

[INCH-POUND]  
A-A-59590/16C  
31 March 2015  
SUPERSEDING  
A-A-59590/16B  
28 August 2010

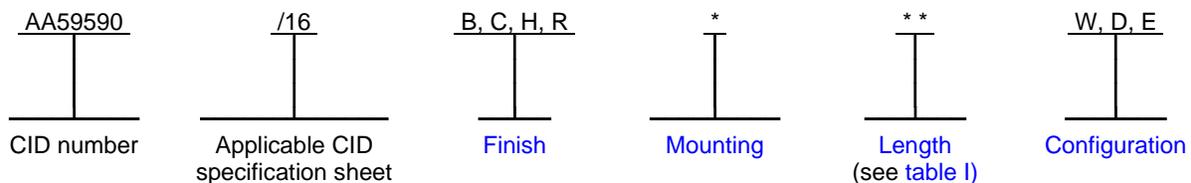
## COMMERCIAL ITEM DESCRIPTION SPECIFICATION SHEET

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](#) herein).



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.

**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, 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.

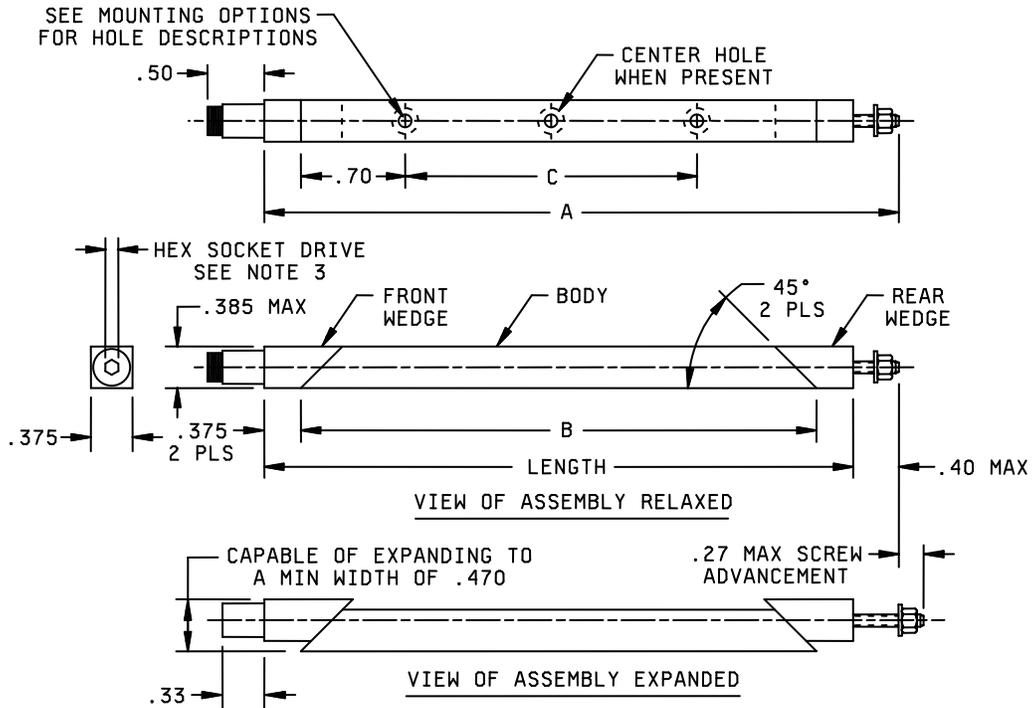
**Screw retention (see [figure 3](#)).** Card holders shall have a screw retention feature intended to prevent unintentional disassembly of the card holder. The locknut shall be fabricated of a corrosion resistant material.

**Actuating screw hex drive socket.** The across flats dimension for the hex drive socket shall be as follows: .140 inch (3.57 mm) for mounting options "J", "N", "T", "R", "V", and "S" and a metric dimension of 3.0 mm (0.118 inch) for mounting options "G" and "M".

