

[INCH-POUND]
A-A-59590/20B
20 May 2012
SUPERSEDING
A-A-59590/20A
7 July 2007

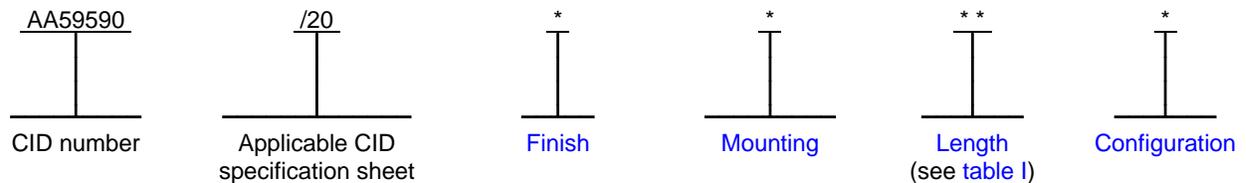
COMMERCIAL ITEM DESCRIPTION
SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 3 PIECE, SCREW ACTUATED DRIVE
.260 X .260 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: AA59590/20ET58E is the PIN for a nickel plated, 5.8 inches (147 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.

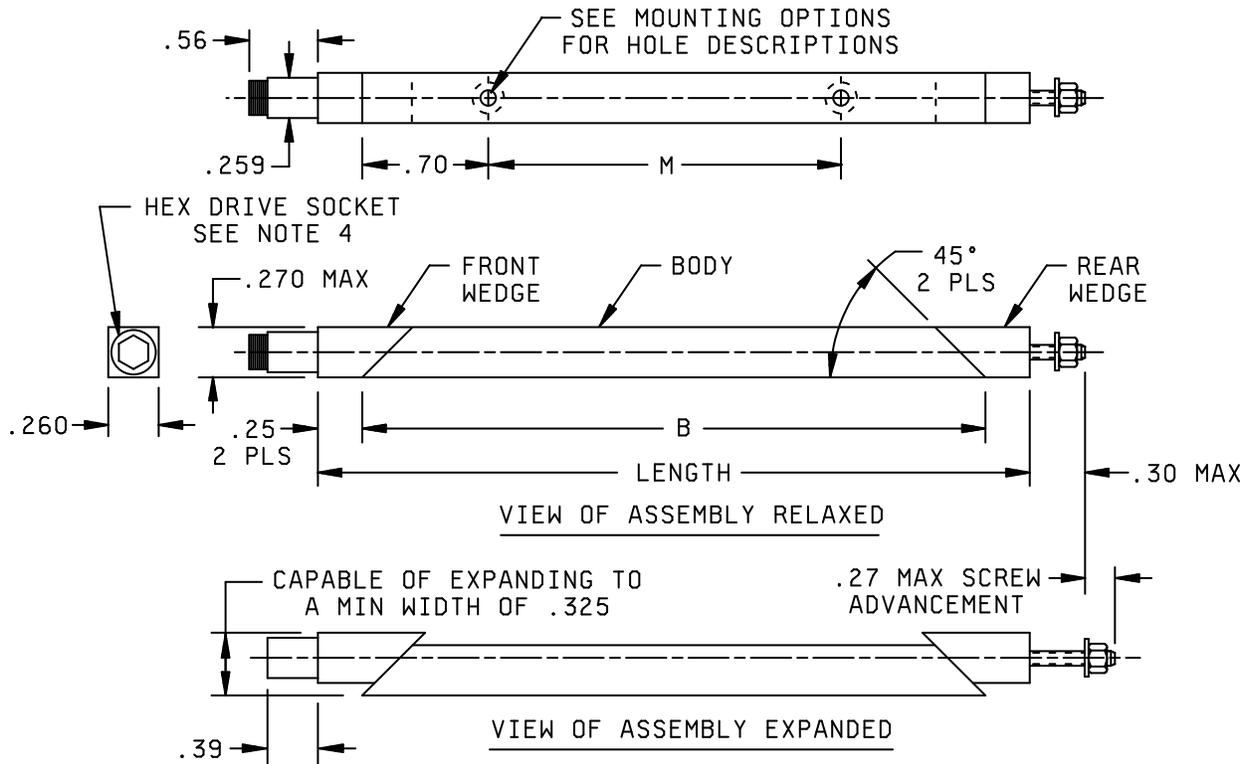
Performance. Card holders shall hold the circuit card assembly firmly in its installed position and provide high resistance to loosening due to shock and vibration. Card holders shall also provide maximum thermal transfer from the circuit card assembly to the cold plate or heat sink surfaces. The screw retention feature is intended to prevent unintentional disassembly of the card holder.

