

[INCH-POUND]  
A-A-59789/4A  
22 July 2010  
SUPERSEDING  
A-A-59789/4  
26 March 2006

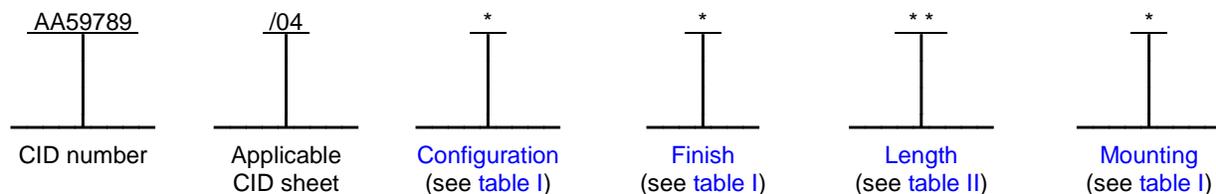
COMMERCIAL ITEM DESCRIPTION  
SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 5 PIECE, FOR COLD PLATE APPLICATIONS,  
.225 X .225 INCH BODY SIZE, WITH TWO MOUNTING HOLES, VISUAL LOCK INDICATION,  
AND 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: AA59789/04DE65S is the PIN for a visual lock indicating, electroless nickel finished, 6.3 inch (160.0 mm)  
long card holder with a retained actuating screw. The card holder also features two tapped mounting holes for use  
with 2-56 UNC 2B fasteners and a combination of a lockwasher, flat washer, and screw self-lock element 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 visual indicator to  
show when the assembly is in its relaxed (unlocked) and expanded (locked) state. Card holders shall also have a  
screw retention feature to prevent unintentional disassembly of the card holder.

Material. 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 recommended slot width for cold plates used with this card holder is .250 inch (6.35 mm)  
plus the thickness of the circuit card assembly printed board (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](#), [2](#), and [3](#), and may include those on figures [4](#) and [5](#).

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, 2, and 3	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, 3, and 4	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, 3, and 5	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, 4, and 5	Lockwasher, flat washer, and screw self-lock element
D	C	B, C, E, H	S, R, T, U		

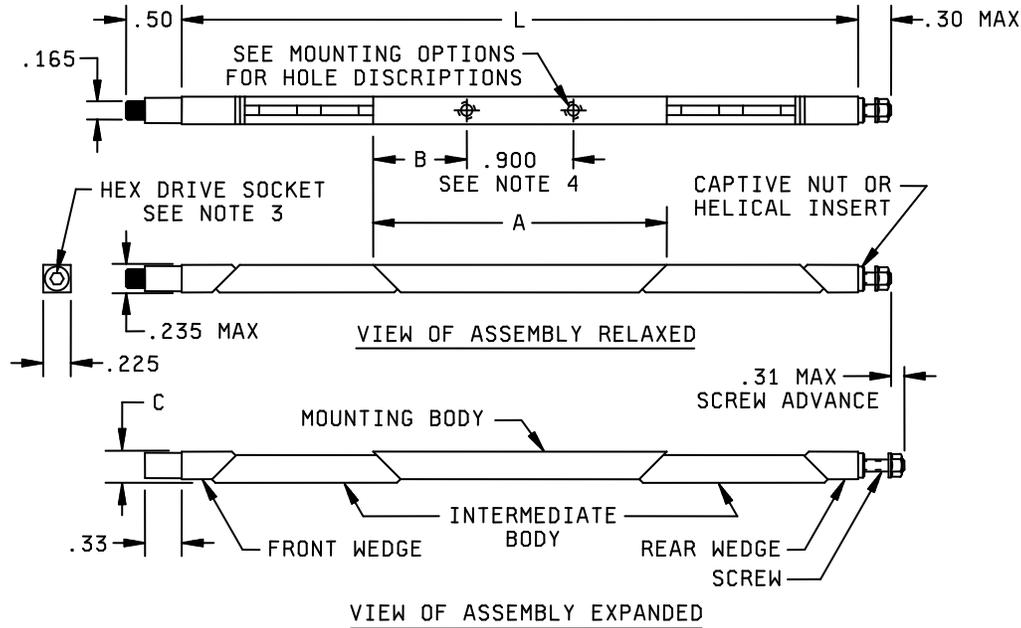
**Finish.** The finish designator shall be as specified in [A-A-59789](#). The finishes available for this CID specification sheet are as follows: "B" (black anodize), "C" (gold chemical film), "E" (electroless nickel), "P" (electrodeposited nickel), or "H" (hard black anodize). The center mounting wedge 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	Inches	mm
.165	4.19	.235	5.97	.31	7.9	.50	12.7
.225	5.72	.30	7.6	.33	8.4	.900	22.86

NOTES:

1. Dimensions are in inches. Millimeter equivalents are given for general information only.
2. Unless otherwise specified, tolerances are for  $\pm 0.02$  inch (0.51 mm) for two place decimals and  $\pm 0.10$  (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  $\pm 0.10$  inch (0.25 mm) for mounting body style A and  $\pm 0.005$  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" ( $\varnothing 0.062 \times .040$  index pins), or "U" (tapped metric M2 x 0.4 holes). See [figure 1](#) for mounting hole spacing requirements. Card holders using mounting option "P" and "R" may be shipped unassembled. The center mounting wedge is not finished for card holders using mounting option "P".