AMSC N/A

FSC 5998





Inches	mm	Inches	mm	Inches	mm	Inches	mm
.27	6.9	.375	9.5	.40	10.2	.50	12.7
.33	8.3	.385	9.8	.470	11.9	.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 (3.57 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 (.118 inch) across flats for mounting option "G" and "M".

FIGURE 1. Relaxed and expanded dimensions.

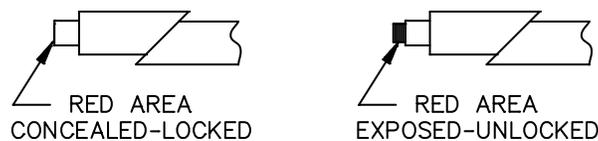


FIGURE 2. Visual lock indicator.

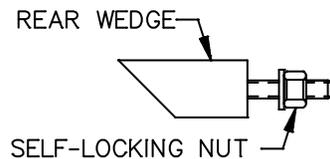


FIGURE 3. Screw retaining self-locking nut (corrosion resistant) details.

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 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 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), "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). Card holders using mounting option "J" may be shipped unassembled. See [figure 1](#) and [table I](#) for mounting hole 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.

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 general 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 figures 1, 2 and 3, and may include those on figures 4 and 5. 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, 2, and 3	No added options
W	1, 2, 3 and 4	Lockwasher and flat washer
E	1, 2, 3 and 5	Screw self-locking element
D	1, 2, 3, 4 and 5	Lockwasher, flat washer and screw self-locking element

Lockwasher and flat washer (see figure 4). A lockwasher and flat washer located under the screw head will provide for additional resistance to loosening of the card holder assembly 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).

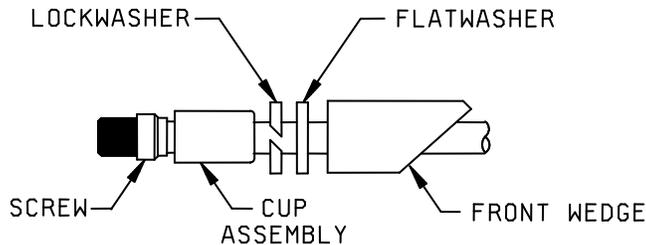


FIGURE 4. Lockwasher and flat washer details.

Screw self-locking element (see figure 5). The use of a screw self-locking element will provide prevailing torque for resistance to loosening of the card holder assembly from shock and vibration. The screw self-locking element shall be as specified in A-A-59590. Card holders requiring a screw self-locking element shall include a suffix "E" in the PIN (see [classification](#) and [notes](#)).

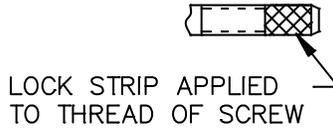


FIGURE 5. Screw self-locking element details.

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://quicksearch.dla.mil>.)

Ordering data. Ordering data shall be 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>
61081 (1)	Schroff Division of Pentair Equipment and Electronic Protection (formerly Birtcher) 7328 Trade Street San Diego, CA 92121-3410	Telephone: (858) 740-2400 Toll Free: (800) 854-7086 Facsimile: (858) 740-2430 E-mail: <a href="mailto:schroff.us@pentair.com">schroff.us@pentair.com</a> URL: <a href="http://www.pentairprotect.com">http://www.pentairprotect.com</a>
61081 (2)	Schroff Division of Pentair Equipment and Electronic Protection (formerly Calmark) 7328 Trade Street San Diego, CA 92121-3410	Telephone: (858) 740-2400 Toll Free: (800) 854-7086 Facsimile: (858) 740-2430 E-mail: <a href="mailto:schroff.us@pentair.com">schroff.us@pentair.com</a> URL: <a href="http://www.pentairprotect.com">http://www.pentairprotect.com</a>
5BG68	American Circuit Card Retainers, Inc. 2310 E. Orangethorpe Avenue Anaheim, CA 92806-1231	Telephone: (714) 738-6194 Facsimile: (714) 446-0119 E-mail: <a href="mailto:sales@accrmfg.com">sales@accrmfg.com</a> URL: <a href="http://www.accrmfg.com">www.accrmfg.com</a>



