

[INCH-POUND]
A-A-59590/22B
22 March 2013
SUPERSEDING
A-A-59590/22A
11 September 2007

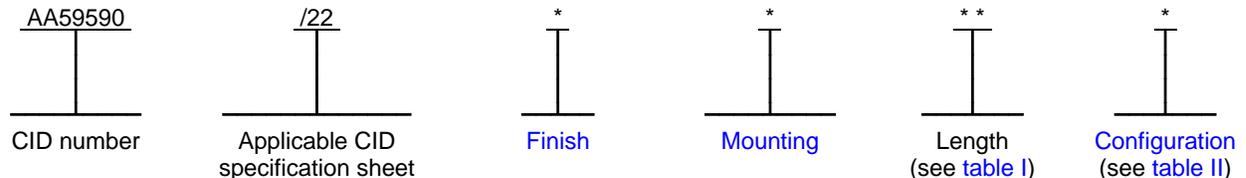
COMMERCIAL ITEM DESCRIPTION
SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 3 PIECE, SCREW ACTUATED DRIVE
.500 X .450 INCH BODY SIZE, WITH VISUAL LOCK INDICATION

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: AA59590/22ET48E is the PIN for a nickel plated, 4.8 inches (122 mm) long card holder with a visual lock indication and a screw self-locking element. The card holder also features two tapped 0-80 UNF mounting holes for use with fasteners.

SALIENT CHARACTERISTICS.

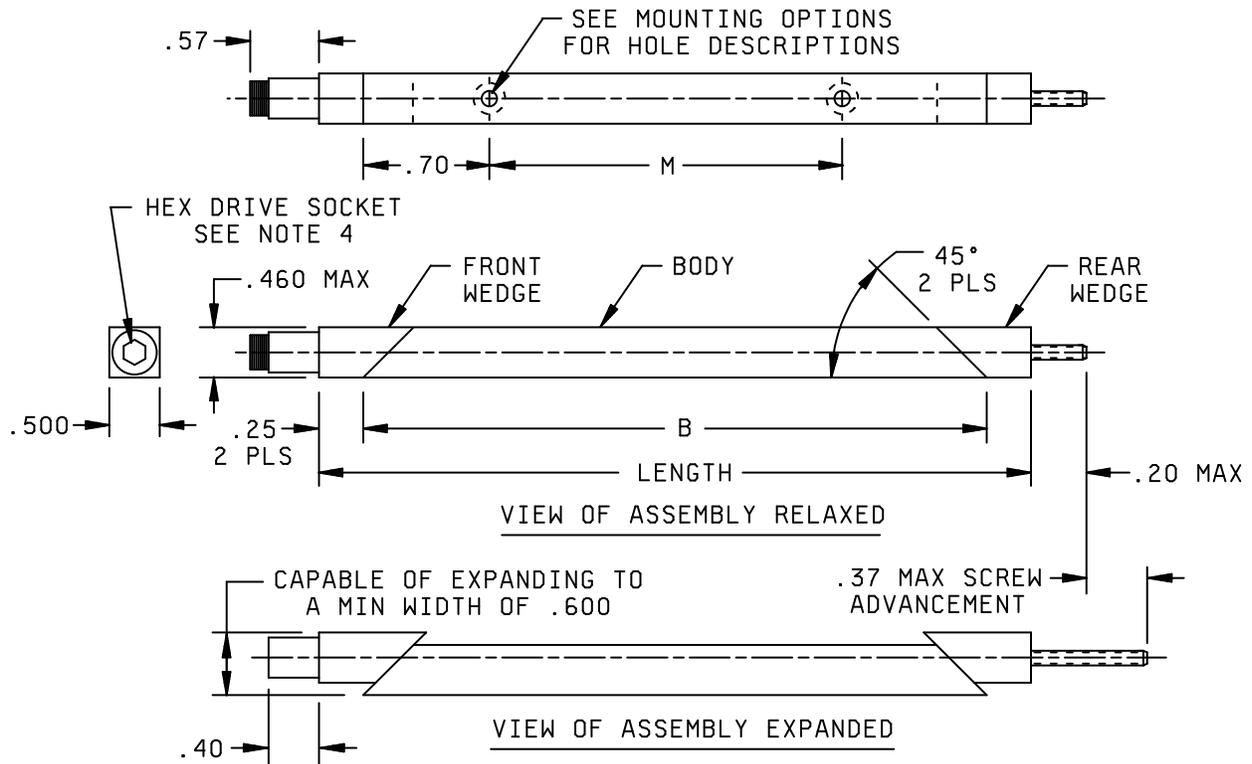
Performance. Card holders shall hold the circuit card assembly firmly in its installed position and prevent loosening or movement as a result of shock and vibration. The card holder shall also provide a thermal transfer path from the circuit card assembly to the cold plate or heat sink surfaces. Card holders shall have a visual indicator to show when the assembly is in its relaxed (unlocked) state.

