

[INCH-POUND]
A–A–59789/4B
14 July 2015
SUPERSEDING
A–A–59789/4A
22 July 2010

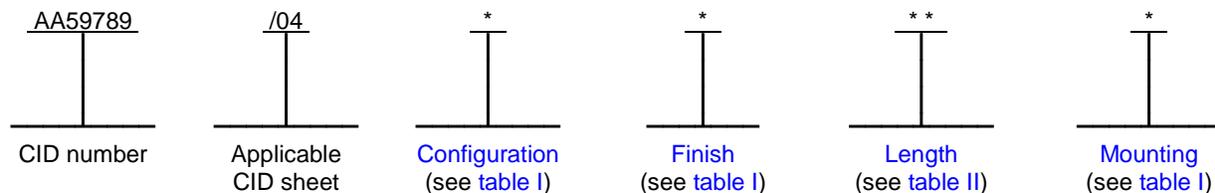
COMMERCIAL ITEM DESCRIPTION
SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 5 PIECE, FOR COLD PLATE APPLICATIONS,
.225 X .225 INCH BODY SIZE, WEDGE MOUNTING BODY, WITH TWO MOUNTING HOLES,
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".

AMSC N/A

FSC 5998



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](#). 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, 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		

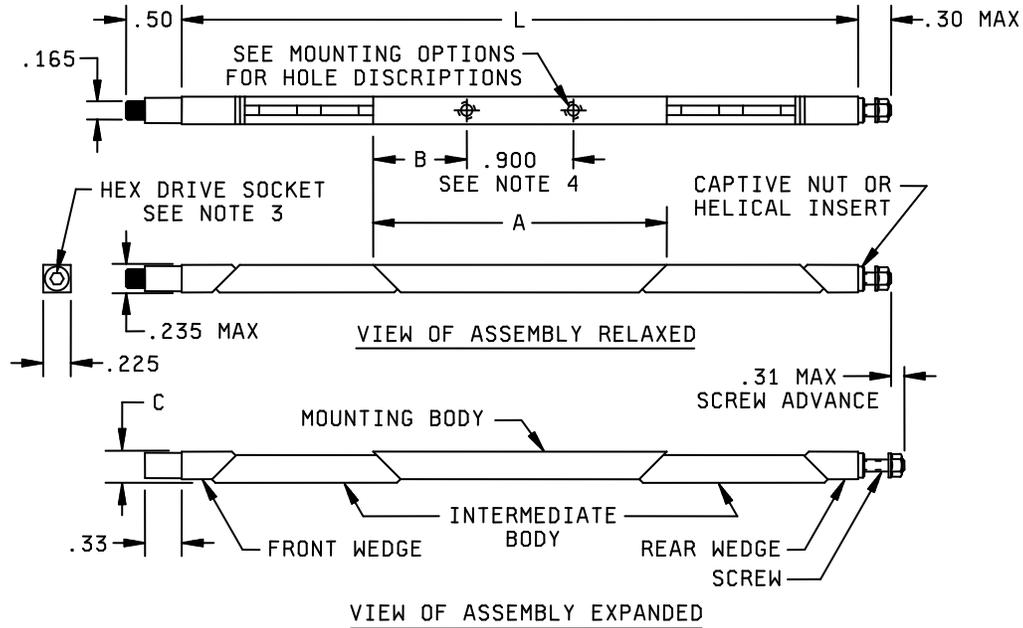
Finish. The finish designator shall be as specified in [A-A-59789](#). The finishes available for this CID specification sheet are as follows: "B" (black anodize), "C" (gold chemical film), "E" (electroless nickel), "P" (electrodeposited nickel), or "H" (hard black anodize). See [table I](#) for the 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	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 ± 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" ($\varnothing 0.062 \times .040$ 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.

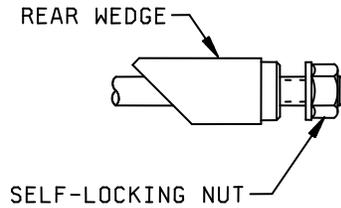


FIGURE 2. Screw retaining self-locking nut (corrosion resistant) details.