Part number supersession data. These 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 AA59590/16	Vendor similar designator or type part number <a href="#">1/</a>		
	CAGE 61081 <a href="#">2/</a>	CAGE 61081 <a href="#">3/</a>	CAGE 5BG68
BJ28	44VI-6-B-LN	VA250CR2.80HR	3370VBA-2.80HR
BN28	44VI-6-B-LN-A	VA250CR2.80R	3370VBA-2.80R
BT28	44VI-6-B-LN-T	VA250CR2.80T0R	3370VBA-2.80T0R
BV28	44VI-6-B-LN-S	VA250CR2.80T2R	3370VBA-2.80T2R
BG28	44VI-6-B-LN-M	MVA250CR2.80TM2.5R	3370MVBA-2.80TM2.5R
BJ28E	44VI-6-B-LN-L	VA250CR2.80HLR	3370VBA-2.80HLR
BN28E	44VI-6-B-LN-AL	VA250CR2.80LR	3370VBA-2.80LR
BT28E	44VI-6-B-LN-TL	VA250CR2.80T0LR	3370VBA-2.80T0LR
BV28E	44VI-6-B-LN-SL	VA250CR2.80T2LR	3370VBA-2.80T2LR
BG28E	44VI-6-B-LN-ML	MVA250CR2.80TM2.5LR	3370MVBA-2.80TM2.5LR
BJ28W	44VI-6-B-LF-LN	WVA250CR2.80HR	3370VWBA-2.80HR
BN28W	44VI-6-B-LFLNA	WVA250CR2.80R	3370VWBA-2.80R
BT28W	44VI-6-B-LFLNT	WVA250CR2.80T0R	3370VWBA-2.80T0R
BV28W	44VI-6-B-LFLNS	WVA250CR2.80T2R	3370VWBA-2.80T2R
BG28W	44VI-6-B-LFLNM	MWVA250CR2.80TM2.5R	3370MVWBA-2.80TM2.5R
BJ28D	44VI-6-B-LFLNL	WVA250CR2.80HLR	3370VWBA-2.80HLR
BN28D	44VI-6-BLFLNAL	WVA250CR2.80LR	3370VWBA-2.80LR
BT28D	44VI-6-BLFLNTL	WVA250CR2.80T0LR	3370VWBA-2.80T0LR
BV28D	44VI-6-BLFLNSL	WVA250CR2.80T2LR	3370VWBA-2.80T2LR
BG28D	44VI-6-BLFLNML	MWVA250CR2.80TM2.5LR	3370MVWBA-2.80TM2.5LR