Interface and physical dimensions. The card holders supplied to this CID specification sheet shall be as specified herein (see [figures 1, 2, 3, 4, 5](#) 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 .094 inch (2.39 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 .300 inch (7.62 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	.325	8.26	.56	14.2
.25	6.4	.270	6.86	.30	7.62	.39	9.9	.70	17.8

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: 10 inch-pounds (1.1 N-m) for assemblies using no options or option "W" and 12 inch-pounds (1.4 N-m) for assemblies using options "D" or "E".

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.

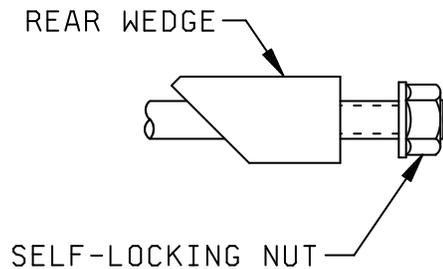


FIGURE 2. Screw retaining self-locking nut details.

Visual lock indicator (see figure 3). 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.

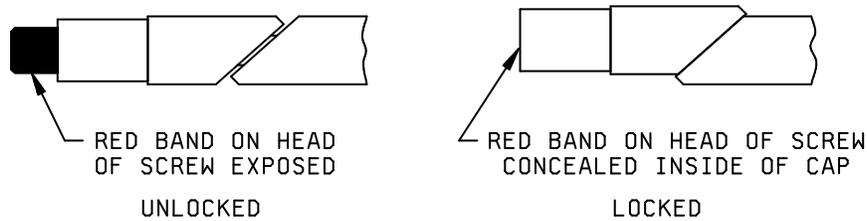


FIGURE 3. Visual lock indicator details.

Finish. The finish designator shall be as specified in A-A-59590. The wedge body 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 .068/.073 inch (1.73/1.85 mm) diameter, countersunk 100 degrees by .140 inch (3.56 mm) diameter through holes with an access/clearance counterbore of .156 inch (3.96 mm) diameter by .200 inch (5.08 mm) deep.

Rivets. This card holder uses rivet type A 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, 2, and 3, and may include those on figures 4 and 5. 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, 2 and 3	No changes from basic configuration
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). 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).

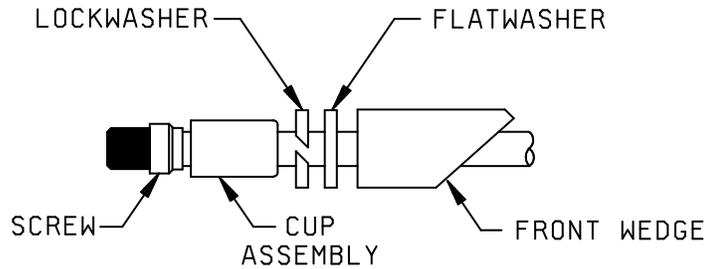


FIGURE 4. Lockwasher and flat washer details.

Screw self-locking element (see figure 5). The use of a 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. Card holders requiring a screw self-locking element shall include a suffix "E" in the PIN (see [classification](#) and [notes](#)).

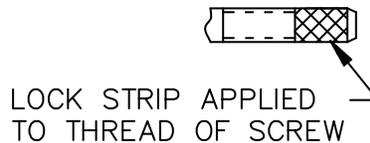


FIGURE 5. Screw self-locking element details.

