

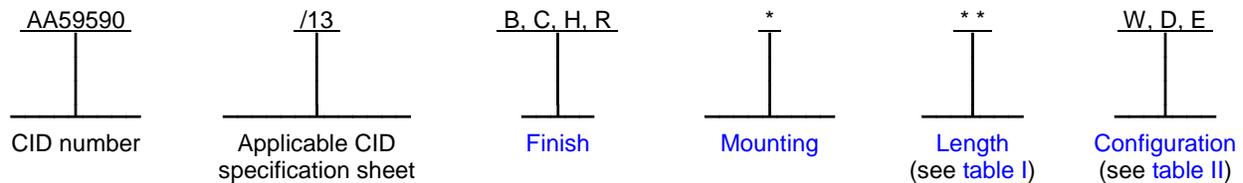
COMMERCIAL ITEM DESCRIPTION  
SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 3 PIECE,  
SCREW ACTUATED DRIVE, .375 X .375 INCH BODY SIZE

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: AA59590/13HV28W is the PIN for a hard black anodize finished, 2.8 inch (71.1 mm) long card holder. The card holder also features two tapped mounting holes for use with 2-56 UNC 2B fasteners and a lockwasher and flat washer under the screw head for added resistance to loosening.

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.

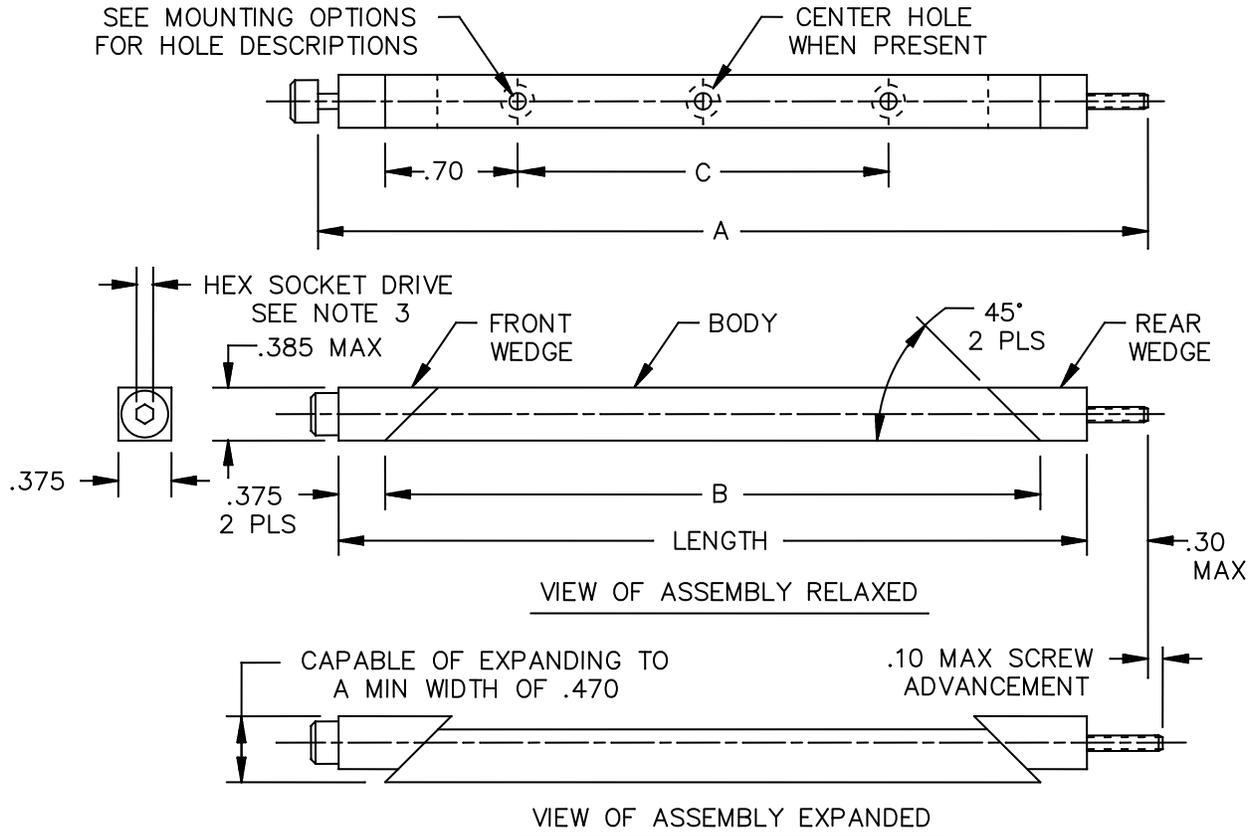
Material. Unless otherwise specified herein, the card holder materials shall be as specified in [A-A-59590](#).