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/16	Vendor similar designator or type part number <u>1/</u>		
	CAGE 61081 <u>2/</u>	CAGE 61081 <u>3/</u>	CAGE 5BG68
CJ28	44VI-6-LN	V250CR2.80HR	3370VCG-2.80HR
CN28	44VI-6-LN-A	V250CR2.80R	3370VCG-2.80R
CT28	44VI-6-LN-T	V250CR2.80T0R	3370VCG-2.80T0R
CV28	44VI-6-LN-S	V250CR2.80T2R	3370VCG-2.80T2R
CG28	44VI-6-LN-M	MV250CR2.80TM2.5R	3370MVCG-2.80TM2.5R
CJ28E	44VI-6-LN-L	V250CR2.80HLR	3370VCG-2.80HLR
CN28E	44VI-6-LN-A-L	V250CR2.80LR	3370VCG-2.80LR
CT28E	44VI-6-LN-T-L	V250CR2.80T0LR	3370VCG-2.80T0LR
CV28E	44VI-6-LN-S-L	V250CR2.80T2LR	3370VCG-2.80T2LR
CG28E	44VI-6-LN-M-L	MV250CR2.80TM2.5LR	3370MVCG-2.80TM2.5LR
CJ28W	44VI-6-LF-LN	WV250CR2.80HLR	3370WVCG-2.80HR
CN28W	44VI-6-LF-LN-A	WV250CR2.80R	3370WVCG-2.80R
CT28W	44VI-6-LF-LN-T	WV250CR2.80T0R	3370WVCG-2.80T0R
CV28W	44VI-6-LF-LN-S	WV250CR2.80T2R	3370WVCG-2.80T2R
CG28W	44VI-6-LF-LN-M	MWV250CR2.80TM2.5R	3370MVWCG-2.80TM2.5R
CJ28D	44VI-6-LF-LN-L	WV250CR2.80HLR	3370VWCG-2.80HLR
CN28D	44VI-6-LF-LNAL	WV250CR2.80LR	3370VWCG-2.80LR
CT28D	44VI-6-LF-LNTL	WV250CR2.80T0LR	3370VWCG-2.80T0LR
CV28D	44VI-6-LF-LNSL	WV250CR2.80T2LR	3370VWCG-2.80T2LR
CG28D	44VI-6-LF-LNML	MWV250CR2.80TM2.5LR	3370MVWCG-2.80TM2.5LR
HJ28	44VI-6-B3-LN	VHA250CR2.80HR	3370VBH-2.80HR
HN28	44V-6-B3-LN-A	VHA250CR2.80R	3370VBH-2.80R
HT28	44VI-6-B3-LN-T	VHA250CR2.80T0R	3370VBH-2.80T0R
HV28	44VI-6-B3-LN-S	VHA250CR2.80T2R	3370VBH-2.80T2R
HG28	44VI-6-B3-LN-M	MVHA250CR2.80TM2.5R	3370MVBH-2.80TM2.5R
HJ28E	44VI-6-B3-LN-L	VHA250CR2.80HLR	3370VBH-2.80HLR
HN28E	44VI-6-B3-LNAL	VHA250CR2.80LR	3370VBH-2.80LR
HT28E	44VI-6-B3-LNTL	VHA250CR2.80T0LR	3370VBH-2.80T0LR
HV28E	44VI-6-B3-LNSL	VHA250CR2.80T2LR	3370VBH-2.80T2LR
HG28E	44VI-6-B3-LNML	MVHA250CR2.80TM2.5LR	3370MVBH-2.80TM2.5LR

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/16	Vendor similar designator or type part number <u>1/</u>		
	CAGE 61081 <u>2/</u>	CAGE 61081 <u>3/</u>	CAGE 5BG68
HJ28W	44VI-6-B3-LFLN	WVHA250CR2.80HR	3370VWBH-2.80HR
HN28W	44VI-6-B3LFLNA	WVHA250CR2.80R	3370VWBH-2.80R
HT28W	44VI-6-B3LFLNT	WVHA250CR2.80T0R	3370VWBH-2.80T0R
HV28W	44VI-6-B3LFLNS	WVHA250CR2.80T2R	3370VWBH-2.80T2R
HG28W	44VI-6-B3LFLNM	MWVHA250CR2.80TM2.5R	3370MVWBH-2.80TM2.5R
HJ28D	44VI-6-B3LFLNL	WVHA250CR2.80HLR	3370VWBH-2.80HLR
HN28D	44VI-6B3LFLNAL	WVHA250CR2.80LR	3370VWBH-2.80LR
HT28D	44VI-6B3LFLNLT	WVHA250CR2.80T0LR	3370VWBH-2.80T0LR
HV28D	44VI-6B3LFLNSL	WVHA250CR2.80T2LR	3370VWBH-2.80T2LR
HG28D	44VI-6B3LFLNML	MWVHA250CR2.80TM2.5LR	3370MVWBH-2.80TM2.5LR
RJ28	44VI-6-CC-LN	VR250CR2.80HR	3370VCC-2.80HR
RN28	44VI-6-CC-LN-A	VR250CR2.80R	3370VCC-2.80R
RT28	44VI-6-CC-LN-T	VR250CR2.80T0R	3370VCC-2.80T0R
RV28	44VI-6-CC-LN-S	VR250CR2.80T2R	3370VCC-2.80T2R
RG28	44VI-6-CC-LN-M	MVR250CR2.80TM2.5R	3370MVCC-2.80TM2.5R
RJ28E	44VI-6-CC-LN-L	VR250CR2.80HLR	3370VCC-2.80HLR
RN28E	44VI-6-CC-LNAL	VR250CR2.80LR	3370VCC-2.80LR
RT28E	44VI-6-CC-LNTL	VR250CR2.80T0LR	3370VCC-2.80T0LR
RV28E	44VI-6-CC-LNSL	VR250CR2.80T2LR	3370VCC-2.80T2LR
RG28E	44VI-6-CC-LNML	MVR250CR2.80TM2.5LR	3370MVCC-2.80TM2.5LR
RJ28	44VI-6-CCLFLN	VR250CR2.80HR	3370VCC-2.80HR
RN28	44VI-6-CCLFLNA	VR250CR2.80R	3370VCC-2.80R
RT28	44VI-6-CCLFLNT	VR250CR2.80T0R	3370VCC-2.80T0R
RV28	44VI-6-CCLFLNS	VR250CR2.80T2R	3370VCC-2.80T2R
RG28	44VI-6-CCLFLNM	MVR250CR2.80TM2.5R	3370MVCC-2.80TM2.5R