**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.

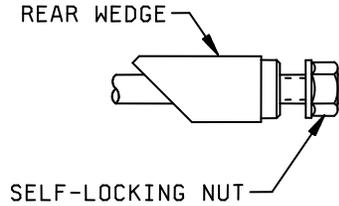


FIGURE 2. Screw retaining self-locking nut (corrosion resistant) details.

Visual lock indicator (see figure 3). 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 end of the actuating 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.

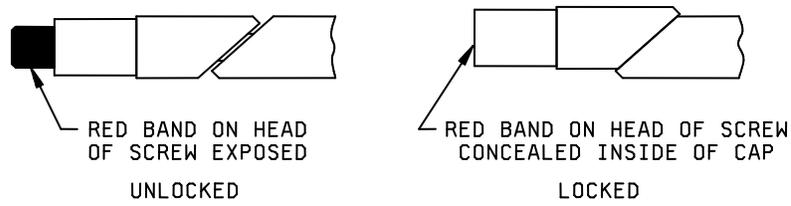


FIGURE 3. Visual lock indicator.

Hardware options. Card holders can have the following options: No hardware options added, lockwasher and flat washer (see figure 4), screw self lock element (see figure 4), or lockwasher, flat washer, and screw self lock element (see figure 4 and 5). 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 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 configuration identifier "F" or "W" in the PIN (see [classification](#), [notes](#), and [table I](#)).

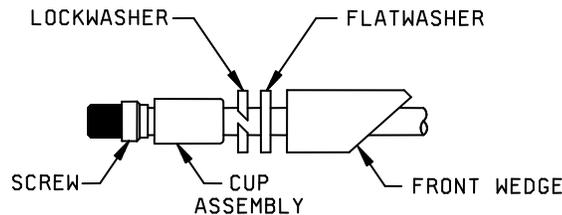


FIGURE 4. Lockwasher and flat washer details.

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 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](#)).

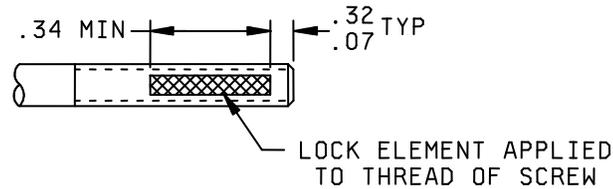


FIGURE 5. Screw self-locking element details.

Lockwasher, flat washer, and screw self-locking element. Card holders requiring a lockwasher, flat washer, and screw self-locking element option shall include 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 <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-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 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 – A Division of Pentair Electronic Packaging 7238 Trade Street San Diego, CA 92121-3410	Telephone: (858) 740-2400 Toll Free: (800) 854-7086 Facsimile: (858) 679-4555 (URL): <a href="http://www.birtcherproducts.com">www.birtcherproducts.com</a>
52094	Calmark – A Division of Pentair Electronic Packaging 7238 Trade Street San Diego, CA 92121-3410	Telephone: (858) 740-2400 Toll Free: (800) 854-7086 Facsimile: (858) 740-2430 Electronic mail: <a href="mailto:sales@calmark.com">sales@calmark.com</a> URL: <a href="http://www.calmark.com">www.calmark.com</a>
5BG68	Card Locks Unlimited, Inc. 2310 E. Orangethorpe Avenue Anaheim, CA 92806-1231	Telephone: (714) 738-6194 Facsimile: (714) 446-0119 E-mail: <a href="mailto:sales@clumfg.com">sales@clumfg.com</a> 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 IV are only for length designator "50". See [table IV](#) 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.

