



DEFENSE LOGISTICS AGENCY
LAND AND MARITIME
P.O. BOX 3990
COLUMBUS, OHIO 43218-3990

DLA LAND AND MARITIME

June 13, 2016

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Draft(s) of: 86040, 86078
Project Number(s): 5935-2016-E12 and -E13

The initial draft(s) for the subject document(s), is now available for viewing and downloading from the DLA Land and Maritime-VA Web site:

<http://www.dscc.dla.mil/Programs/MilSpec/DocSearch.asp>

Major changes to this document(s) include updating industry references and removing vendor.

Concurrence or comments are required at this Center within 30 days from the date of this letter. Late comments will be held for the next coordination of the document. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians of this office, as applicable, in sufficient time to allow for consolidating the department reply. Lack of response to this draft will be construed as concurrence.

If this document(s) is of interest to you, please provide your comments or suggested changes. The point of contact for this document is Mr. Antonelli, phone number 614-692-0576, facsimile transmission, 614-692-6939, e-mail ralph.antonelli@dla.mil, or may be mailed via the US Postal Service to DLA LAND AND MARITIME, ATTN: VAI (Attention: Ralph Antonelli), P.O. Box 3990, Columbus, OH 43218-3990.

Sincerely,

/ SIGNED /

ABDONASSER M. ABDOUNI
Chief,
Interconnection Branch

cc:
FMVA (Dave Barman)
DSCC.Standardization@dla.mil

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	Add new vendor CAGE 28198, part numbers, on page 14.	2/2/88	R. Marbais
B	Figure 1, redraw configuration 3.	12/09/93	R. Larson
C	Change CAGE 14933 to 037Z3. Added hardware for size 75 and 104 position connectors. Remove source CAGE 97954. Editorial changes throughout.	1/22/04	R. Taylor
D	Updating references. Remove vendor CAGE 95238.	DRAFT	

CURRENT DESIGN ACTIVITY CAGE CODE 037Z3 HAS CHANGED NAMES TO: DLA LAND AND MARITIME COLUMBUS, OHIO 43218-3990
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Prepared in accordance with ASME Y14.100

Source control drawing

REV	C	D															
PAGE	16	17															
REV STATUS	REV	D	D	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OF PAGES	PAGE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

PMIC N/A	PREPARED BY Gail Willis		DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OHIO 43216-5000														
Original date of drawing 15 Sept 86	CHECKED BY Carl Dello-Stritto		TITLE CONNECTOR, RECEPTACLE, ELECTRICAL, RECTANGULAR, SUBMINIATURE, CRIMP REMOVABLE CONTACTS														
	APPROVED BY Richard Marbais																
	SIZE A	CAGE CODE 037Z3	DWG. NO. 86040														
	REV D	PAGE 1	OF 17														

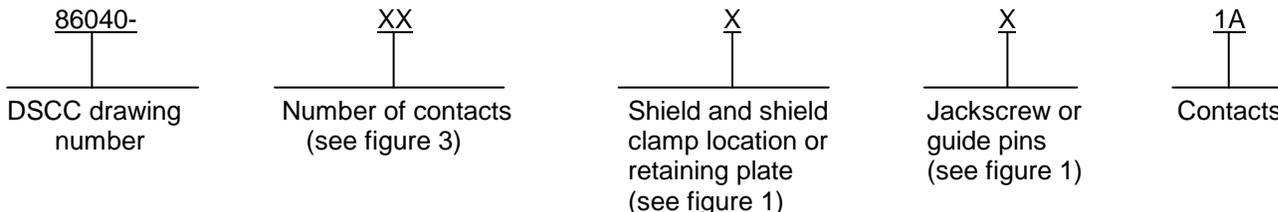
REQUIREMENTS: Shall meet the requirements of MIL-DTL-28748, except as specified herein.

Dimensions and configurations: See figures 1, 2, and 3.

Mating connector: 86078.

Resistance to test probe damage .145 inch (3.68 mm) ± .015 inch (0.38 mm) depth of insertion.

Marking: Marking shall be in accordance with MIL-DTL-28748 except the DSCC Part or Identifying Number (PIN) shall be used in place of the M28748 PIN.



Insert arrangements and number of contacts (see figure 3)

- 09
- 11
- 29
- 75
- 104

Shield and shield clamp location or retaining plate (see figure 1)

- 1 – Top opening per configuration D
- 2 – Side opening per configuration D
- 3 - None included

Jackscrews or guidepins (see figure 1)

- A - Guide pins
- B - Short knobless jackscrews
- C - Short jackscrews
- D - Long jackscrews
- E - Fixed jackscrews

Contacts

In accordance with M39029/35-441
1A - 100 percent size 22

QUALIFICATION: Not required.