Interface and physical dimensions. The card holders supplied to this CID specification sheet shall be as specified herein (see [figures 1, 2, 3, 4](#) and [table I](#)) and meet the general requirements of CID [A-A-59590](#).

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

Actuating screw hex drive socket. The dimension for hex drive socket shall be .156 inch (3.96 mm) for mounting options "J", "N", "T" and "V". The dimension for hex drive socket shall be a metric dimension of 2.5 mm (.098 inch) across flats for mounting option "G".

Cold plate dimensions. Recommend cold plate slot width to accommodate the circuit card assembly with attached card holder is .525 inch (13.3 mm) plus the thickness of the printed board of the circuit card assembly (see [A-A-59590](#)).



Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.20	5.1	.260	6.60	.27	6.9	.39	9.9	.70	17.8
.25	6.4	.270	6.86	.325	8.26	.56	14.2		

NOTES:

1. Dimensions are in inches. Millimeters 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 inch (0.25 mm) for three place decimals.
3. The tolerance for the mounting hole spacing is ± 0.005 inches (0.13 mm).
4. The across flats dimension for hex drive socket shall be .094 inch (2.39 mm) for mounting options "J", "N", "T", and "V". The across flats dimension for hex drive socket shall be a metric dimension of 2.5 mm (.098 inch) across flats for mounting option "G".

FIGURE 1. Relaxed and expanded dimensions, basic configuration.

Nominal installation torque. When card holders are used in cold plate applications, the nominal installation torque of each card holder shall be as follows: 31 inch-pounds (3.5 N-m) for assemblies using no options or option "W" and 34 to 36 inch-pounds (3.8 to 4.1 N-m) for assemblies using options "D" or "E".

Visual lock indicator (see figure 2). Card holders shall have a visual indicator to show when the card holder assembly is in its relaxed (unlocked) state. When the card holder assembly is in the 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 so that the assembly is in the expanded (locked) position, this red band shall be concealed.

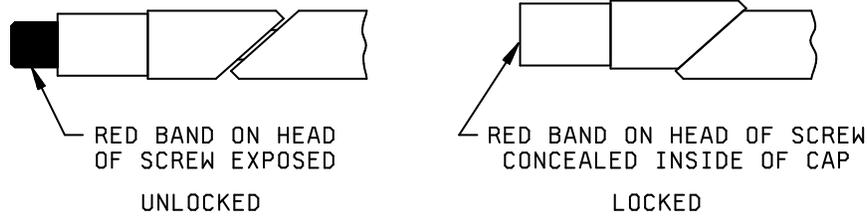


FIGURE 2. Visual lock indicator details.

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), "E" (electroless nickel), "H" (hard black anodize), or "R" (clear chemical film).

Mounting. The mounting designators shall be as specified in A-A-59590. Except when using mounting option "N", two mounting holes are required on the card holders. The mounting options available for this CID specification sheet are as follows: "J" (rivet mounting holes), "N" (no mounting holes), "T" (tapped 0-80 UNF 2B holes), "V" (tapped 2-56 UNC 2B holes), or "G" (tapped M2.5 x.45 metric holes). See figure 1 and table I for mounting hole spacing requirements. Card holders using mounting option "J" may be shipped unassembled.

Counterbore holes (for rivet mounting). The holes used for rivet mounting shall be .136 inch (3.45 mm) diameter, countersunk 100 degrees by .190/.200 inch (4.83/5.08 mm) diameter through holes with an access/clearance counterbore of .190/.200 inch (4.83/5.08 mm) diameter by .390 inch (9.91 mm) deep.

