

[INCH-POUND]
A-A-59789/3B
13 July 2015
SUPERSEDING
A-A-59789/3A
21 July 2010

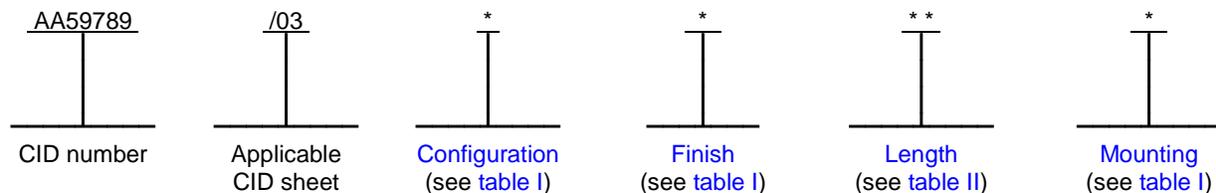
COMMERCIAL ITEM DESCRIPTION
SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 5 PIECE, FOR COLD PLATE APPLICATIONS,
.225 X .225 INCH BODY SIZE, WEDGE MOUNTING BODY, WITH TWO MOUNTING HOLES,
WITH SCREW ACTUATION AND 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-59789](#).

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: AA59789/03NH60T is the PIN for a hard black anodize finished, 5.8 inch (147.3 mm) long card holder with a retained actuating screw. The card holder also feature two tapped mounting holes for use with 0-80 UNF 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 firmly in place providing high resistance to shock and vibration while providing maximum thermal transfer.

Interface and physical dimensions. The card holders supplied to this CID specification sheet shall be as specified herein and meet the general requirements specified in CID [A-A-59789](#). Card holders shall have a screw retention feature to prevent unintentional disassembly of the card holder.

Material. Unless otherwise specified herein, the card holder materials shall be as specified in [A-A-59789](#).

Actuating screw hex drive socket. The dimension for hex drive socket shall be .094 inch (2.38 mm) across flats for mounting options "S", "R", "P", "U", and "T".

Cold plate slot width. The recommend cold plate slot width to accommodate the circuit card assembly with attached card holder is .250 inch (6.35 mm) plus the thickness of the printed board of the circuit card assembly (see [A-A-59789](#)).

Installation torque. The recommended nominal installation torque is as follows: 6 inch-pounds (0.68 N-m) for assemblies of configuration "A", "C", "F", or "W" and 7.2 inch-pounds (0.81 N-m) for assemblies of configurations "D", "J", "L", or "N".



Configuration. The configuration of a card holder shall be as specified in [table I](#). The details of a particular configuration consist of those on [figures 1 and 2](#), and may include those on [figures 3 and 4](#). This specification sheet covers two styles of mounting bodies, style A and style C. The differences between the two mounting body styles are detailed in tables I and II and on [figure 1](#).

TABLE I. [Configurations](#).

| Configuration | Mounting body style | Finish options | Mounting options | Applicable figures | Hardware options |
|---------------|---------------------|----------------|------------------|--------------------|--|
| A | A | B, C, H, P | S, R, T, P | 1 and 2 | No hardware options added |
| C | C | B, C, E, H | S, R, T, U | | |
| F | A | B, C, H, P | S, R, T, P | 1, 2, and 3 | Lockwasher and flat washer |
| W | C | B, C, E, H | S, R, T, U | | |
| N | A | B, C, H, P | S, R, T, P | 1, 2, and 4 | Screw self-lock element |
| L | C | B, C, E, H | S, R, T, U | | |
| J | A | B, C, H, P | S, R, T, P | 1, 2, 3, and 4 | Lockwasher, flat washer, and screw self-lock element |
| D | C | B, C, E, H | S, R, T, U | | |