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

Actuating screw hex drive socket. The across flats dimension for the hex drive socket shall be as follows: .140 inch (3.56 mm) for mounting options "J", "N", "T", "R", "V", and "S" and 3.0 mm (0.118 inch) for mounting options "G" and "M".

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".

Cold plate slot width dimensions (when applicable). The recommended 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](#)).



| Inches | mm  | Inches | mm  | Inches | mm   |
|--------|-----|--------|-----|--------|------|
| .10    | 2.5 | .375   | 9.5 | .470   | 11.9 |
| .20    | 5.1 | .385   | 9.8 | .70    | 17.8 |

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
2. Unless otherwise specified, tolerances are  $\pm 0.02$  inch (0.51 mm) for two place decimals and  $\pm 0.010$  inch (0.25 mm) for three place decimals.
3. The across flats dimension for hex drive socket shall be .140 inch (3.56 mm) for mounting options "J", "N", "R", "T", "S" and "V". The across flats dimension for hex drive socket shall be a metric dimension of 3.0 mm (0.118 inch) across flats for mounting option "G" and "M".

FIGURE 1. Relaxed and expanded dimensions.

**Finish.** The finish designator shall be as specified in [A-A-59590](#). The finishes available for this CID specification sheet are as follows: "B" (black anodize), "C" (gold chemical film), "H" (hard black anodize), or "R" (clear chemical film).

**Mounting.** The mounting designators shall be as specified in [A-A-59590](#). The mounting options available for this CID specification sheet are as follows: "J" (rivet mounting holes), "N" (no mounting holes), "T" or "R" (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). Card holders using mounting option "J" may be shipped unassembled. See figure 1 for mounting hole spacing requirements.

**Mounting hole locations (when required).** When mounting holes are specified in the PIN, 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.

**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.

**Rivets.** This card holder uses rivet style B as specified in [A-A-59590](#) when rivet mounting is used.

**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 for this specification sheet are listed in [table I](#).

TABLE I. [Assembly dimensions \(see figure 1\)](#). <sup>1/</sup>

| PIN length designator | Dimension "LENGTH"<br>±.02 (0.5) | Dimension "A"<br>(maximum) | Dimension "B"<br>±.03 (0.8) | Dimension "C"<br>±.005 (0.13) |
|-----------------------|----------------------------------|----------------------------|-----------------------------|-------------------------------|
| 28                    | 2.8 (71.1)                       | 3.10 (78.7)                | 2.05 (52.1)                 | .65 (16.5)                    |
| 33                    | 3.3 (83.8)                       | 3.60 (91.4)                | 2.55 (64.8)                 | 1.15 (29.2)                   |
| 38                    | 3.8 (96.5)                       | 4.10 (104.1)               | 3.05 (77.5)                 | 1.65 (41.9)                   |
| 43                    | 4.3 (109.2)                      | 4.60 (116.8)               | 3.55 (90.2)                 | 2.15 (54.6)                   |
| 48                    | 4.8 (121.9)                      | 5.10 (129.5)               | 4.05 (102.9)                | 2.65 (67.3)                   |
| 53                    | 5.3 (134.6)                      | 5.60 (142.2)               | 4.55 (115.6)                | 3.15 (80.0)                   |
| 58                    | 5.8 (147.3)                      | 6.10 (154.9)               | 5.05 (128.3)                | 3.65 (92.7)                   |

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

**Configuration.** The configuration of a card holder shall be as specified in [table II](#). The details of a particular configuration consist of those on [figure 1](#), and may include those on [figures 2](#) and [3](#). Card holders not requiring the options described by [table II](#) shall leave the configuration position in the PIN blank.