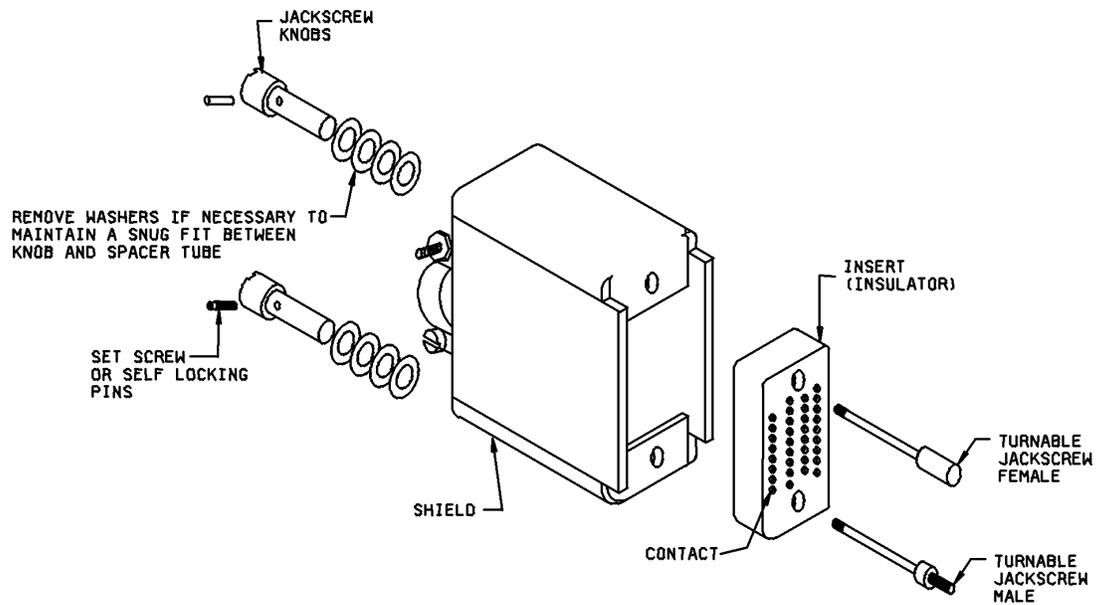
Contacts: SAE AS39029/35, PIN: M39029/35-441.

Crimp tool: M22520/2-01.

Installing and removal tools: SAE AS81969/18 and /20.

Positioner: Astro Tool (58164) PIN 615695 or Daniels Manufacturing Corp. (11851) PIN K280, or equivalent.

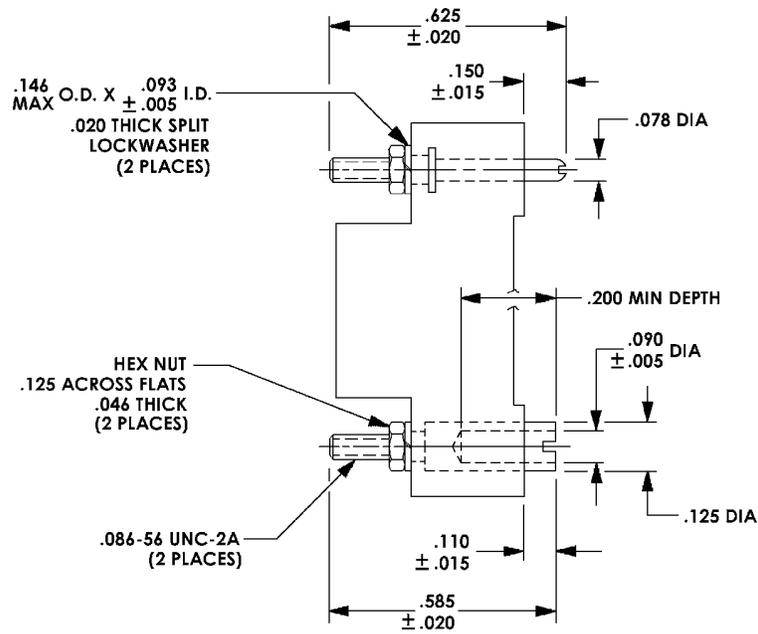
DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE	CAGE CODE	DWG NO.
	A	037Z3	86040
		REV D	PAGE 2



Connector assembly

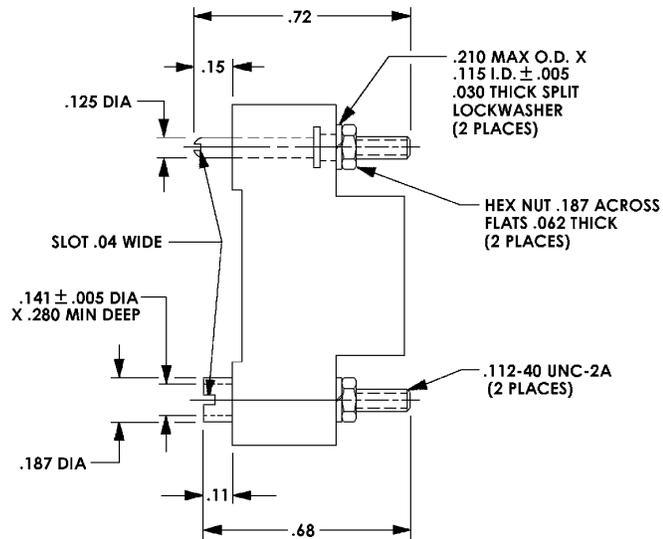
FIGURE 1. Connector with guide pins, jackscrews, and shields.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
		REV C	PAGE 3



Configuration A is not applicable to sizes 75 and 104 inserts

Configuration A. Connector with guide pins.