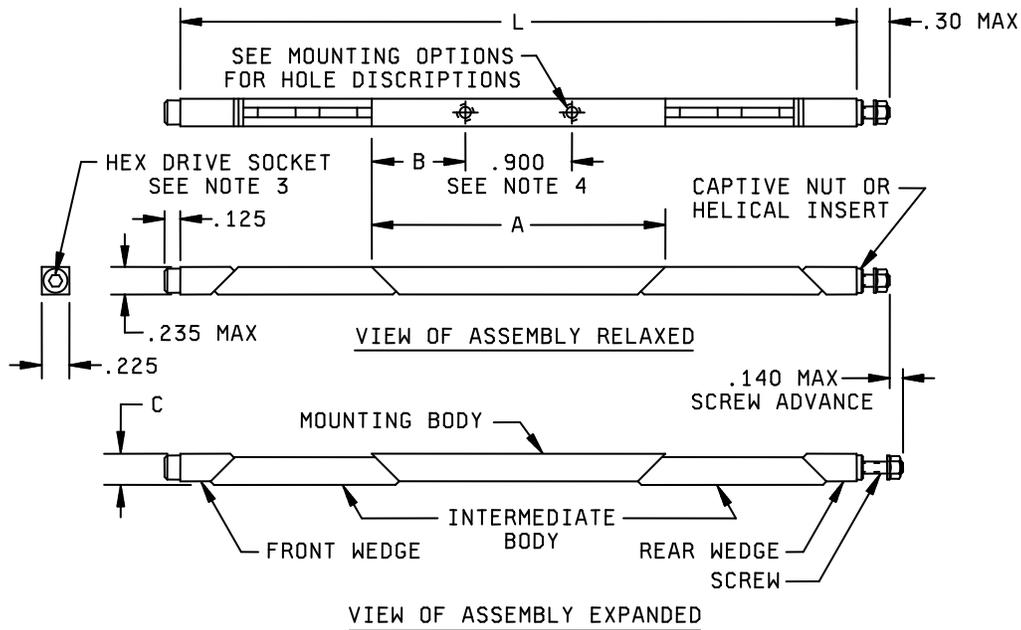
Finish. The finish designator shall be as specified in [A-A-59789](#). The finishes available for this CID specification sheet are as follows: "B" (black anodize), "C" (gold chemical film), "E" (electroless nickel), "P" (electrodeposited nickel), or "H" (hard black anodize). See table I for the finish options associated with the two mounting body styles. The center mounting wedge is not finished for card holders using mounting option "P".

Length, expanded and relaxed dimensions. The length designator shall be as specified in [A-A-59789](#) and the lengths available for this CID specification sheet are listed in table II. The length, expanded, and relaxed dimensions shall be as specified on [figure 1](#).

TABLE II. [Additional assembly dimensions](#) (see [figure 1](#)). ^{1/}

| PIN length designator | Dimension "L" ±.02 (0.5) | Mounting body style | Dimension "A" ±.01 (0.3) | Dimension "B" ±.02 (0.5) | Dimension "C" minimum |
|-----------------------|--------------------------|---------------------|--------------------------|--------------------------|-----------------------|
| 50 | 4.8 (121.9) | A | 1.50 (38.1) | .30 (7.6) | .275 (6.99) |
| | | C | 1.50 (38.1) | .30 (7.6) | .275 (6.99) |
| 55 | 5.3 (134.6) | A | 2.00 (50.8) | .55 (14.0) | .275 (6.99) |
| | | C | 1.50 (38.1) | .30 (7.6) | .275 (6.99) |
| 60 | 5.8 (147.3) | A | 2.50 (63.5) | .80 (20.3) | .275 (6.99) |
| | | C | 1.50 (38.1) | .30 (7.6) | .275 (6.99) |
| 65 | 6.3 (160.0) | A | 3.00 (71.2) | 1.05 (26.7) | .275 (6.99) |
| | | C | 1.50 (38.1) | .30 (7.6) | .275 (6.99) |

^{1/} Dimensions are in inches. Millimeters are given for information only.



| Inches | mm | Inches | mm | Inches | mm |
|--------|------|--------|------|--------|-------|
| .125 | 3.18 | .225 | 5.72 | .30 | 7.6 |
| .140 | 3.56 | .235 | 5.97 | .900 | 22.86 |

NOTES:

1. Dimensions are in inches. Millimeter equivalents are given for general information only.
2. Unless otherwise specified, tolerances are ± 0.02 inch (0.51 mm) for two place decimals and ± 0.010 (0.25 mm) for three place decimals.
3. The across flats dimension for hex drive socket shall be .094 inch (2.38 mm).
4. Tolerance for the hole spacing is ± 0.010 inch (0.25 mm) for mounting body style A and ± 0.005 inch (0.51 mm) for mounting body style C.