PIN designator AA59789/04	Vendor similar designator or type part number <u>1/</u> CAGE 18915	PIN designator AA59789/04	Vendor similar designator or type part number <u>1/</u> CAGE 52094	Vendor similar designator or type part number <u>1/</u> CAGE 5BG68
AB50S	42-5VI-10-B-LN	CB50S	VA231CR4.80T2R	5231VBA-4.80T2R
AB50R	42-5VI-10-BLNR	CB50R	VA231CR4.80HR	5231VBA-4.80HR
AB50T	42-5VI-10-BLNT	CB50T	VA231CR4.80T0R	5231VBA-4.80T0R
AB50P	42-5VI-10-BLNP	CB50U	VA231CR4.80TM2R	5231VBA-4.80TM2R
FB50S	42-5VI-10BLFLN	WB50S	WVA231CR4.80T2R	5231VWBA-4.80T2R
FB50R	42-5VI10BLFLNR	WB50R	WVA231CR4.80HR	5231VWBA-4.80HR
FB50T	42-5VI10BLFLNT	WB50T	WVA231CR4.80T0R	5231VWBA-4.80T0R
FB50P	42-5VI10BLFLNP	WB50U	WVA231CR4.80TM2R	5231VWBA-4.80TM2R
NB50S	42-5VI-10-BLNL	LB50S	VA231CR4.80T2LR	5231VBA-4.80T2LR
NB50R	42-5VI-10BLNRL	LB50R	VA231CR4.80HLR	5231VBA-4.80HLR
NB50T	42-5VI-10BLNTL	LB50T	VA231CR4.80T0LR	5231VBA-4.80T0LR
NB50P	42-5VI-10BLNPL	LB50U	VA231CR4.80TM2LR	5231VBA-4.80TM2LR
JB50S	42-5VI10BLFLNL	DB50S	WVA231CR4.80T2LR	5231VWBA-4.80T2LR
JB50R	425VI10BLFLNRL	DB50R	WVA231CR4.80HLR	5231VWBA-4.80HLR
JB50T	425VI10BLFLNTL	DB50T	WVA231CR4.80T0LR	5231VWBA-4.80T0LR
JB50P	425VI10BLFLNPL	DB50U	WVA231CR4.80TM2LR	5231VWBA-4.80TM2LR

See footnote at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59789/04	Vendor similar designator or type part number <sup>1/</sup> CAGE 18915	PIN designator AA59789/04	Vendor similar designator or type part number <sup>1/</sup> CAGE 52094	Vendor similar designator or type part number <sup>1/</sup> CAGE 5BG68
AC50S	42-5VI-10-LN	CC50S	V231CR4.80T2R	5231VCG-4.80T2R
AC50R	42-5VI-10-LN-R	CC50R	V231CR4.80HR	5231VCG-4.80HR
AC50T	42-5VI-10-LN-T	CC50T	V231CR4.80T0R	5231VCG-4.80T0R
AC50P	42-5VI-10-LN-P	CC50U	V231CR4.80TM2R	5231VCG-4.80TM2R
FC50S	42-5VI-10-LFLN	WC50S	WV231CR4.80T2R	5231VWCG-4.80T2R
FC50R	42-5VI-10LFLNR	WC50R	WV231CR4.80HR	5231VWCG-4.80HR
FC50T	42-5VI-10LFLNT	WC50T	WV231CR4.80T0R	5231VWCG-4.80T0R
FC50P	42-5VI-10LFLNP	WC50U	WV231CR4.80TM2R	5231VWCG-4.80TM2R
NC50S	42-5VI-10-LN-L	LC50S	V231CR4.80T2LR	5231VCG-4.80T2LR
NC50R	42-5VI-10-LNRL	LC50R	V231CR4.80HLR	5231VCG-4.80HLR
NC50T	42-5VI-10-LNTL	LC50T	V231CR4.80T0LR	5231VCG-4.80T0LR
NC50P	42-5VI-10-LNPL	LC50U	V231CR4.80TM2LR	5231VCG-4.80TM2LR
JC50S	42-5VI-10LFLNL	DC50S	WV231CR4.80T2LR	5231VWCG-4.80T2LR
JC50R	42-5VI10LFLNRL	DC50R	WV231CR4.80HLR	5231VWCG-4.80HLR
JC50T	42-5VI10LFLNTL	DC50T	WV231CR4.80T0LR	5231VWCG-4.80T0LR
JC50P	42-5VI10LFLNP	DC50U	WV231CR4.80TM2LR	5231VWCG-4.80TM2LR
AP50S	42-5VI-10-N-LN	CE50S	VEN231CR4.80T2R	5231VEN-4.80T2R
AP50R	42-5VI-10-NLNR	CE50R	VEN231CR4.80HR	5231VEN-4.80HR
AP50T	42-5VI-10-NLNT	CE50T	VEN231CR4.80T0R	5231VEN-4.80T0R
AP50P	42-5VI-10-NLNP	CE50U	VEN231CR4.80TM2R	5231VEN-4.80TM2R
FP50S	42-5VI-10NLNLF	WE50S	WVEN231CR4.80T2R	5231VWEN-4.80T2R
FP50R	42-5VI10NLFLNR	WE50R	WVEN231CR4.80HR	5231VWEN-4.80HR
FP50T	42-5VI10NLFLNT	WE50T	WVEN231CR4.80T0R	5231VWEN-4.80T0R
FP50P	42-5VI10NLFLNP	WE50U	WVEN231CR4.80TM2R	5231VWEN-4.80TM2R
NP50S	42-5VI-10-NLNL	LE50S	VEN231CR4.80T2LR	5231VEN-4.80T2LR
NP50R	42-5VI-10NLNRL	LE50R	VEN231CR4.80HLR	5231VEN-4.80HLR
NP50T	42-5VI-10NLNTL	LE50T	VEN231CR4.80T0LR	5231VEN-4.80T0LR
NP50P	42-5VI-10NLNPL	LE50U	VEN231CR4.80TM2LR	5231VEN-4.80TM2LR