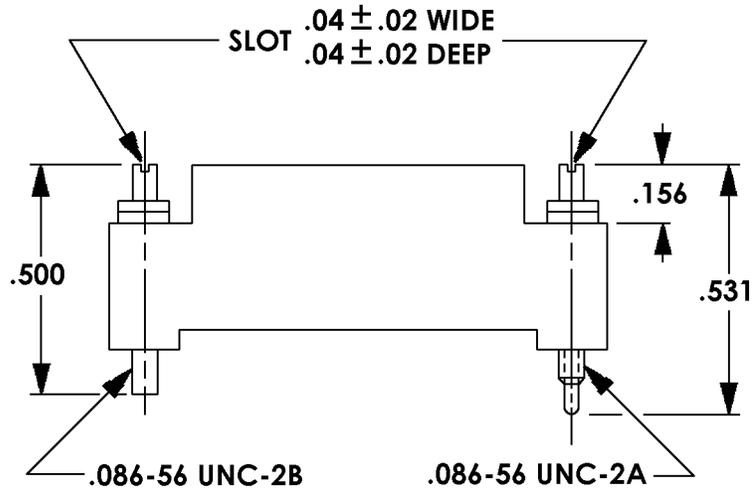


Configuration A1 is applicable to sizes 75 and 104 inserts

Configuration A1. Connector with guide pins.

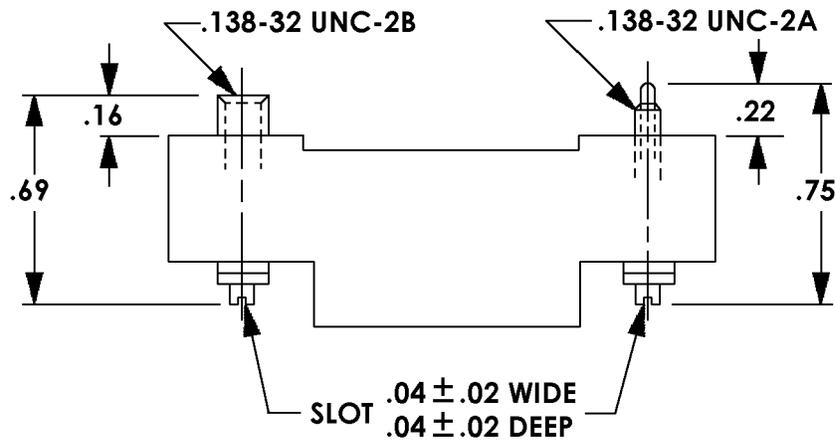
FIGURE 1. Connector with guide pins, jackscrews, and shields - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
		REV C	PAGE 4



Configuration B is not applicable to 75- and 104- position connectors

Configuration B. Connector with knobless short turnable jackscrews.