Rivets. This card holder uses rivet type B as specified in A-A-59590 when rivet mounting is used.

Length, expanded, and relaxed dimensions. The length designator shall be as specified in A-A-59590 and the lengths available for this CID specification sheet are listed in table I. The length, expanded, and relaxed dimensions shall be as specified on figure 1.

TABLE I. Assembly dimensions (see figure 1). 1/

PIN length designator	Dimension "LENGTH" ±.02 (0.5 mm)	Dimension "B" ±.03 (0.8 mm)	Dimension "M" ±.005 (0.13 mm)
28	2.8 (71 mm)	2.30 (58.4 mm)	.90 (22.9 mm)
33	3.3 (84 mm)	2.80 (71.1 mm)	1.40 (35.6 mm)
38	3.8 (97 mm)	3.30 (83.8 mm)	1.90 (48.3 mm)
43	4.3 (109 mm)	3.80 (96.5 mm)	2.40 (61.0 mm)
48	4.8 (122 mm)	4.30 (109.2 mm)	2.90 (73.7 mm)
53	5.3 (135 mm)	4.80 (121.9 mm)	3.40 (86.4 mm)
58	5.8 (147 mm)	5.30 (134.6 mm)	3.90 (99.1 mm)

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 and 2, and may include those on figures 3 and 4. The correct PIN configuration identifier for each option is listed in table II. Card holders not requiring the options described by table II shall leave the configuration position in the PIN blank.

TABLE II. Configuration.

Configuration	Applicable figures	Hardware options
	1 and 2	No changes from basic configuration
W	1, 2 and 3	Lockwasher and flat washer
E	1, 2 and 4	Screw self-locking element
D	1, 2, 3 and 4	Lockwasher, flat washer, and screw self-locking element

Lockwasher and flat washer (see figure 3). The use of 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 shall include a suffix "W" in the PIN (see [classification](#) and [notes](#)).

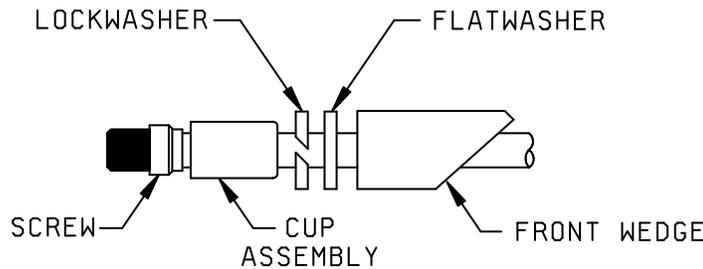


FIGURE 3. Lockwasher and flat washer details.

Screw self-locking element (see figure 4). The use of a screw self-locking element on the screw will provide a prevailing-torque for increased 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](#)).

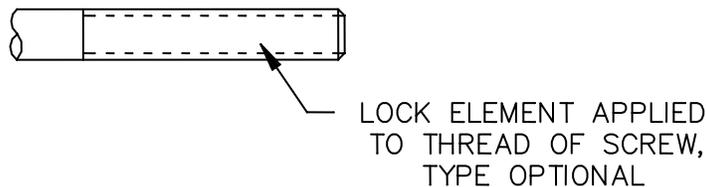


FIGURE 4. Screw self-locking element details.

Lockwasher, flat washer, and screw self-locking element. Card holders requiring a lockwasher, flat washer, and screw self-locking element option shall include 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.dla.mil/quicksearch> or <https://assist.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>
61081	Calmark – A Division of Pentair Technical Products 7328 Trade Street San Diego, CA 92121-3410	Telephone: (858) 740-2400 Toll Free: (800) 854-7086 Facsimile: (858) 740-2430 E-mail: sales@calmark.com URL: www.calmark.com
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: http://www.accrmfg.com