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 <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 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	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	Card Locks Unlimited, Inc. 2310 E. Orangethorpe Avenue Anaheim, CA 92806-1231	Telephone: (714) 738-6194 Facsimile: (714) 446-0119 E-mail: sales@clumfg.com URL: www.clumfg.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 AA59590/20	Vendor similar designator or type part number <u>1/</u> <u>2/</u>	
	CAGE 61081	CAGE 5BG68
BJ28	VA245CR2.80HR	3245VBA-2.80HR
BN28	VA245CR2.80R	3245VBA-2.80R
BT28	VA245CR2.80T0R	3245VBA-2.80T0R
BV28	VA245CR2.80T2R	3245VBA-2.80T2R
BG28	MVA245CR2.80TM2.5R	3245MVBA-2.80TM2.5R
BJ28W	WVA245CR2.80HR	3245VWBA-2.80HR
BN28W	WVA245CR2.80R	3245VWBA-2.80R
BT28W	WVA245CR2.80T0R	3245VWBA-2.80T0R
BV28W	WVA245CR2.80T2R	3245VWBA-2.80T2R
BG28W	MWVA245CR2.80TM2.5R	3245MVWBA-2.80TM2.5R
BJ28E	VA245CR2.80HLR	3245VBA-2.80HLR
BN28E	VA245CR2.80LR	3245VBA-2.80LR
BT28E	VA245CR2.80T0LR	3245VBA-2.80T0LR
BV28E	VA245CR2.80T2LR	3245VBA-2.80T2LR
BG28E	MVA245CR2.80TM2.5LR	3245MVBA-2.80TM2.5LR
BJ28D	WVA245CR2.80HLR	3245VWBA-2.80HLR
BN28D	WVA245CR2.80LR	3245VWBA-2.80LR
BT28D	WVA245CR2.80T0LR	3245VWBA-2.80T0LR
BV28D	WVA245CR2.80T2LR	3245VWBA-2.80T2LR
BG28D	MWVA245CR2.80TM2.5LR	3245MVWBA-2.80TM2.5LR

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/20	Vendor similar designator or type part number <u>1/ 2/</u>	
	CAGE 61081	CAGE 5BG68
CJ28	V245CR2.80HR	3245VCG-2.80HR
CN28	V245CR2.80R	3245VCG-2.80R
CT28	V245CR2.80T0R	3245VCG-2.80T0R
CV28	V245CR2.80T2R	3245VCG-2.80T2R
CG28	MV245CR2.80TM2.5R	3245MVCG-2.80TM2.5R
CJ28W	WV245CR2.80HR	3245VWCG-2.80HR
CN28W	WV245CR2.80R	3245VWCG-2.80R
CT28W	WV245CR2.80T0R	3245VWCG-2.80T0R
CV28W	WV245CR2.80T2R	3245VWCG-2.80T2R
CG28W	MWV245CR2.80TM2.5R	3245MVWCG-2.80TM2.5R
CJ28E	V245CR2.80HLR	3245VCG-2.80HLR
CN28E	V245CR2.80LR	3245VCG-2.80LR
CT28E	V245CR2.80T0LR	3245VCG-2.80T0LR
CV28E	V245CR2.80T2LR	3245VCG-2.80T2LR
CG28E	MV245CR2.80TM2.5LR	3245MVCG-2.80TM2.5LR
CJ28D	WV245CR2.80HLR	3245VWCG-2.80HLR
CN28D	WV245CR2.80LR	3245VWCG-2.80LR
CT28D	WV245CR2.80T0LR	3245VWCG-2.80T0LR
CV28D	WV245CR2.80T2LR	3245VWCG-2.80T2LR
CG28D	MWV245CR2.80TM2.5LR	3245MVWCG-2.80TM2.5LR
EJ28	VEN245CR2.80HR	3245VEN-2.80HR
EN28	VEN245CR2.80R	3245VEN-2.80R
ET28	VEN245CR2.80T0R	3245VEN-2.80T0R
EV28	VEN245CR2.80T2R	3245VEN-2.80T2R
EG28	MVEN245CR2.80TM2.5LR	3245MVEN-2.80TM2.5R
EJ28W	WVEN245CR2.80HR	3245VWEN-2.80HR
EN28W	WVEN245CR2.80R	3245VWEN-2.80R
ET28W	WVEN245CR2.80T0R	3245VWEN-2.80T0R
EV28W	WVEN245CR2.80T2R	3245VWEN-2.80T2R
EG28W	MWVEN245CR2.80TM2.5R	3245MVWEN-2.80TM2.5R