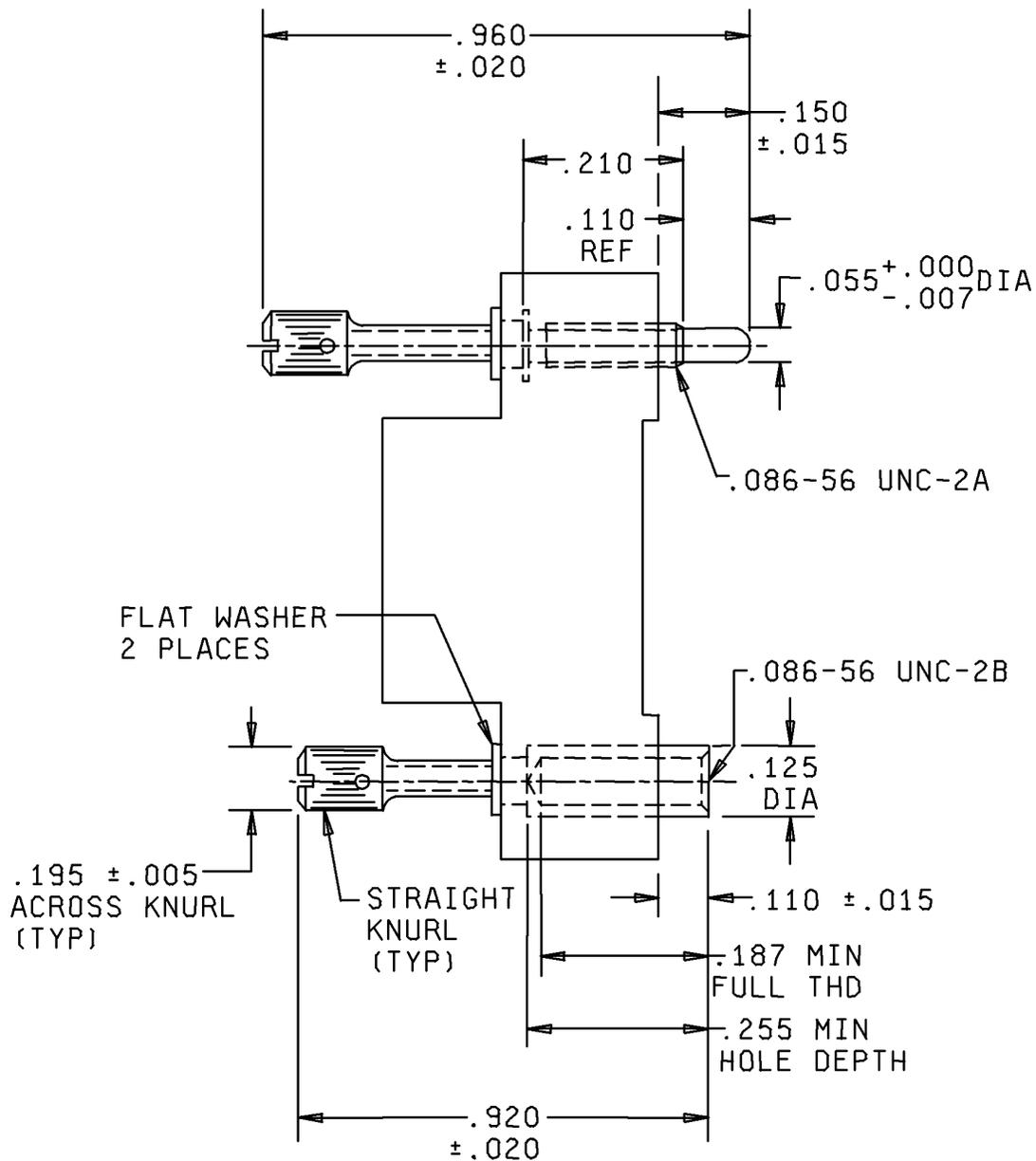


Configuration B1 is applicable to 75- and 104- position connectors

Configuration B1. Connector with knobless short turnable jackscrews.

FIGURE 1. Connector with guide pins, jackscrews, and shields - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
		REV C	PAGE 5

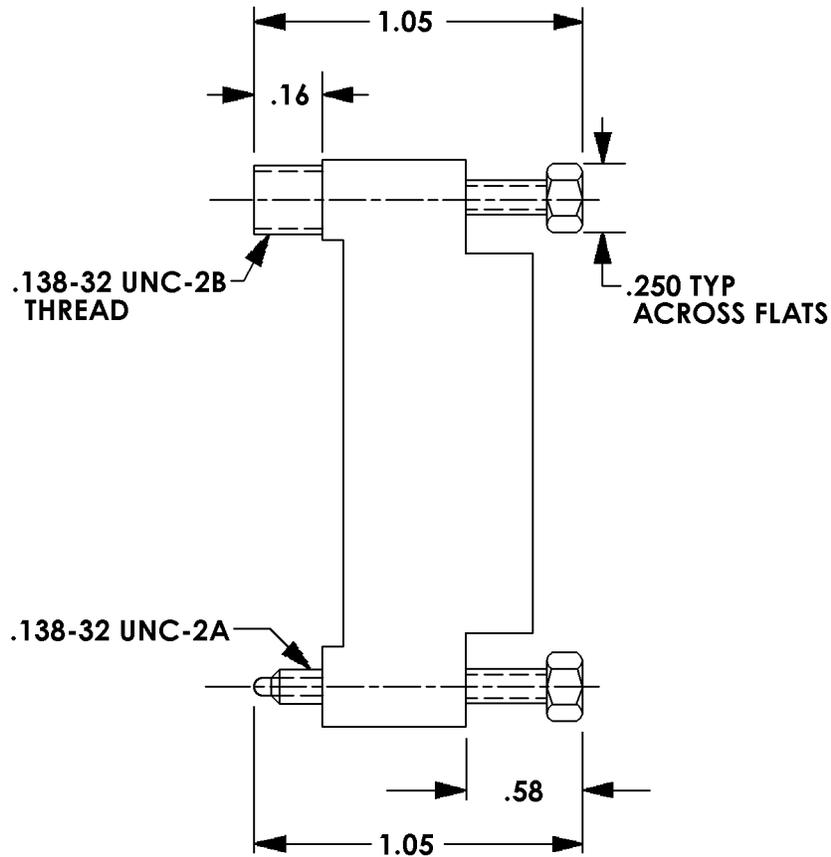


Configuration C is not applicable to 75- and 104- position connectors.