TABLE II. Configurations.

| Configuration | Applicable figures | Hardware options                                       |
|---------------|--------------------|--|
|               | 1                  | No added options                                       |
| W             | 1 and 2            | Lockwasher and flat washer                             |
| E             | 1 and 3            | Screw self-locking element                             |
| D             | 1, 2, and 3        | Lockwasher, flat washer and screw self-locking element |

Lockwasher and flat washer (see figure 2). 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 shall include a suffix "W" in the PIN (see [classification](#) and [notes](#)).

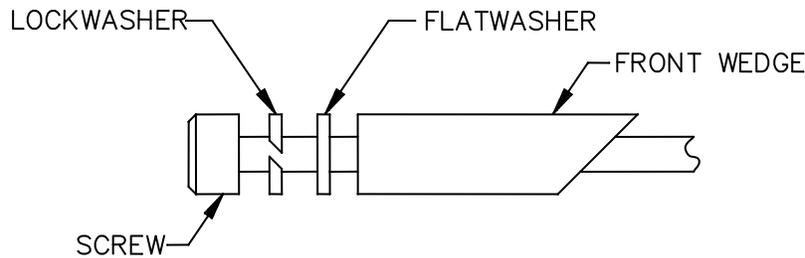


FIGURE 2. Lockwasher and flat washer details.

Screw self-locking element (see figure 3). 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](#)).

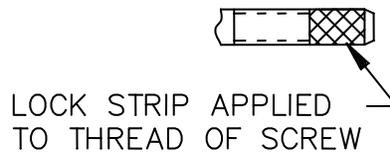


FIGURE 3. Screw self-locking element details.

Lockwasher, flat washer, and screw self-locking element. Card holders requiring a lockwasher, flat washer, and screw self-locking element configuration 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 <https://assist.daps.dla.mil/quicksearch/> or <https://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                    | Birtcher<br>A Division of Pentair Electronic Packaging<br>7328 Trade Street<br>San Diego, CA 92121-3410 | Telephone: (858) 740-2400<br>Toll Free: (800) 854-7086<br>Facsimile: (858) 740-2430<br>URL: <a href="http://www.birtcherproducts.com">www.birtcherproducts.com</a>  |
| 61081                    | Calmark<br>A Division of Pentair Electronic Packaging<br>7328 Trade Street<br>San Diego, CA 92121-3410  | Telephone: (858) 740-2400<br>Toll Free: (800) 854-7086<br>Facsimile: (858) 740-2430<br>Electronic mail: <a href="mailto:sales@calmark.com">sales@calmark.com</a><br>URL: <a href="http://www.calmark.com">www.calmark.com</a> |
| 5BG68                    | Card Locks Unlimited, Inc.<br>2310 E. Orangethorpe Avenue<br>Anaheim, CA 92806-1231                     | Telephone: (714) 738-6194<br>Facsimile: (714) 446-0119<br>E-mail: <a href="mailto:sales@clumfg.com">sales@clumfg.com</a><br>URL: <a href="http://www.clumfg.com">www.clumfg.com</a>   |

Part number supersession data. This CID specification sheet PINs supersedes the following manufacturer's part numbers as shown in [table III](#). The CID PINs listed in table III are only for length designator "28". See [table IV](#) 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 III. Commercial part number supersession data.