FIGURE 1. Relaxed and expanded dimensions.

Mounting. The mounting designators shall be as specified in [A-A-59789](#). The mounting options available for this CID specification sheet are as follows: "S" (tapped 2-56 holes), "R" (rivet mount holes with counterbore and countersink), "T" (tapped 0-80 holes), "P" ($\varnothing.062 \times .040$ index pins), or "U" (tapped metric M2 x 0.4 holes). See [figure 1](#) and [table II](#) for mounting hole spacing requirements. See [table I](#) for the mounting options associated with the two mounting body styles. Card holders using mounting option "P" and "R" may be shipped unassembled.

Rivet mounting holes. The holes used for rivet mounting shall be .066/.073 inch (1.68/1.85 mm) diameter, countersunk 100 degrees by .140 inch (3.56 mm) diameter through holes with a counterbore of .156 inch (3.96 mm) diameter with a depth of .165 inch (4.19 mm) for style C mounting bodies and .175 inch (4.45 mm) for style A mounting bodies.

Rivets. This card holder uses rivet type A as specified in [A-A-59789](#) when rivet mounting is used.

Screw retention locknut (see figure 2). Card holders shall have a screw retention locknut intended to prevent unintentional disassembly of the card holder. The locknut shall be fabricated of a corrosion resistant material.

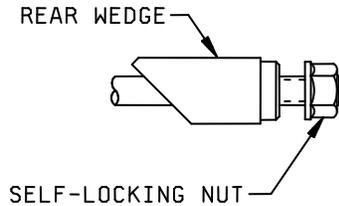


FIGURE 2. Screw retaining self-locking nut (corrosion resistant) details.

Configuration hardware options. Card holders can have the following options: no hardware options added, lockwasher and flat washer (see figure 3), screw self lock element (see figure 4), or lockwasher, flat washer, and screw self lock element (see figures 3 and 4). See [table I](#) for the correct PIN configuration identifier.

No hardware options added. The base configuration of the card holder is as depicted by [figures 1](#) and [2](#). Card holders not requiring any hardware options shall include configuration identifier "A" or "C" in the PIN (see [classification](#), [notes](#), and [table I](#)).

Lockwasher and flat washer (see figure 3). 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 configuration identifier "F" or "W" in the PIN (see [classification](#), [notes](#), and [table I](#)).

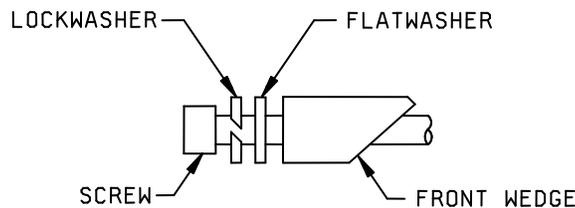


FIGURE 3. Lockwasher and flat washer details.

Screw self-locking element (see figure 4). 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 configuration identifier "L" or "N" in the PIN (see [classification](#), [notes](#), and [table I](#)).

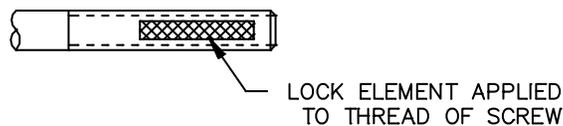


FIGURE 4. Screw self-locking element details.

Lockwasher, flat washer, and screw self-locking element. Card holders requiring a lockwasher, flat washer, and screw self-locking element option shall include configuration identifier "D" or "J" in the PIN (see [classification](#), [notes](#), and [table I](#)).

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-59789](#) – Holder, Electrical Card, Wedge Retainers, 5 Piece, For Cold Plate Applications, 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-59789](#).