Configuration C. Connector with short turnable jackscrews.

FIGURE 1. Connector with guide pins, jackscrews, and shields - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE	CAGE CODE	DWG NO.
	A	037Z3	86040
	REV	C	PAGE 6

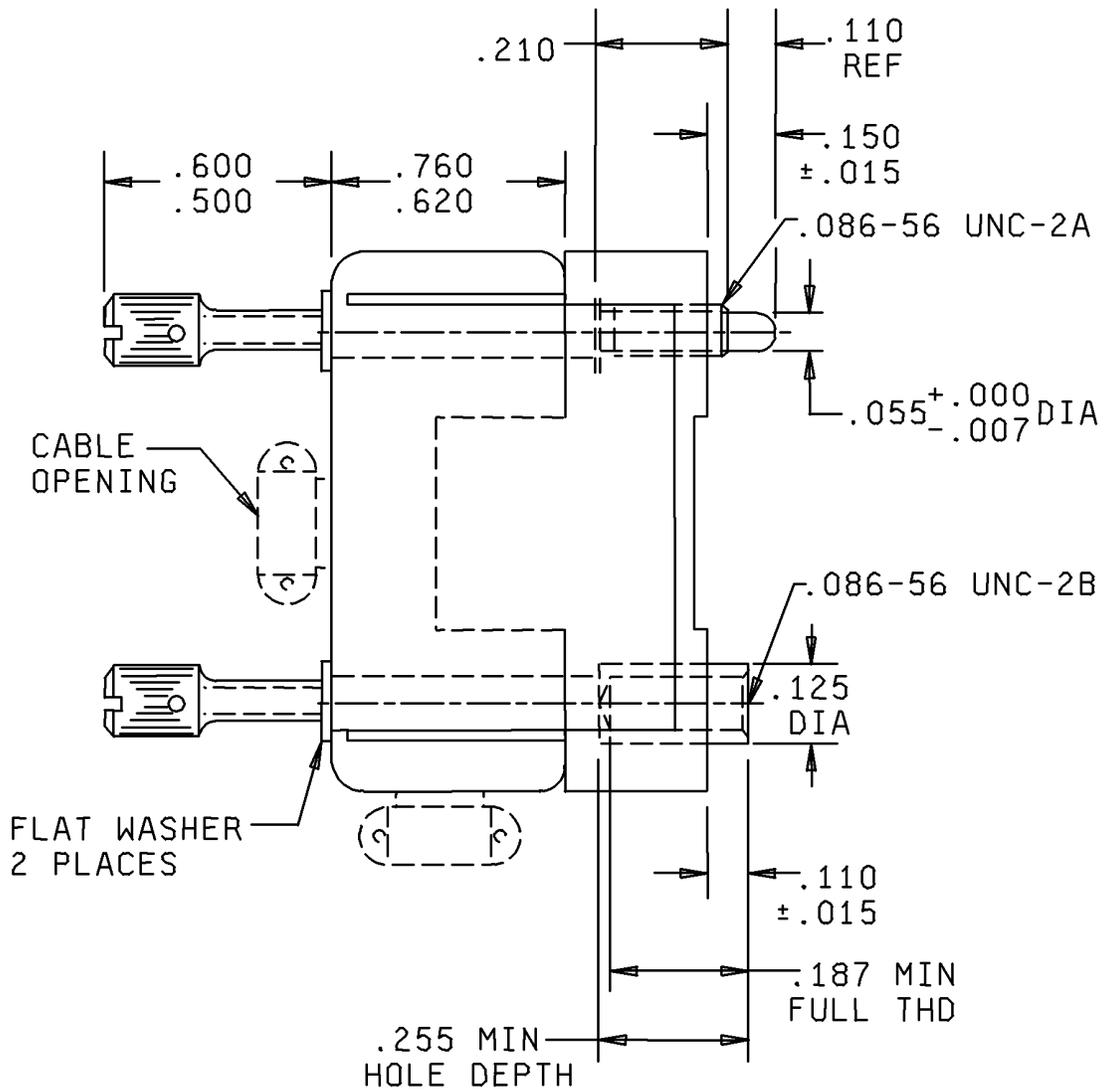


Configuration C1 is applicable to 75- and 104- position connectors.

Configuration C1. Connector with short turnable jackscrews.