| PIN designator<br>AA59590/13 | Vendor similar designator<br>or type part number <u>1/</u><br>CAGE 18915 | Vendor similar designator<br>or type part number <u>1/</u><br>CAGE 61081 | Vendor similar designator<br>or type part number <u>1/</u><br>CAGE 5BG68 |
|------------------------------|--|--|--|
| BJ28                         | 44-6-B   | A250-2.80H   | 3250BA-2.80H   |
| BN28                         | 44-6-B-A   | A250-2.80  | 3250BA-2.80  |
| BT28                         | 44-6-B-T   | A250-2.80T0  | 3250BA-2.80T0  |
| BV28                         | 44-6-B-S   | A250-2.80T2  | 3250BA-2.80T2  |
| BG28                         | 44-6-B-M   | MA250-2.80TM2.5  | 3250MBA-2.80TM2.5  |
| BJ28E                        | 44-6-B-L   | A250-2.80HL  | 3240BA-2.80HL  |
| BN28E                        | 44-6-B-A-L   | A250-2.80L   | 3240BA-2.80L   |
| BT28E                        | 44-6-B-T-L   | A250-2.80T0L   | 3240BA-2.80T0L   |
| BV28E                        | 44-6-B-S-L   | A250-2.80T2L   | 3250BA-2.80T2L   |
| BG28E                        | 44-6-B-M-L   | MA250-2.80TM2.5L   | 3250MBA-2.80TM2.5L   |
| BJ28W                        | 44-6-B-LF  | WA250-2.80H  | 3250WBA-2.80H  |
| BN28W                        | 44-6-B-LF-A  | WA250-2.80   | 3250WBA-2.80   |
| BT28W                        | 44-6-B-LF-T  | WA250-2.80T0   | 3250WBA-2.80T0   |
| BV28W                        | 44-6-B-LF-S  | WA250-2.80T2   | 3250WBA-2.80T2   |
| BG28W                        | 44-6-B-LF-M  | MWA250-2.80TM2.5   | 3250MWBA-2.80TM2.5   |
| BJ28D                        | 44-6-B-LF-L  | WA250-2.80HL   | 3250WBA-2.80HL   |
| BN28D                        | 44-6-B-LF-A-L  | WA250-2.80L  | 3250WBA-2.80L  |
| BT28D                        | 44-6-B-LF-T-L  | WA250-2.80T0L  | 3250WBA-2.80T0L  |
| BV28D                        | 44-6-B-LF-S-L  | WA250-2.80T2L  | 3250WBA-2.80T2L  |
| BG28D                        | 44-6-B-LF-M-L  | MWA250-2.80TM2.5L  | 3250MWBA-2.80TM2.5L  |
| CJ28                         | 44-6   | 250-2.80H  | 3250CG-2.80H   |
| CN28                         | 44-6-A   | 250-2.80   | 3250CG-2.80  |
| CT28                         | 44-6-T   | 250-2.80T0   | 3250CG-2.80T0  |
| CV28                         | 44-6-S   | 250-2.80T2   | 3250CG-2.80T2  |
| CG28                         | 44-6-M   | M250-2.80TM2.5   | 3250MCG-2.80TM2.5  |
| CJ28E                        | 44-6-L   | 250-2.80HL   | 3250CG-2.80HL  |
| CN28E                        | 44-6-A-L   | 250-2.80L  | 3250CG-2.80L   |
| CT28E                        | 44-6-T-L   | 250-2.80T0L  | 3250CG-2.80T0L   |
| CV28E                        | 44-6-S-L   | 250-2.80T2L  | 3250CG-2.80T2L   |
| CG28E                        | 44-6-M-L   | M250-2.80TM2.5L  | 3250MCG-2.80TM2.5L   |

See footnote at end of table.