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/20	Vendor similar designator or type part number <u>1/ 2/</u>	
	CAGE 61081	CAGE 5BG68
EJ28E	VEN245CR2.80HLR	3245VEN-2.80HLR
EN28E	VEN245CR2.80LR	3245VEN-2.80LR
ET28E	VEN245CR2.80T0LR	3245VEN-2.80T0LR
EV28E	VEN245CR2.80T2LR	3245VEN-2.80T2LR
EG28E	MVEN245CR2.80TM2.5LR	3245MVEN-2.80TM2.5LR
EJ28D	WVEN245CR2.80HLR	3245VWEN-2.80HLR
EN28D	WVEN245CR2.80LR	3245VWEN-2.80LR
ET28D	WVEN245CR2.80T0LR	3245VWEN-2.80T0LR
EV28D	WVEN245CR2.80T2LR	3245VWEN-2.80T2LR
EG28D	MWVEN245CR2.80TM2.5LR	3245MVWEN-2.80TM2.5LR
HJ28	VHA245CR2.80HR	3245VBH-2.80HR
HN28	VHA245CR2.80R	3245VBH-2.80R
HT28	VHA245CR2.80T0R	3245VBH-2.80T0R
HV28	VHA245CR2.80T2R	3245VBH-2.80T2R
HG28	MVHA245CR2.80TM2.5LR	3245MVBH-2.80TM2.5R
HJ28W	WVHA245CR2.80HR	3245VVBH-2.80HR
HN28W	WVHA245CR2.80R	3245VVBH-2.80R
HT28W	WVHA245CR2.80T0R	3245VVBH-2.80T0R
HV28W	WVHA245CR2.80T2R	3245VVBH-2.80T2R
HG28W	MWVHA245CR2.80TM2.5LR	3245MVVBH-2.80TM2.5R
HJ28E	VHA245CR2.80HLR	3245VBH-2.80HLR
HN28E	VHA245CR2.80LR	3245VBH-2.80LR
HT28E	VHA245CR2.80T0LR	3245VBH-2.80T0LR
HV28E	VHA245CR2.80T2LR	3245VBH-2.80T2LR
HG28E	VMHA245CR2.80TM2.5LR	3245MVBH-2.80TM2.5R
HJ28D	WVHA245CR2.80HLR	3245VVBH-2.80HLR
HN28D	WVHA245CR2.80LR	3245VVBH-2.80LR
HT28D	WVHA245CR2.80T0LR	3245VVBH-2.80T0LR
HV28D	WVHA245CR2.80T2LR	3245VVBH-2.80T2LR
HG28D	MWVHA245CR2.80TM2.5LR	3245MVVBH-2.80TM2.5LR

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/20	Vendor similar designator or type part number <u>1/</u> <u>2/</u>	
	CAGE 61081	CAGE 5BG68
RJ28	VR245CR2.80HR	3245VCC-2.80HR
RN28	VR245CR2.80R	3245VCC-2.80R
RT28	VR245CR2.80T0R	3245VCC-2.80T0R
RV28	VR245CR2.80T2R	3245VCC-2.80T2R
RG28	MVR245CR2.80TM2.5LR	3245MVCC-2.80TM2.5R
RJ28W	WVR245CR2.80HR	3245VWCC-2.80HR
RN28W	WVR245CR2.80R	3245VWCC-2.80R
RT28W	WVR245CR2.80T0R	3245VWCC-2.80T0R
RV28W	WVR245CR2.80T2R	3245VWCC-2.80T2R
RG28W	MWVR245CR2.80TM2.5LR	3245MVWCC-2.80TM2.5R
RJ28E	VR245CR2.80HLR	3245VCC-2.80HLR
RN28E	VR245CR2.80LR	3245VCC-2.80LR
RT28E	VR245CR2.80T0LR	3245VCC-2.80T0LR
RV28E	VR245CR2.80T2LR	3245VCC-2.80T2LR
RG28E	VMR245CR2.80TM2.5LR	3245MVCC-2.80TM2.5LR
RJ28D	WVR245CR2.80HLR	3245VWCC-2.80HLR
RN28D	WVR245CR2.80LR	3245VWCC-2.80LR
RT28D	WVR245CR2.80T0LR	3245VWCC-2.80T0LR
RV28D	WVR245CR2.80T2LR	3245VWCC-2.80T2LR
RG28D	MWVR245CR2.80TM2.5LR	3245MVWCC-2.80TM2.5LR

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 AA59590/20	Vendor similar designator or type part number <u>1/</u> <u>2/</u>	
	CAGE 61081	CAGE 5BG68
ET28E	VEN245CR2.80T0LR	3245VWEN-2.80T0LR
ET38E	VEN245CR3.80T0LR	3245VWEN-3.80T0LR
ET48E	VEN245CR4.80T0LR	3245VWEN-5.80T0LR
ET58E	VEN245CR5.80T0LR	3245VWEN-5.80T0LR

- 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 5998-2012-020

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