FIGURE 1. Connector with guide pins, jackscrews, and shields - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
		REV C	PAGE 7

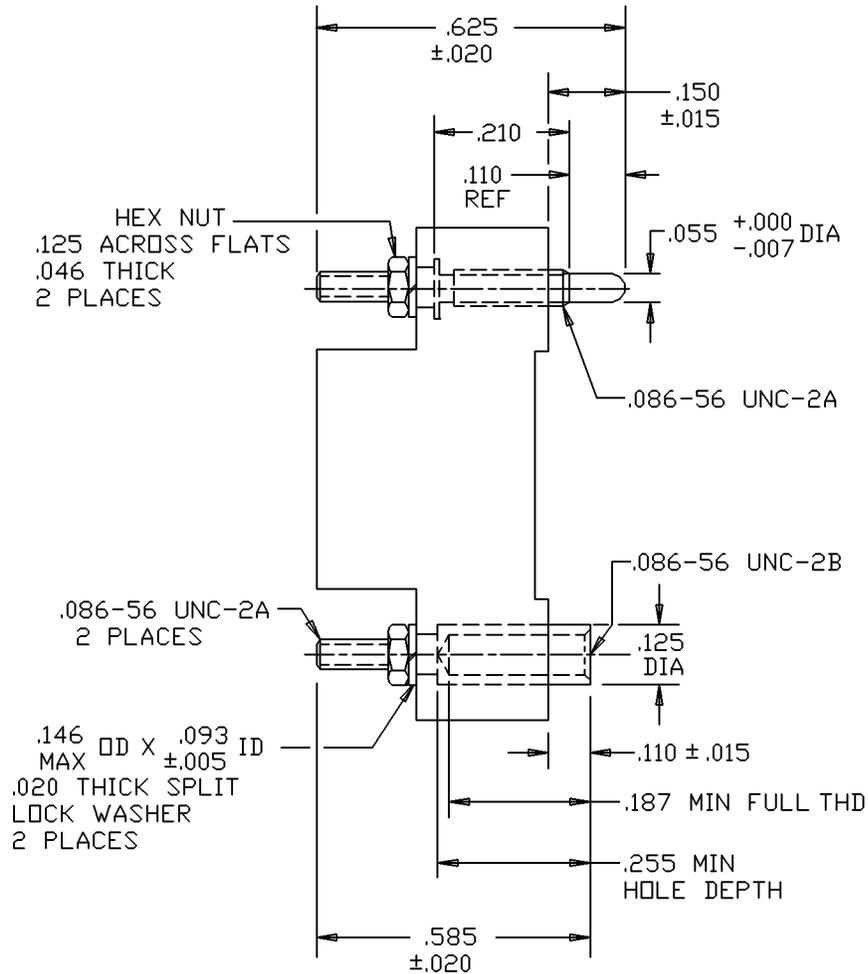


Configuration D is not applicable to 75- and 104-position connectors.

Configuration D. Connector with long turnable jackscrews and shield.

FIGURE 1. Connector with guide pins, jackscrews, and shields - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE	CAGE CODE	DWG NO.
	A	037Z3	86040
	REV	C	PAGE 8

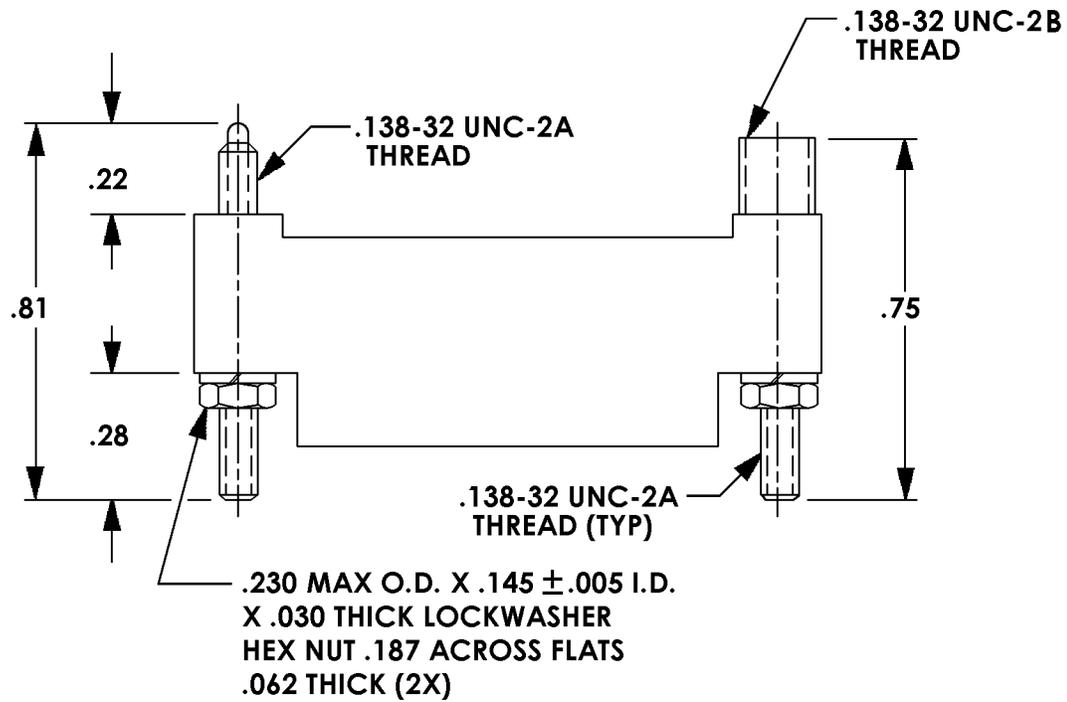


Configuration E. Connector with fixed jackscrews.