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 AA59590/22	Vendor similar designator or type part number <u>1/</u> <u>2/</u>	
	CAGE 61081	CAGE 5BG68
BJ28	VA255-2.80H	3500VBA-2.80H
BN28	VA255-2.80	3500VBA-2.80
BT28	VA255-2.80T0	3500VBA-2.80T0
BV28	VA255-2.80T2	3500VBA-2.80T2
BG28	MVA255-2.80TM2.5	3500MVBA-2.80TM2.5
BJ28W	WVA255-2.80H	3500VWBA-2.80H
BN28W	WVA255-2.80	3500VWBA-2.80
BT28W	WVA255-2.80T0	3500VWBA-2.80T0
BV28W	WVA255-2.80T2	3500VWBA-2.80T2
BG28W	MWVA255-2.80TM2.5	3500MVWBA-2.80TM2.5
BJ28E	VA255-2.80HL	3500VBA-2.80HL
BN28E	VA255-2.80L	3500VBA-2.80L
BT28E	VA255-2.80T0L	3500VBA-2.80T0L
BV28E	VA255-2.80T2L	3500VBA-2.80T2L
BG28E	MVA255-2.80TM2.5L	3500MVBA-2.80TM2.5L
BJ28D	WVA255-2.80HL	3500VWBA-2.80HL
BN28D	WVA255-2.80L	3500VWBA-2.80L
BT28D	WVA255-2.80T0L	3500VWBA-2.80T0L
BV28D	WVA255-2.80T2L	3500VWBA-2.80T2L
BG28D	MWVA255-2.80TM2.5L	3500MVWBA-2.80TM2.5L
CJ28	V255-2.80H	3500VCG-2.80H
CN28	V255-2.80	3500VCG-2.80
CT28	V255-2.80T0	3500VCG-2.80T0
CV28	V255-2.80T2	3500VCG-2.80T2
CG28	MV255-2.80TM2.5	3500MVCG-2.80TM2.5
CJ28W	WV255-2.80H	3500VWCG-2.80H
CN28W	WV255-2.80	3500VWCG-2.80
CT28W	WV255-2.80T0	3500VWCG-2.80T0
CV28W	WV255-2.80T2	3500VWCG-2.80T2
CG28W	MWV255-2.80TM2.5	3500MVWCG-2.80TM2.5

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/22	Vendor similar designator or type part number <u>1/ 2/</u>	
	CAGE 61081	CAGE 5BG68
CJ28E	V255-2.80HL	3500VCG-2.80HL
CN28E	V255-2.80L	3500VCG-2.80L
CT28E	V255-2.80T0L	3500VCG-2.80T0L
CV28E	V255-2.80T2L	3500VCG-2.80T2L
CG28E	MV255-2.80TM2.5L	3500MVCG-2.80TM2.5L
CJ28D	WV255-2.80HL	3500VWCG-2.80HL
CN28D	WV255-2.80L	3500VWCG-2.80L
CT28D	WV255-2.80T0L	3500VWCG-2.80T0L
CV28D	WV255-2.80T2L	3500VWCG-2.80T2L
CG28D	MWV255-2.80TM2.5L	3500MVWCG-2.80TM2.5L
EJ28	VEN255-2.80H	3500VEN-2.80H
EN28	VEN255-2.80	3500VEN-2.80
ET28	VEN255-2.80T0	3500VEN-2.80T0
EV28	VEN255-2.80T2	3500VEN-2.80T2
EG28	MVEN255-2.80TM2.5L	3500MVEN-2.80TM2.5
EJ28W	WVEN255-2.80H	3500VWEN-2.80H
EN28W	WVEN255-2.80	3500VWEN-2.80
ET28W	WVEN255-2.80T0	3500VWEN-2.80T0
EV28W	WVEN255-2.80T2	3500VWEN-2.80T2
EG28W	MWVEN255-2.80TM2.5	3500MVWEN-2.80TM2.5
EJ28E	VEN255-2.80HL	3500VEN-2.80HL
EN28E	VEN255-2.80L	3500VEN-2.80L
ET28E	VEN255-2.80T0L	3500VEN-2.80T0L
EV28E	VEN255-2.80T2L	3500VEN-2.80T2L
EG28E	MVEN255-2.80TM2.5L	3500MVEN-2.80TM2.5L
EJ28D	WVEN255-2.80HL	3500VWEN-2.80HL
EN28D	WVEN255-2.80L	3500VWEN-2.80L
ET28D	WVEN255-2.80T0L	3500VWEN-2.80T0L
EV28D	WVEN255-2.80T2L	3500VWEN-2.80T2L
EG28D	MWVEN255-2.80TM2.5L	3500MVWEN-2.80TM2.5L

