

[INCH-POUND]
A-A-59590/2A
March 7, 2003
A-A-59590/2
November 27, 2000

COMMERCIAL ITEM DESCRIPTION
SPECIFICATION SHEET

HOLDERS, ELECTRICAL CARD, WEDGE RETAINERS, 3 PIECE, SCREW ACTUATED DRIVE,
.225 X .260 INCH BODY SIZE, WITH EJECTION ACTION

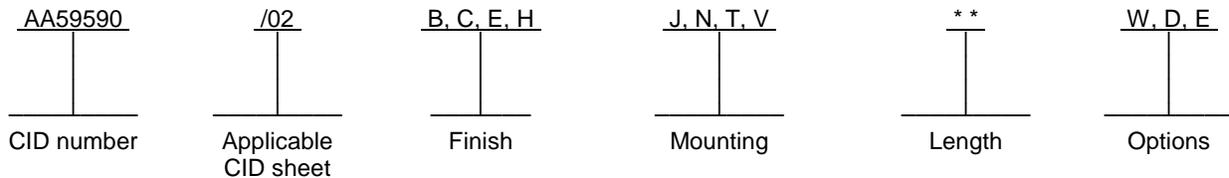
The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

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.

SCOPE. This CID specification sheet covers 3 piece card holders with an ejection action feature that forces the circuit card assembly to disengage from its installed position when used in heat sinking devices (cold plates, heat exchanger) or other applications. Card holders covered by this CID are intended to provide maximum contact between thermal paths on the circuit card assemblies and the heat sink surfaces and to provide resistance to loosening due to shock and vibration. Items covered by this CID are intended for all federal agency applications and environments.

Reluctant

CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN). This CID specification sheet uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see notes).



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. The recommended installation torque is as follows: 6 inch-pounds (0.7 N-m) for assemblies using no options or option "W" and 8 inch-pounds (0.91 N-m) for assemblies using options "D" or "E".

Interface and physical dimensions. The card holders supplied to this CID specification sheet shall be as specified herein and the general CID. An ejection action shall be used to allow for initial ejection of the circuit card assembly without damaging circuits, components, or connector pins.

Finish options. The finish options B, C, E, or H shall be as specified in A-A-59590.

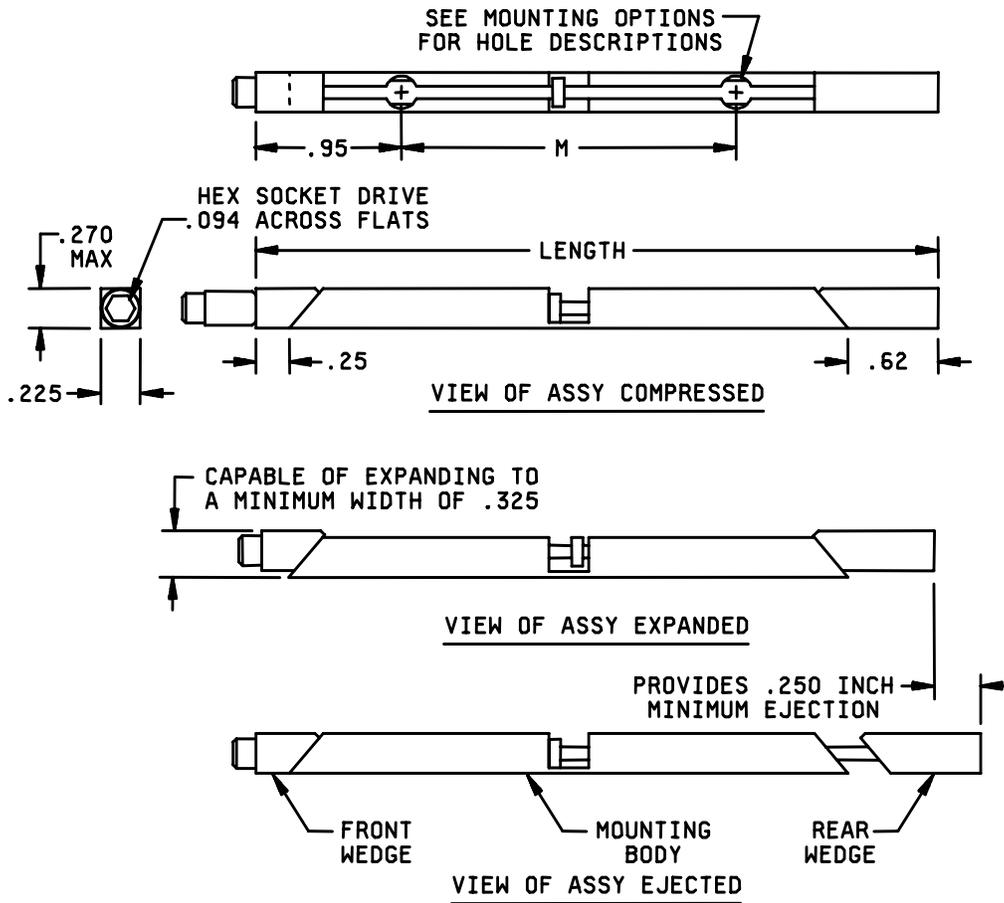
Mounting options. The mounting options J, N, T or V shall be as specified in A-A-59590. Except when using mounting option "N", two mounting holes are required on card holders. See table I and figure 1 for mounting hole spacing requirements.