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.

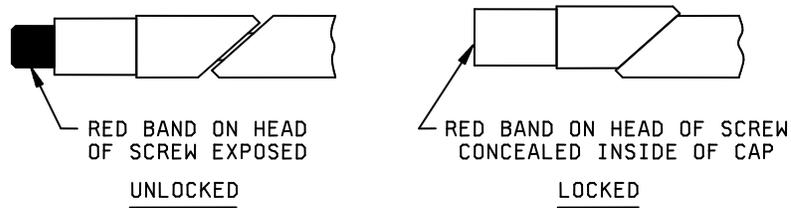


FIGURE 3. Visual lock indicator.

Configuration 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](#)).

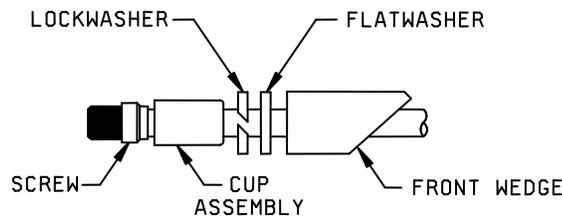


FIGURE 4. Lockwasher and flat washer details.

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](#)).

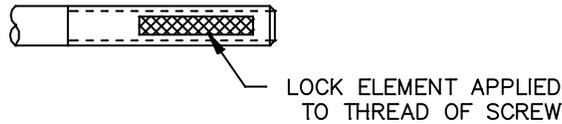


FIGURE 5. Screw self-locking element details.

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 <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 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.)

Manufacturer CAGE	Manufacturer name and address	Manufacturer contact information
-------------------	-------------------------------	----------------------------------

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 AA59789/04	Vendor similar designator or type part number 1/ CAGE 61081 2/	PIN designator AA59789/04	Vendor similar designator or type part number 1/ CAGE 61081 2/
AB60S	42-5VI-12-B-LN	NB60S	42-5VI-12-BLNL
AB60R	42-5VI-12-BLNR	NB60R	42-5VI-12BLNRL
AB60T	42-5VI-12-BLNT	NB60T	42-5VI-12BLNTL
AB60P	42-5VI-12-BLNP	NB60P	42-5VI-12BLNPL
FB60S	42-5VI-12BLFLN	JB60S	42-5VI12BLFLNL
FB60R	42-5VI12BLFLNR	JB60R	425VI12BLFLNRL
FB60T	42-5VI12BLFLNT	JB60T	425VI12BLFLNTL
FB60P	42-5VI12BLFLNP	JB60P	425VI12BLFLNPL

See footnotes at end of table.