TABLE III. Commercial part number supersession data – Continued.

| PIN designator<br>AA59590/13 | Vendor similar designator<br>or type part number <u>1/</u><br>CAGE 18915 | Vendor similar designator<br>or type part number <u>1/</u><br>CAGE 61081 | Vendor similar designator<br>or type part number <u>1/</u><br>CAGE 5BG68 |
|------------------------------|--|--|--|
| CJ28W                        | 44-6-LF  | W250-2.80H   | 3250WCG-2.80H  |
| CN28W                        | 44-6-LF-A  | W250-2.80  | 3250WCG-2.80   |
| CT28W                        | 44-6-LF-T  | W250-2.80T0  | 3250WCG-2.80T0   |
| CV28W                        | 44-6-LF-S  | W250-2.80T2  | 3250WCG-2.80T2   |
| CG28W                        | 44-6-LF-M  | MW250-2.80TM2.5  | 3250MWCG-2.80TM2.5   |
| CJ28D                        | 44-6-LF-L  | W250-2.80HL  | 3250WCG-2.80HL   |
| CN28D                        | 44-6-LF-A-L  | W250-2.80L   | 3250WCG-2.80L  |
| CT28D                        | 44-6-LF-T-L  | W250-2.80T0L   | 3250WCG-2.80T0L  |
| CV28D                        | 44-6-LF-S-L  | W250-2.80T2L   | 3250WCG-2.80T2L  |
| CG28D                        | 44-6-LF-M-L  | MW250-2.80TM2.5L   | 3250MWCG-2.80TM2.5L  |
| HJ28                         | 44-6-B3  | HA250-2.80H  | 3250BH-2.80H   |
| HN28                         | 44-6-B3-A  | HA250-2.80   | 3250BH-2.80  |
| HT28                         | 44-6-B3-T  | HA250-2.80T0   | 3250BH-2.80T0  |
| HV28                         | 44-6-B3-S  | HA250-2.80T2   | 3250BH-2.80T2  |
| HG28                         | 44-6-B3-M  | MHA250-2.80TM2.5   | 3250MBH-2.80TM2.5  |
| HJ28E                        | 44-6-B3-L  | HA250-2.80HL   | 3250BH-2.80HL  |
| HN28E                        | 44-6-B3-A-L  | HA250-2.80L  | 3250BH-2.80L   |
| HT28E                        | 44-6-B3-T-L  | HA250-2.80T0L  | 3250BH-2.80T0L   |
| HV28E                        | 44-6-B3-S-L  | HA250-2.80T2L  | 3250BH-2.80T2L   |
| HG28E                        | 44-6-B3-M-L  | MHA250-2.80TM2.5L  | 3250MBH-2.80TM2.5L   |
| HJ28W                        | 44-6-B3-LF   | WHA250-2.80H   | 3250WBH-2.80H  |
| HN28W                        | 44-6-B3-LF-A   | WHA250-2.80  | 3250WBH-2.80   |
| HT28W                        | 44-6-B3-LF-T   | WHA250-2.80T0  | 3250WBH-2.80T0   |
| HV28W                        | 44-6-B3-LF-S   | WHA250-2.80T2  | 3250WBH-2.80T2   |
| HG28W                        | 44-6-B3-LF-M   | MWHA250-2.80TM2.5  | 3250MWBH-2.80TM2.5   |
| HJ28D                        | 44-6-B3-LF-L   | WHA250-2.80HL  | 3250WBH-2.80HL   |
| HN28D                        | 44-6-B3-LF-A-L   | WHA250-2.80L   | 3250WBH-2.80L  |
| HT28D                        | 44-6-B3-LF-T-L   | WHA250-2.80T0L   | 3250WBH-2.80T0L  |
| HV28D                        | 44-6-B3-LF-S-L   | WHA250-2.80T2L   | 3250WBH-2.80T2L  |
| HG28D                        | 44-6-B3-LF-M-L   | MWHA250-2.80TM2.5L   | 3250MWBH-2.80TM2.5L  |

See footnote at end of table.