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FSC 5998

Counterbore holes. Counterbore holes shall be .066/.073 inch (1.68/1.85 mm) diameter, countersunk 100 degrees by .140 inch (3.56 mm) diameter through holes with an access/clearance hole of .156 inch (3.96 mm) diameter by .200 inch (5.08 mm) deep.

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



Inches	mm								
.06	1.5	.225	5.72	.250	6.35	.325	8.26	.95	24.1
.094	2.39	.25	6.4	.270	6.86	.62	15.7		

NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only.
2. Unless otherwise specified, tolerances are for $\pm .02$ inch (0.51 mm) for two place decimals and $\pm .010$ (0.25 mm) for three place decimals.

FIGURE 1. Relaxed and expanded dimensions.

Ejection. An ejection action shall be incorporated into the card holder. This shall allow for disengagement of the circuit card assembly from its mating connector(s). The minimal amount of ejection distance shall be .25 inches (6.4 mm) (see figure 2).

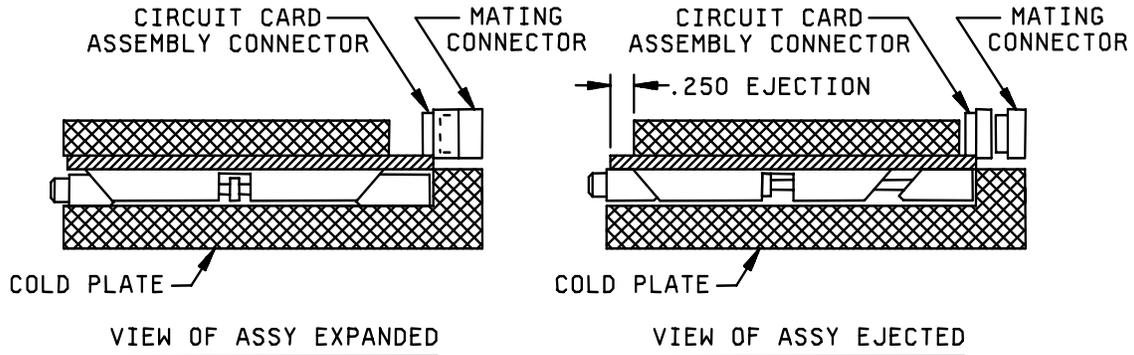


FIGURE 2. Ejection diagram.

TABLE I. Additional assembly dimensions (see figure 2).

PIN length designator	Dimension "LENGTH" ± .02 (0.5 mm)	Dimension "M" ± .005 (0.13 mm)
28	2.8 (71)	.530 (13.5)
35	3.5 (89)	1.23 (31.2)
38	3.8 (97)	1.53 (38.9)
40	4.0 (102)	1.73 (43.9)
48	4.8 (122)	2.53 (64.3)
58	5.8 (147)	3.53 (89.7)
64	6.4 (163)	4.13 (104.9)

Options. Card holders can have the following options. Card holders not requiring the following option shall leave the position in the PIN blank.