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

PIN designator AA59789/04	Vendor similar designator or type part number ^{1/} CAGE 61081 ^{2/}	PIN designator AA59789/04	Vendor similar designator or type part number ^{1/} CAGE 61081 ^{2/}
AC60S	42-5VI-12-LN	NC60S	42-5VI-12-LN-L
AC60R	42-5VI-12-LN-R	NC60R	42-5VI-12-LNRL
AC60T	42-5VI-12-LN-T	NC60T	42-5VI-12-LNNTL
AC60P	42-5VI-12-LN-P	NC60P	42-5VI-12-LNPL
FC60S	42-5VI-12-LFLN	JC60S	42-5VI-12LFLNL
FC60R	42-5VI-12LFLNR	JC60R	42-5VI12LFLNRL
FC60T	42-5VI-12LFLNT	JC60T	42-5VI12LFLNTL
FC60P	42-5VI-12LFLNP	JC60P	42-5VI12LFLNPL
AP60S	42-5VI-12-N-LN	NP60S	42-5VI-12-NLNL
AP60R	42-5VI-12-NLNR	NP60R	42-5VI-12NLNRL
AP60T	42-5VI-12-NLNT	NP60T	42-5VI-12NLNTL
AP60P	42-5VI-12-NLNP	NP60P	42-5VI-12NLNPL
FP60S	42-5VI-12NLNLF	JP60S	42-5VI12NLFLNL
FP60R	42-5VI12NLFLNR	JP60R	425VI12NLFLNRL
FP60T	42-5VI12NLFLNT	JP60T	425VI12NLFLNTL
FP60P	42-5VI12NLFLNP	JP60P	425VI12NLFLNPL
AH60S	42-5VI-12-B3LN	NH60S	42-5VI-12B3LNL
AH60R	42-5VI-12B3LNR	NH60R	42-5VI12B3LNRL
AH60T	42-5VI-12B3LNT	NH60T	42-5VI12B3LNTL
AH60P	42-5VI-12B3LNP	NH60P	42-5VI12B3LNPL
FH60S	42-5VI12B3LFLN	JH60S	425VI12B3LFLNL
FH60R	425VI12B3LFLNR	JH60R	425VI12B3LFLNRL
FH60T	425VI12B3LFLNT	JH60T	425VI12B3LFLNTL
FH60P	425VI12B3LFLNP	JH60P	425VI12B3LFLNPL

^{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 AA59789/04	Vendor similar designator or type part number 1/		
	CAGE 61081 2/	CAGE 5BG68	CAGE
CB60S	VA231CR4.80T2R	G5220VBA-4.80T2R	
CB60R	VA231CR4.80HR	G5220VBA-4.80HR	
CB60T	VA231CR4.80T0R	G5220VBA-4.80T0R	
CB60U	VA231CR4.80TM2R	G5220VBA-4.80TM2R	
WB60S	WVA231CR4.80T2R	G5220VWBA-4.80T2R	
WB60R	WVA231CR4.80HR	G5220VWBA-4.80HR	
WB60T	WVA231CR4.80T0R	G5220VWBA-4.80T0R	
WB60U	WVA231CR4.80TM2R	G5220VWBA-4.80TM2R	
LB60S	VA231CR4.80T2LR	G5220VBA-4.80T2LR	
LB60R	VA231CR4.80HLR	G5220VBA-4.80HLR	
LB60T	VA231CR4.80T0LR	G5220VBA-4.80T0LR	
LB60U	VA231CR4.80TM2LR	G5220VBA-4.80TM2LR	
DB60S	WVA231CR4.80T2LR	G5220VWBA-4.80T2LR	
DB60R	WVA231CR4.80HLR	G5220VWBA-4.80HLR	
DB60T	WVA231CR4.80T0LR	G5220VWBA-4.80T0LR	
DB60U	WVA231CR4.80TM2LR	G5220VWBA-4.80TM2LR	
CC60S	V231CR4.80T2R	G5220VCG-4.80T2R	
CC60R	V231CR4.80HR	G5220VCG-4.80HR	
CC60T	V231CR4.80T0R	G5220VCG-4.80T0R	
CC60U	V231CR4.80TM2R	G5220VCG-4.80TM2R	
WC60S	WV231CR4.80T2R	G5220VWCG-4.80T2R	
WC60R	WV231CR4.80HR	G5220VWCG-4.80HR	
WC60T	WV231CR4.80T0R	G5220VWCG-4.80T0R	
WC60U	WV231CR4.80TM2R	G5220VWCG-4.80TM2R	

See footnotes at end of table.