TABLE III. Commercial part number supersession data – Continued.

| PIN designator<br>AA59590/13 | Vendor similar designator<br>or type part number <sup>1/</sup><br>CAGE 18915 | Vendor similar designator<br>or type part number <sup>1/</sup><br>CAGE 61081 | Vendor similar designator<br>or type part number <sup>1/</sup><br>CAGE 5BG68 |
|------------------------------|--|--|--|
| RJ28                         | 44-6-CC  | R250-2.80H   | 3250CC-2.80H   |
| RN28                         | 44-6-CC-A  | R250-2.80  | 3250CC-2.80  |
| RT28                         | 44-6-CC-T  | R250-2.80T0  | 3250CC-2.80T0  |
| RV28                         | 44-6-CC-S  | R250-2.80T2  | 3250CC-2.80T2  |
| RG28                         | 44-6-CC-M  | MR250-2.80TM2.5  | 3250MCC-2.80TM2.5  |
| RJ28E                        | 44-6-CC-L  | R250-2.80HL  | 3250CC-2.80HL  |
| RN28E                        | 44-6-CC-A-L  | R250-2.80L   | 3250CC-2.80L   |
| RT28E                        | 44-6-CC-T-L  | R250-2.80T0L   | 3250CC-2.80T0L   |
| RV28E                        | 44-6-CC-S-L  | R250-2.80T2L   | 3250CC-2.80T2L   |
| RG28E                        | 44-6-CC-M-L  | MR250-2.80TM2.5L   | 3250MCC-2.80TM2.5L   |
| RJ28W                        | 44-6-CC-LF   | WR250-2.80H  | 3250WCC-2.80H  |
| RN28W                        | 44-6-CC-LF-A   | WR250-2.80   | 3250WCC-2.80   |
| RT28W                        | 44-6-CC-LF-T   | WR250-2.80T0   | 3250WCC-2.80T0   |
| RV28W                        | 44-6-CC-LF-S   | WR250-2.80T2   | 3250WCC-2.80T2   |
| RG28W                        | 44-6-CC-LF-M   | MWR250-2.80TM2.5   | 3250MWCC-2.80TM2.5   |
| RJ28D                        | 44-6-CC-LF-L   | WR250-2.80HL   | 3250WCC-2.80HL   |
| RN28D                        | 44-6-CC-LF-A-L   | WR250-2.80L  | 3250WCC-2.80L  |
| RT28D                        | 44-6-CC-LF-T-L   | WR250-2.80T0L  | 3250WCC-2.80T0L  |
| RV28D                        | 44-6-CC-LF-S-L   | WR250-2.80T2L  | 3250WCC-2.80T2L  |
| RG28D                        | 44-6-CC-LF-M-L   | MWR250-2.80TM2.5L  | 3250MWCC-2.80TM2.5L  |

- <sup>1/</sup> 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 IV. Example of PIN with available length designators.

| PIN designator<br>AA59590/13 | Vendor similar designator<br>or type part number <sup>1/</sup> <sub>2/</sub><br>CAGE 18915 | Vendor similar designator<br>or type part number <sup>1/</sup> <sub>2/</sub><br>CAGE 61081 | Vendor similar designator<br>or type part number <sup>1/</sup> <sub>2/</sub><br>CAGE 5BG68 |
|------------------------------|--|--|--|
| BT28                         | 44-6-B-T   | A250-2.80T0  | 3250BA-2.80T0  |
| BT33                         | 44-7-B-T   | A250-3.30T0  | 3250BA-3.30T0  |
| BT38                         | 44-8-B-T   | A250-3.80T0  | 3250BA-3.80T0  |
| BT43                         | 44-9-B-T   | A250-4.30T0  | 3250BA-4.30T0  |
| BT48                         | 44-10-B-T  | A250-4.80T0  | 3250BA-4.80T0  |
| BR53                         | 44-11-B-T  | A250-5.30ET0   | 3250BA-5.30ET0   |
| BR58                         | 44-12-B-T  | A250-5.80ET0   | 3250BA-5.80ET0   |

- <sup>1/</sup> 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](#).
- <sub>2/</sub> Other lengths are available on request.

MILITARY INTERESTS:

Custodians:  
 Army – CR  
 Navy – EC  
 Air Force – 85  
 DLA – CC

Review Activity:  
 Air Force – 99

CIVIL AGENCY COORDINATING ACTIVITY:

GSA – FAS  
 Preparing Activity:  
 DLA – CC  
 Project 5998-2010-023

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