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> | |
|--------------------------|---|---|---|
| 5BG68 | American Circuit Card Retainers, Inc. 2310 E. Orangethorpe Avenue Anaheim, CA 92806-1231 | Telephone: (714) 738-6194 Facsimile: (714) 446-0119 E-mail: sales@accrmfg.com URL: www.accrmfg.com |  |
| 61081 (1) | Schroff Division of Pentair Equipment and Electronic Protection (formerly Birtcher) 7238 Trade Street San Diego, CA 92121-3410 | Telephone: (858) 740-2400 Toll Free: (800) 854-7086 Facsimile: (858) 740-2430 E-mail: schroff.us@pentair.com URL: http://www.pentairprotect.com |  |
| 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: schroff.us@pentair.com URL: http://www.pentairprotect.com |  |

Part number supersession data. This CID specification sheet PINs supersedes the following manufacturer's part numbers as shown in [tables III](#) and [IV](#). The CID PINs listed in [tables III](#) and [IV](#) are only for length designator "60". See [table V](#) for CID PIN construction using other available lengths for this CID specification sheet. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE III. Commercial part number supersession data, mounting body style A.

| PIN designator AA59789/03 | Vendor similar designator or type part number ^{1/} CAGE 61081 ^{2/} | PIN designator AA59789/03 | Vendor similar designator or type part number ^{1/} CAGE 61081 ^{2/} |
|------------------------------|--|------------------------------|--|
| AB60S | 42-5-12-B-LN | NB60S | 42-5-12-B-LN-L |
| AB60R | 42-5-12-B-LN-R | NB60R | 42-5-12-B-LNRL |
| AB60T | 42-5-12-B-LN-T | NB60T | 42-5-12-B-LNNTL |
| AB60P | 42-5-12-B-LN-P | NB60P | 42-5-12-B-LNPL |
| FB60S | 42-5-12-B-LFLN | JB60S | 42-5-12-BLFLNL |
| FB60R | 42-5-12-BLFLNR | JB60R | 42-5-12BLFLNR |
| FB60T | 42-5-12-BLFLNT | JB60T | 42-5-12BLFLNTL |
| FB60P | 42-5-12-BLFLNP | JB60P | 42-5-12BLFLNPL |
| AC60S | 42-5-12-LN | NC60S | 42-5-12-LN-L |
| AC60R | 42-5-12-LN-R | NC60R | 42-5-12-LN-R-L |
| AC60T | 42-5-12-LN-T | NC60T | 42-5-12-LN-T-L |
| AC60P | 42-5-12-LN-P | NC60P | 42-5-12-LN-P-L |
| FC60S | 42-5-12-LF-LN | JC60S | 42-5-12-LF-LNL |
| FC60R | 42-5-12-LF-LNR | JC60R | 42-5-12-LFLNRL |
| FC60T | 42-5-12-LF-LNT | JC60T | 42-5-12-LFLNNTL |
| FC60P | 42-5-12-LF-LNP | JC60P | 42-5-12-LFLNPL |
| AP60S | 42-5-12-N-LN | NP60S | 42-5-12-N-LN-L |
| AP60R | 42-5-12-N-LN-R | NP60R | 42-5-12-N-LNRL |
| AP60T | 42-5-12-N-LN-T | NP60T | 42-5-12-N-LNNTL |
| AP60P | 42-5-12-N-LN-P | NP60P | 42-5-12-N-LNPL |
| FP60S | 42-5-12-N-LFLN | JP60S | 42-5-12-NLFLNL |
| FP60R | 42-5-12-NLFLNR | JP60R | 42-5-12NLFLNRL |
| FP60T | 42-5-12-NLFLNT | JP60T | 42-5-12NLFLNNTL |
| FP60P | 42-5-12-NLFLNP | JP60P | 42-5-12NLFLNPL |

See footnotes at end of table.