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/22	Vendor similar designator or type part number <u>1/ 2/</u>	
	CAGE 61081	CAGE 5BG68
HJ28	VHA255-2.80H	3500VBH-2.80H
HN28	VHA255-2.80	3500VBH-2.80
HT28	VHA255-2.80T0	3500VBH-2.80T0
HV28	VHA255-2.80T2	3500VBH-2.80T2
HG28	MVHA255-2.80TM2.5L	3500MVBH-2.80TM2.5
HJ28W	WVHA255-2.80H	3500VVBH-2.80H
HN28W	WVHA255-2.80	3500VVBH-2.80
HT28W	WVHA255-2.80T0	3500VVBH-2.80T0
HV28W	WVHA255-2.80T2	3500VVBH-2.80T2
HG28W	MWVHA255-2.80TM2.5L	3500MVVBH-2.80TM2.5
HJ28E	VHA255-2.80HL	3500VBH-2.80HL
HN28E	VHA255-2.80L	3500VBH-2.80L
HT28E	VHA255-2.80T0L	3500VBH-2.80T0L
HV28E	VHA255-2.80T2L	3500VBH-2.80T2L
HG28E	VMHA255-2.80TM2.5L	3500MVBH-2.80TM2.5
HJ28D	WVHA255-2.80HL	3500VVBH-2.80HL
HN28D	WVHA255-2.80L	3500VVBH-2.80L
HT28D	WVHA255-2.80T0L	3500VVBH-2.80T0L
HV28D	WVHA255-2.80T2LR	3500VVBH-2.80T2L
HG28D	MWVHA255-2.80TM2.5L	3500MVVBH-2.80TM2.5L
RJ28	VR255-2.80H	3500VCC-2.80H
RN28	VR255-2.80	3500VCC-2.80
RT28	VR255-2.80T0	3500VCC-2.80T0
RV28	VR255-2.80T2	3500VCC-2.80T2
RG28	MVR255-2.80TM2.5L	3500MVCC-2.80TM2.5
RJ28W	WVR255-2.80H	3500VWCC-2.80H
RN28W	WVR255-2.80	3500VWCC-2.80
RT28W	WVR255-2.80T0	3500VWCC-2.80T0
RV28W	WVR255-2.80T2	3500VWCC-2.80T2
RG28W	MWVR255-2.80TM2.5L	3500MVWCC-2.80TM2.5

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/22	Vendor similar designator or type part number <u>1/</u> <u>2/</u>	
	CAGE 61081	CAGE 5BG68
RJ28E	VR255-2.80HL	3500VCC-2.80HL
RN28E	VR255-2.80L	3500VCC-2.80L
RT28E	VR255-2.80T0L	3500VCC-2.80T0L
RV28E	VR255-2.80T2L	3500VCC-2.80T2L
RG28E	VMR255-2.80TM2.5L	3500MVCC-2.80TM2.5L
RJ28D	WVR255-2.80HL	3500VWCC-2.80HL
RN28D	WVR255-2.80L	3500VWCC-2.80L
RT28D	WVR255-2.80T0L	3500VWCC-2.80T0L
RV28D	WVR255-2.80T2L	3500VWCC-2.80T2L
RG28D	MWVR255-2.80TM2.5L	3500MVWCC-2.80TM2.5L

1/ The CID PINs listed are only for length designator "28".

2/ 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 AA59590/22	Vendor similar designator or type part number <u>1/</u> <u>2/</u>	
	CAGE 61081	CAGE 5BG68
ET28E	VEN255-2.80T0L	3500VEN-2.80T0L
ET38E	VEN255-3.80T0L	3500VEN-3.80T0L
ET48E	VEN255-4.80T0L	3500VEN-5.80T0L
ET58E	VEN255-5.80T0L	3500VEN-5.80T0L

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.

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 5998-2012-022

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>.