Configuration E is not applicable to 75- and 104- position connectors.

FIGURE 1. Connector with guide pins, jackscrews, and shields - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
		REV C	PAGE 9



Configuration E1 is applicable to 75- and 104- position connectors.

Configuration E1. Connector with fixed jackscrews.

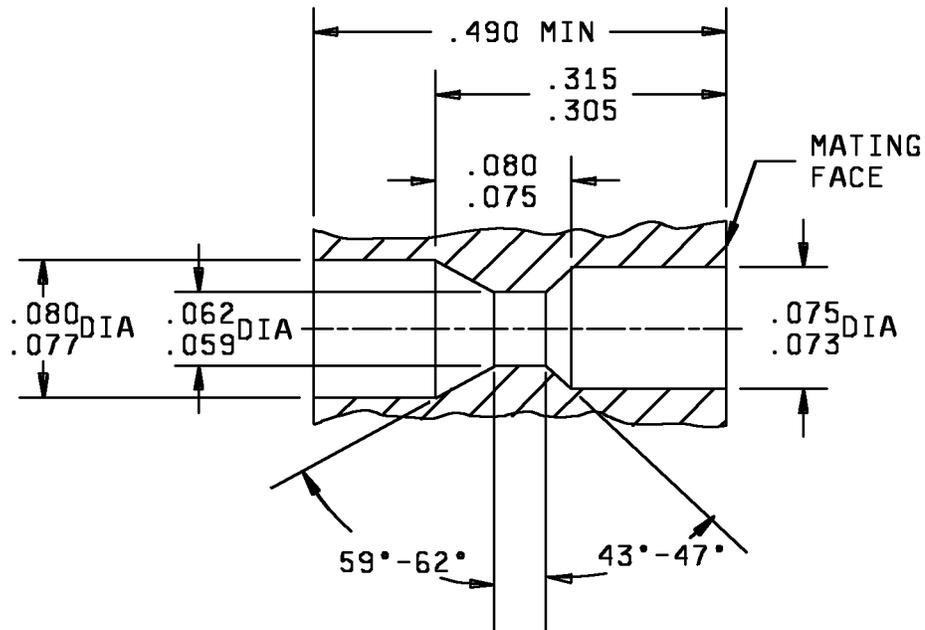
Inches	mm	Inches	mm	Inches	mm
.000	0.00	.110	2.79	.531	13.49
.005	0.13	.115	2.92	.580	14.73
.007	0.18	.125	3.18	.585	14.86
.015	0.38	.141	3.58	.600	15.24
.020	0.51	.146	3.71	.620	15.75
.030	0.76	.150	3.81	.625	15.88
.040	1.00	.156	3.96	.680	17.27
.046	1.17	.187	4.75	.690	17.53
.055	1.40	.195	4.95	.720	18.29
.062	1.57	.200	5.08	.750	19.05
.078	1.98	.210	5.33	.810	20.57
.086	2.18	.255	6.48	.920	23.37
.090	2.28	.280	7.11	.960	24.38
.093	2.36	.500	12.70	1.050	26.67

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ± .003 (0.08 mm).

FIGURE 1. Connector with guide pins, jackscrews, and shields - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE	CAGE CODE	DWG NO.
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	REV	C	PAGE 10