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/16	Vendor similar designator or type part number <u>1/</u>		
	CAGE 61081 <u>2/</u>	CAGE 61081 <u>3/</u>	CAGE 5BG68
RJ28E	44VI-6-CCLFLNL	VR250CR2.80HL	3370VCC-2.80HLR
RN28E	44VI-6CCLFLNAL	VR250CR2.80L	3370VCC-2.80LR
RT28E	44VI-6CCLFLNLT	VR250CR2.80T0L	3370VCC-2.80T0LR
RV28E	44VI-6CCLFLNSL	VR250CR2.80T2L	3370VCC-2.80T2LR
RG28E	44VI-6CCLFLNML	MVR250CR2.80TM2.5L	3370MVCC-2.80TM2.5LR

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](#).

2/ PINs listed are for CAGE [61081 \(1\)](#).

3/ PINs listed are for CAGE [61081 \(2\)](#).

PIN length examples. The CID PINs listed in table IV are for all available standard card holder lengths for this specification sheet. However, only one specific finish, mounting and configuration are listed (see PIN example for a break-down of the codes).

TABLE IV. Example of PIN with available length designators.

PIN designator AA59590/16	Vendor similar designator or type part number <u>1/</u> <u>2/</u>		
	CAGE 61081 <u>3/</u>	CAGE 61081 <u>4/</u>	CAGE 5BG68
CG28D	44VI-6-LF-LNML	MWV250CR2.80T0LR	3370MVWCG-2.80TM2.5LR
CG33D	44VI-7-LF-LNML	MWV250CR3.30T0LR	3370MVWCG-3.30TM2.5LR
CG38D	44VI-8-LF-LNML	MWV250CR3.80T0LR	3370MVWCG-3.80TM2.5LR
CG43D	44VI-9-LF-LNML	MWV250CR4.30T0LR	3370MVWCG-4.30TM2.5LR
CG48D	44VI-10-LFLNML	MWV250CR4.80T0LR	3370MVWCG-4.80TM2.5LR
CM53D	44VI-11-LFLNML	MWV250CR5.30ET0LR	3370MVWCG-5.30ETM2.5LR
CM58D	44VI-12-LFLNML	MWV250CR5.80ET0LR	3370MVWCG-5.80ETM2.5LR

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](#).

2/ Other lengths are available on request.

3/ PINs listed are for CAGE [61081 \(1\)](#).

4/ PINs listed are for CAGE [61081 \(2\)](#).

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

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 5998-2015-006

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.dla.mil>.