TABLE III. Commercial part number supersession data, mounting body style A – Continued.

| PIN designator AA59789/03 | Vendor similar designator or type part number ^{1/} CAGE 61081 ^{2/} | PIN designator AA59789/03 | Vendor similar designator or type part number ^{1/} CAGE 61081 ^{2/} |
|------------------------------|--|------------------------------|--|
| AH60S | 42-5-12-B3-LN | NH60S | 42-5-12-B3-LNL |
| AH60R | 42-5-12-B3-LNR | NH60R | 42-5-12-B3LNRL |
| AH60T | 42-5-12-B3-LNT | NH60T | 42-5-12-B3LNTL |
| AH60P | 42-5-12-B3-LNP | NH60P | 42-5-12-B3LNPL |
| FH60S | 42-5-12-B3LFLN | JH60S | 42-5-12B3LFLNL |
| FH60R | 42-5-12B3LFLNR | JH60R | 42-512B3LFLNRL |
| FH60T | 42-5-12B3LFLNT | JH60T | 42-512B3LFLNTL |
| FH60P | 42-5-12B3LFLNP | JH60P | 42-512B3LFLNPL |

^{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-59789](#).

^{2/} CAGE is for [61081 \(1\)](#).

TABLE IV. Commercial part number supersession data, mounting body style C.

| PIN designator AA59789/03 | Vendor similar designator or type part number 1/ | | |
|------------------------------|--|--------------------|------|
| | CAGE 61081 2/ | CAGE 5BG68 | CAGE |
| CB60S | A231CR5.80T2R | G5220BA-5.80T2R | |
| CB60R | A231CR5.80HR | GG5220BA-5.80HR | |
| CB60T | A231CR5.80T0R | G52220BA-5.80T0R | |
| CB60U | A231CR5.80TM2R | G5220BA-5.80TM2R | |
| WB60S | WA231CR5.80T2R | G5220WBA-5.80T2R | |
| WB60R | WA231CR5.80HR | G5220WBA-5.80HR | |
| WB60T | WA231CR5.80T0R | G5220WBA-5.80T0R | |
| WB60U | WA231CR5.80TM2R | G5220WBA-5.80TM2R | |
| LB60S | A231CR5.80T2LR | G5220BA-5.80T2LR | |
| LB60R | A231CR5.80HLR | G5220BA-5.80HLR | |
| LB60T | A231CR5.80T0LR | G5220BA-5.80T0LR | |
| LB60U | A231CR5.80TM2LR | G5220BA-5.80TM2LR | |
| DB60S | WA231CR5.80T2LR | G5220WBA-5.80T2LR | |
| DB60R | WA231CR5.80HLR | G5220WBA-5.80HLR | |
| DB60T | WA231CR5.80T0LR | G5220WBA-5.80T0LR | |
| DB60U | WA231CR5.80TM2LR | G5220WBA-5.80TM2LR | |
| CC60S | 231CR5.80T2R | G5220CG-5.80T2R | |
| CC60R | 231CR5.80HR | G5220CG-5.80HR | |
| CC60T | 231CR5.80T0R | G5220CG-5.80T0R | |
| CC60U | 231CR5.80TM2R | G5220CG-5.80TM2R | |
| WC60S | W231CR5.80T2R | G5220WCG-5.80T2R | |
| WC60R | W231CR5.80HR | G5220WCG-5.80HR | |
| WC60T | W231CR5.80T0R | G5220WCG-5.80T0R | |
| WC60U | W231CR5.80TM2R | G5220WCG-5.80TM2R | |

See footnotes at end of table.

TABLE IV. Commercial part number supersession data, mounting body style C – Continued.