See footnote at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59789/04	Vendor similar designator or type part number <sup>1/</sup> CAGE 18915	PIN designator AA59789/04	Vendor similar designator or type part number <sup>1/</sup> CAGE 52094	Vendor similar designator or type part number <sup>1/</sup> CAGE 5BG68
JP50S	42-5VI10NLFLNL	DE50S	WVEN231CR4.80T2LR	5231VWEN-4.80T2LR
JP50R	425VI10NLFLNRL	DE50R	WVEN231CR4.80HLR	5231VWEN-4.80HLR
JP50T	425VI10NLFLNNTL	DE50T	WVEN231CR4.80T0LR	5231VWEN-4.80T0LR
JP50P	425VI10NLFLNPL	DE50U	WVEN231CR4.80TM2LR	5231WEN-4.80TM2LR
AH50S	42-5VI-10-B3LN	CH50S	VHA231CR4.80T2R	5231VBH-4.80T2R
AH50R	42-5VI-10B3LNR	CH50R	VHA231CR4.80HR	5231VBH-4.80HR
AH50T	42-5VI-10B3LNT	CH50T	VHA231CR4.80T0R	5231VBH-4.80T0R
AH50P	42-5VI-10B3LNP	CH50U	VHA231CR4.80TM2R	5231VBH-4.80TM2R
FH50S	42-5VI10B3LFLN	WH50S	WVHA231CR4.80T2R	5231VWBH-4.80T2R
FH50R	425VI10B3LFLNR	WH50R	WVHA231CR4.80HR	5231VWBH-4.80HR
FH50T	425VI10B3LFLNT	WH50T	WVHA231CR4.80T0R	5231VWBH-4.80T0R
FH50P	425VI10B3LFLNP	WH50U	WVHA231CR4.80TM2R	5231VWBH-4.80TM2R
NH50S	42-5VI-10B3LNL	LH50S	VHA231CR4.80T2LR	5231VBH-4.80T2LR
NH50R	42-5VI10B3LNRL	LH50R	VHA231CR4.80HLR	5231VBH-4.80HLR
NH50T	42-5VI10B3LNNTL	LH50T	VHA231CR4.80T0LR	5231VBH-4.80T0LR
NH50P	42-5VI10B3LNPL	LH50U	VHA231CR4.80TM2LR	5231VBH-4.80TM2LR
JH50S	425VI10B3LFLNL	DH50S	WVHA231CR4.80T2LR	5231VWBH-4.80T2LR
JH50R	425VI10B3LFLNRL	DH50R	WVHA231CR4.80HLR	5231VWBH-4.80HLR
JH50T	425VI10B3LFLNNTL	DH50T	WVHA231CR4.80T0LR	5231VWBH-4.80T0LR
JH50P	425VI10B3LFLNPL	DH50U	WVHA231CR4.80TM2LR	5231VWBH-4.80TM2LR

<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-59789](#).

TABLE IV. Example of PIN with available length designators.

PIN designator AA59789/04	Vendor similar designator or type part number <u>1/</u> <u>2/</u> CAGE 18915	PIN designator AA59789/04	Vendor similar designator or type part number <u>1/</u> <u>2/</u> CAGE 52094	Vendor similar designator or type part number <u>1/</u> <u>2/</u> CAGE 5BG68
JP50S	42-5VI10NLFLNL	DE50S	WVEN231CR4.80T2LR	5231VWEN-4.80T2LR
JP55S	42-5VI11NLFLNL	DE55S	WVEN231CR5.30T2LR	5231VWEN-5.30T2LR
JP60S	42-5VI12NLFLNL	DE60S	WVEN231CR5.80T2LR	5231VWEN-5.80T2LR
JP65S	42-5VI13NLFLNL	DE65S	WVEN231CR6.30T2LR	5231VWEN-6.30T2LR

- 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.

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 5998-2010-004

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/>.