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 option shall include a suffix "W" in the PIN (see classification and notes).

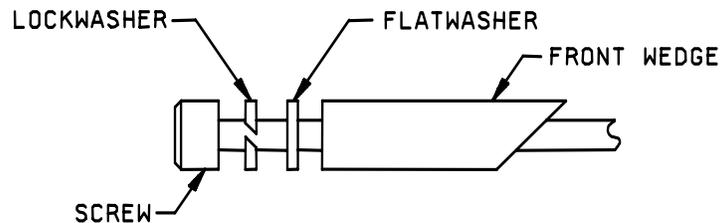


FIGURE 3. Lockwasher and flat washer details.

Screw self-locking element (see figure 4). The use of a screw self-locking element will provide prevailing torque for resistance to loosening from shock vibration. Card holders requiring a screw self-locking element shall include a suffix "E" in the PIN (see classification and notes).

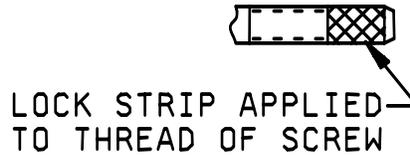


FIGURE 4. Screw self-locking element details.

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.

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 preparation and coordination of this CID specification sheet, 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	APW Electronic Solutions 14100 Danielson Street Poway, CA 92064-6898	Tel: (858) 679-4550 Fax: (858) 679-4555 E-mail: sales.electronicsolutions@apw.com URL: www.apw.com
52094	Calmark Corporation 4915 Walnut Grove Avenue San Gabriel, CA 91776-2099	Tel: (626) 287-0451 Fax: (626) 287-7350 E-mail: sales@calmark.com URL: www.calmark.com

Part number supersession data. This CID specification sheet part numbers supersedes the following manufacturer's part numbers as shown in table II. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE II. Commercial part number supersession data. 1/

PIN designator AA59590/02	Vendor similar designator or type part number <u>2/</u> CAGE 18915	Vendor similar designator or type part number <u>2/</u> CAGE 52094
CJ28	45-5071-2.80	E225-2.80H
CN28	45-5071-2.80-A	E225-2.80
CT28	45-5071-2.80-T	E225-2.80T0
CV28	45-5071-2.80-S	E225-2.80T2
CJ28E	45-5071-2.80-L	E225-2.80HL
CN28E	45-5071-2.80-AL	E225-2.80L
CT28E	45-5071-2.80-TL	E225-2.80T0L
CV28E	45-5071-2.80-SL	E225-2.80T2L
CJ28W	45-5072-2.80	WE225-2.80H
CN28W	45-5072-2.80-A	WE225-2.80
CT28W	45-5072-2.80-T	WE225-2.80T0
CV28W	45-5072-2.80-S	WE225-2.80T2
CJ28D	45-5072-2.80-L	WE225-2.80HL
CN28D	45-5072-2.80-AL	WE225-2.80L
CT28D	45-5072-2.80-TL	WE225-2.80T0L
CV28D	45-5072-2.80-SL	WE225-2.80T2L
BJ28	45-5071-2.80-B	EA225-2.80H
BN28	45-5071-2.80-BA	EA225-2.80
BT28	45-5071-2.80-BT	EA225-2.80T0
BV28	45-5071-2.80-BS	EA225-2.80T2
BJ28E	45-5071-2.80-BAL	EA225-2.80HL
BN28E	45-5071-2.80-BTL	EA225-2.80L
BT28E	45-5071-2.80-BSL	EA225-2.80T0L
BV28E	45-5071-2.80-BL	EA225-2.80T2L

See footnotes at end of table.