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

PIN designator AA59789/04	Vendor similar designator or type part number <u>1/</u>		
	CAGE 61081 <u>2/</u>	CAGE 5BG68	CAGE
LC60S	V231CR4.80T2LR	G5220VCG-4.80T2LR	
LC60R	V231CR4.80HLR	G5220VCG-4.80HLR	
LC60T	V231CR4.80T0LR	G5220VCG-4.80T0LR	
LC60U	V231CR4.80TM2LR	G5220VCG-4.80TM2LR	
DC60S	WV231CR4.80T2LR	G5220VWCG-4.80T2LR	
DC60R	WV231CR4.80HLR	G5220VWCG-4.80HLR	
DC60T	WV231CR4.80T0LR	G5220VWCG-4.80T0LR	
DC60U	WV231CR4.80TM2LR	G5220VWCG-4.80TM2LR	
CE60S	VEN231CR4.80T2R	G5220VEN-4.80T2R	
CE60R	VEN231CR4.80HR	G5220VEN-4.80HR	
CE60T	VEN231CR4.80T0R	G5220VEN-4.80T0R	
CE60U	VEN231CR4.80TM2R	G5220VEN-4.80TM2R	
WE60S	WVEN231CR4.80T2R	G5220VWEN-4.80T2R	
WE60R	WVEN231CR4.80HR	G5220VWEN-4.80HR	
WE60T	WVEN231CR4.80T0R	G5220VWEN-4.80T0R	
WE60U	WVEN231CR4.80TM2R	G5220VWEN-4.80TM2R	
LE60S	VEN231CR4.80T2LR	G5220VEN-4.80T2LR	
LE60R	VEN231CR4.80HLR	G5220VEN-4.80HLR	
LE60T	VEN231CR4.80T0LR	G5220VEN-4.80T0LR	
LE60U	VEN231CR4.80TM2LR	G5220VEN-4.80TM2LR	
DE60S	WVEN231CR4.80T2LR	G5220VWEN-4.80T2LR	
DE60R	WVEN231CR4.80HLR	G5220VWEN-4.80HLR	
DE60T	WVEN231CR4.80T0LR	G5220VWEN-4.80T0LR	
DE60U	WVEN231CR4.80TM2LR	G5220VWEN-4.80TM2LR	

See footnotes at end of table.

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

PIN designator AA59789/04	Vendor similar designator or type part number <u>1/</u>		
	CAGE 61081 <u>2/</u>	CAGE 5BG68	CAGE
CH60S	VHA231CR4.80T2R	G5220VBH-4.80T2R	
CH60R	VHA231CR4.80HR	G5220VBH-4.80HR	
CH60T	VHA231CR4.80T0R	G5220VBH-4.80T0R	
CH60U	VHA231CR4.80TM2R	G5220VBH-4.80TM2R	
WH60S	WVHA231CR4.80T2R	G5220VWBH-4.80T2R	
WH60R	WVHA231CR4.80HR	G5220VWBH-4.80HR	
WH60T	WVHA231CR4.80T0R	G5220VWBH-4.80T0R	
WH60U	WVHA231CR4.80TM2R	G5220VWBH-4.80TM2R	
LH60S	VHA231CR4.80T2LR	G5220VBH-4.80T2LR	
LH60R	VHA231CR4.80HLR	G5220VBH-4.80HLR	
LH60T	VHA231CR4.80T0LR	G5220VBH-4.80T0LR	
LH60U	VHA231CR4.80TM2LR	G5220VBH-4.80TM2LR	
DH60S	WVHA231CR4.80T2LR	G5220VWBH-4.80T2LR	
DH60R	WVHA231CR4.80HLR	G5220VWBH-4.80HLR	
DH60T	WVHA231CR4.80T0LR	G5220VWBH-4.80T0LR	
DH60U	WVHA231CR4.80TM2LR	G5220VWBH-4.80TM2LR	

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 AA59789/04	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
JP50S	42-5VI10NLFLNL			
JP55S	42-5VI11NLFLNL			
JP60S	42-5VI12NLFLNL			
JP65S	42-5VI13NLFLNL			
DE50S		WVEN231CR4.80T2LR	G5220VWEN-4.80T2LR	
DE55S		WVEN231CR5.30T2LR	G5220VWEN-5.30T2LR	
DE60S		WVEN231CR5.80T2LR	G5220VWEN-5.80T2LR	
DE65S		WVEN231CR6.30T2LR	G5220VWEN-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.

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 5998-2015-014

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>.