIN designator AA59590/16 | Vendor similar designator or type part number ^{1/} CAGE 18915 | PIN designator AA59590/16 | Vendor similar designator or type part number ^{1/} CAGE 52094 |
|------------------------------|--|------------------------------|--|
| HJ28E | 44VI-6-B3-LN-L | HJ28E | VHA250CR2.80HLR |
| HN28E | 44VI-6-B3-LN-AL | HN28E | VHA250CR2.80LR |
| HT28E | 44VI-6-B3-LN-TL | HT28E | VHA250CR2.80T0LR |
| HV28E | 44VI-6-B3-LN-SL | HV28E | VHA250CR2.80T2LR |
| HG28E | 44VI-6-B3-LN-ML | HG28E | MVHA250CR2.80TM2.5LR |
| HJ28W | 44VI-6-B3-LF-LN | HJ28W | WVHA250CR2.80HR |
| HN28W | 44VI-6-B3-LFLNA | HN28W | WVHA250CR2.80R |
| HT28W | 44VI-6-B3-LFLNT | HT28W | WVHA250CR2.80T0R |
| HV28W | 44VI-6-B3-LFLNS | HV28W | WVHA250CR2.80T2R |
| HG28W | 44VI-6-B3-LFLNM | HG28W | MWVHA250CR2.80TM2.5R |
| HJ28D | 44VI-6-B3-LFLNL | HJ28D | WVHA250CR2.80HLR |
| HN28D | 44VI-6-B3LFLNAL | HN28D | WVHA250CR2.80LR |
| HT28D | 44VI-6-B3LFLNTL | HT28D | WVHA250CR2.80T0LR |
| HV28D | 44VI-6-B3LFLNSL | HV28D | WVHA250CR2.80T2LR |
| HG28D | 44VI-6-B3LFLNML | HG28D | MWVHA250CR2.80TM2.5LR |

^{1/} The manufacturer's part number shall not be used for procurement to the requirements of this CID specification sheet. At the time of preparation of this CID specification sheet, the aforementioned commercial products were reviewed and could be replaced by the CID PIN shown. For actual part marking requirements, see the marking paragraph in [A-A-59590](#).

TABLE III. Example of PIN with available length designators.

| PIN designator AA59590/16 | Vendor similar designator or type part number <u>1/</u> CAGE 18915 | PIN designator AA59590/16 | Vendor similar designator or type part number <u>1/</u> <u>2/</u> CAGE 52094 |
|------------------------------|--|------------------------------|--|
| CG28D | 44VI-6-LF-LN-ML | CG28D | MWV250CR2.80T0LR |
| CG33D | 44VI-7-LF-LN-ML | CG33D | MWV250CR3.30T0LR |
| CG38D | 44VI-8-LF-LN-ML | CG38D | MWV250CR3.80T0LR |
| CG43D | 44VI-9-LF-LN-ML | CG43D | MWV250CR4.30T0LR |
| CG48D | 44VI-10-LF-LNML | CG48D | MWV250CR4.80T0LR |
| CM53D | 44VI-11-LF-LNML | CM53D | MWV250CR5.30ET0LR |
| CM58D | 44VI-12-LF-LNML | CM58D | MWV250CR5.80ET0LR |

- 1/ The manufacturer's part number shall not be used for procurement to the requirements of this CID specification sheet. At the time of preparation of this CID specification sheet, the aforementioned commercial products were reviewed and could be replaced by the CID PIN shown. For actual part marking requirements, see the marking paragraph in [A-A-59590](#).
- 2/ Other lengths are available on request.

MILITARY INTERESTS:

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

Review activity:
 Air Force – 99

CIVIL AGENCY COORDINATING ACTIVITY:

GSA – FSS
 Preparing Activity:
 DLA – CC
 Project 5998-2005-004

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