TABLE II. Commercial part number supersession data – Continued. 1/

PIN designator AA59590/02	Vendor similar designator or type part number <u>2/</u> CAGE 18915	Vendor similar designator or type part number <u>2/</u> CAGE 52094
BJ28W	45-5072-2.80-B	WEA225-2.80H
BN28W	45-5072-2.80-BA	WEA225-2.80
BT28W	45-5072-2.80-BT	WEA225-2.80T0
BV28W	45-5072-2.80-BS	WEA225-2.80T2
BJ28D	45-5072-2.80-BL	WEA225-2.80HL
BN28D	45-5072-2.80-BAL	WEA225-2.80L
BT28D	45-5072-2.80-BTL	WEA225-2.80T0L
BV28D	45-5072-2.80-BSL	WEA225-2.80T2L
HJ28	45-5071-2.80-B3	EHA225-2.80H
HN28	45-5071-2.80B3A	EHA225-2.80
HT28	45-5071-2.80B3T	EHA225-2.80T0
HV28	45-5071-2.80B3S	EHA225-2.80T2
HJ28E	45-5071-2.80B3L	EHA225-2.80HL
HN28E	45-5071-280B3AL	EHA225-2.80L
HT28E	45-5071-280B3TL	EHA225-2.80T0L
HV28E	45-5071-280B3SL	EHA225-2.80T2L
HJ28W	45-5072-2.80-B3	WEHA225-2.80H
HN28W	45-5072-2.80B3A	WEHA225-2.80
HT28W	45-5072-2.80B3T	WEHA225-2.80T0
HV28W	45-5072-2.80B3S	WEHA225-2.80T2
HJ28D	45-5072-2.80B3L	WEHA225-2.80HL
HN28D	45-5072-280B3AL	WEHA225-2.80L
HT28D	45-5072-280B3TL	WEHA225-2.80T0L
HV28D	45-5072-280B3SL	WEHA225-2.80T2L

See footnotes at end of table.

TABLE II. Commercial part number supersession data – Continued. 1/

PIN designator AA59590/02	Vendor similar designator or type part number <u>2/</u> CAGE 18915	Vendor similar designator or type part number <u>2/</u> CAGE 52094
EJ28	45-5071-2.80-EN	EEN225-2.80H
EN28	45-5071-2.80ENA	EEN225-2.80
ET28	45-5071-2.80ENT	EEN225-2.80T0
EV28	45-5071-2.80ENS	EEN225-2.80T2
EJ28E	45-5071-2.80ENL	EEN225-2.80HL
EN28E	45-5071-280ENAL	EEN225-2.80L
ET28E	45-5071-280ENTL	EEN225-2.80T0L
EV28E	45-5071-280ENSL	EEN225-2.80T2L
EJ28W	45-5072-2.80-EN	WEEN225-2.80H
EN28W	45-5072-2.80ENA	WEEN225-2.80
ET28W	45-5072-2.80ENT	WEEN225-2.80T0
EV28W	45-5072-2.80ENS	WEEN225-2.80T2
EJ28D	45-5072-2.80ENL	WEEN225-2.80HL
EN28D	45-5072-280ENAL	WEEN225-2.80L
ET28D	45-5072-280ENTL	WEEN225-2.80T0L
EV28D	45-5072-280ENSL	WEEN225-2.80T2L

- 1/ CID PINs listed only with length designator "28". See table III for CID PIN construction using other available lengths.
- 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 of the basic CID.

TABLE III. Example of PIN with available length designators.

PIN designator AA59590/02	Vendor similar designator or type part number ^{1/} CAGE 18915	PIN designator AA59590/02	Vendor similar designator or type part number ^{1/} CAGE 52094
CJ28	45-5071-2.80	CJ28	E225-2.80H
CJ35	45-5071-3.50	CJ35	E225-3.50H
CJ38	45-5071-3.80	CJ38	E225-3.80H
CJ40	45-5071-4.00	CJ40	E225-4.00H
CJ48	45-5071-4.80	CJ48	E225-4.80H
CJ58	45-5071-5.80	CJ58	E225-5.80H
CJ64	45-5071-6.40	CJ64	E225-6.40H

^{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 of the basic CID.

MILITARY INTERESTS:

Custodians:
 Army – CR
 Navy – EC
 Air Force – 11
 DLA – CC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA – 7FXE
 Preparing Activity
 DLA – CC
 Project 5998-0131