| PIN designator AA59789/03 | Vendor similar designator or type part number 1/ | | |
|------------------------------|--|--------------------|------|
| | CAGE 61081 2/ | CAGE 5BG68 | CAGE |
| LC60S | 231CR5.80T2LR | G5220CG-5.80T2LR | |
| LC60R | 231CR5.80HLR | G5220CG-5.80HLR | |
| LC60T | 231CR5.80T0LR | G5220CG-5.80T0LR | |
| LC60U | 231CR5.80TM2.5LR | G5220CG-5.80TM2LR | |
| DC60S | W231CR5.80T2LR | G5220WCG-5.80T2LR | |
| DC60R | W231CR5.80HLR | G5220WCG-5.80HLR | |
| DC60T | W231CR5.80T0LR | G5220WCG-5.80T0LR | |
| DC60U | W231CR5.80TM2.5LR | G5220WCG-5.80TM2LR | |
| CE60S | EN231CR5.80T2R | G5220EN-5.80T2R | |
| CE60R | EN231CR5.80HR | G5220EN-5.80HR | |
| CE60T | EN231CR5.80T0R | G5220EN-5.80T0R | |
| CE60U | EN231CR5.80TM2R | G5220EN-5.80TM2R | |
| WE60S | WEN231CR5.80T2R | G5220WEN-5.80T2R | |
| WE60R | WEN231CR5.80HR | G5220WEN-5.80HR | |
| WE60T | WEN231CR5.80T0R | G5220WEN-5.80T0R | |
| WE60U | WEN231CR5.80TM2R | G5220WEN-5.80TM2R | |
| LE60S | EN231CR5.80T2LR | G5220EN-5.80T2LR | |
| LE60R | EN231CR5.80HLR | G5220EN-5.80HLR | |
| LE60T | EN231CR5.80T0LR | G5220EN-5.80T0LR | |
| LE60U | EN231CR5.80TM2LR | G5220EN-5.80TM2LR | |
| DE60S | WEN231CR5.80T2LR | G5220WEN-5.80T2LR | |
| DE60R | WEN231CR5.80HLR | G5220WEN-5.80HLR | |
| DE60T | WEN231CR5.80T0LR | G5220WEN-5.80T0LR | |
| DE60U | WEN231CR5.80TM2LR | G5220WEN-5.80TM2LR | |

See footnotes at end of table.

TABLE IV. Commercial part number supersession data, mounting body style C – Continued.

| PIN designator AA59789/03 | Vendor similar designator or type part number <u>1/</u> | | |
|------------------------------|---|--------------------|------|
| | CAGE 61081 <u>2/</u> | CAGE 5BG68 | CAGE |
| CH60S | HA231CR5.80T2R | G5220BH-5.80T2R | |
| CH60R | HA231CR5.80HR | G5220BH-5.80HR | |
| CH60T | HA231CR5.80T0R | G5213BH-5.80T0R | |
| CH60U | HA231CR5.80TM2R | G5220BH-5.80TM2R | |
| WH60S | WHA231CR5.80T2R | G5220WBH-5.80T2R | |
| WH60R | WHA231CR5.80HR | G5220WBH-5.80HR | |
| WH60T | WHA231CR5.80T0R | G5220WBH-5.80T0R | |
| WH60U | WHA231CR5.80TM2R | G5220WBH-5.80TM2R | |
| LH60S | HA231CR5.80T2LR | G5220BH-5.80T2LR | |
| LH60R | HA231CR5.80HLR | G5220BH-5.80HLR | |
| LH60T | HA231CR5.80T0LR | G5220BH-5.80T0LR | |
| LH60U | HA231CR5.80TM2LR | G5220BH-5.80TM2LR | |
| DH60S | WHA231CR5.80T2LR | G5220WBH-5.80T2LR | |
| DH60R | WHA231CR5.80HLR | G5220WBH-5.80HLR | |
| DH60T | WHA231CR5.80T0LR | G5220WBH-5.80T0LR | |
| DH60U | WHA231CR5.80TM2LR | G5220WBH-5.80TM2LR | |

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-59789](#).

2/ CAGE is for [61081 \(2\)](#).

PIN length examples. The CID PINs listed in table V 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 V. Example of PIN with available length designators.

| PIN designator AA59789/03 | 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 | CAGE |
| NH50T | 42-5-10-B3LNNTL | | | |
| NH55T | 42-5-11-B3LNNTL | | | |
| NH60T | 42-5-12-B3LNNTL | | | |
| NH65T | 42-5-13-B3LNNTL | | | |
| LH50T | | HA231CR4.80T0LR | G5220BH-4.80T0LR | |
| LH55T | | HA231CR5.30T0LR | G5220BH-5.30T0LR | |
| LH60T | | HA231CR5.80T0LR | G5220BH-5.80T0LR | |
| LH65T | | HA231CR6.30T0LR | G5220BH-6.30T0LR | |

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-59789](#).

2/ Other lengths are available on request.

3/ CAGE is for [61081 \(1\)](#).

4/ CAGE is for [61081 \(2\)](#).

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

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 5998-2015-013

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