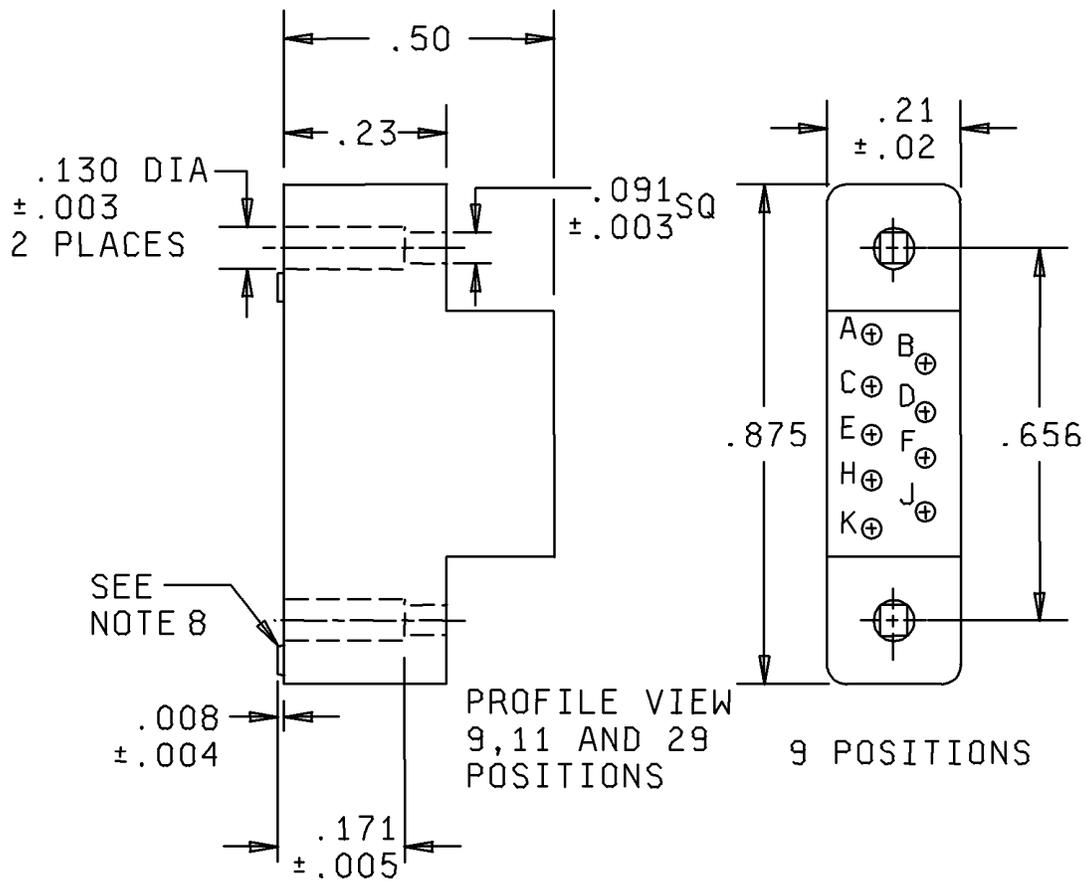
Inches	mm
.059	1.50
.062	1.57
.073	1.85
.075	1.91
.077	1.96
.080	2.03
.305	7.75
.315	8.00
.490	12.45

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.

FIGURE 2. Insert hole configuration.

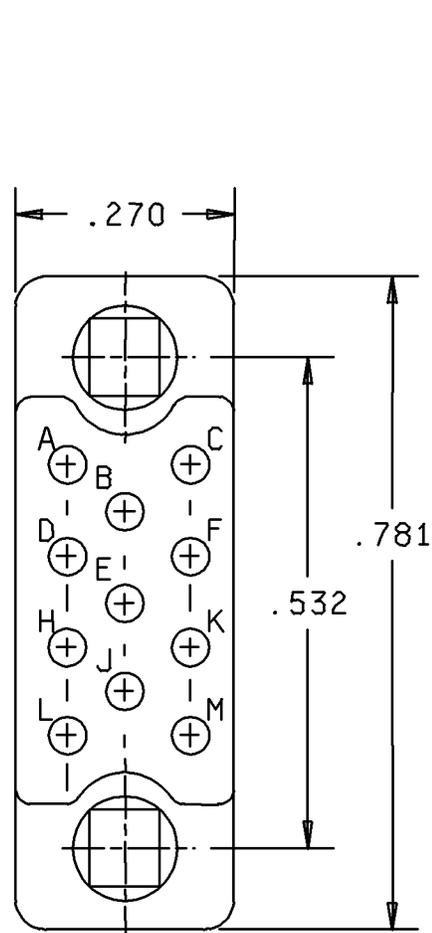
DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
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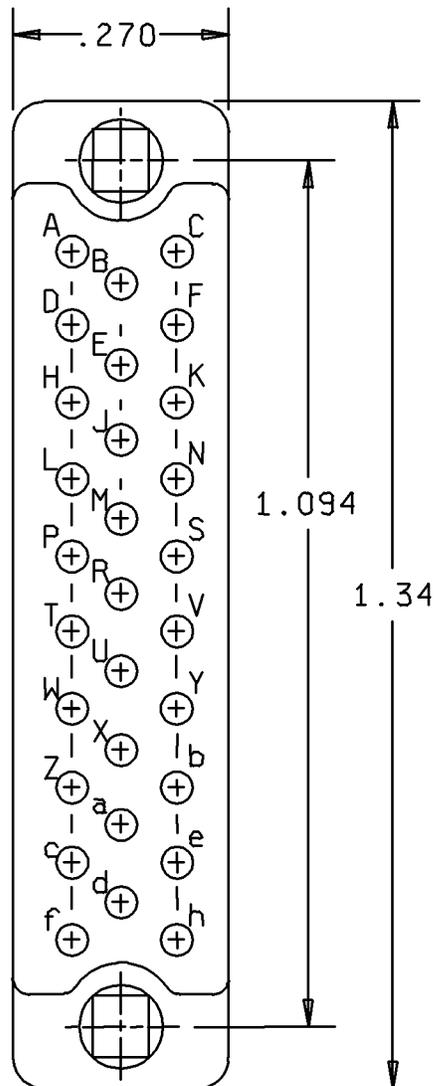
MATING FACE FEMALE CONNECTOR

FIGURE 3. Insert arrangements.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
		REV C	PAGE 12



11 POSITIONS

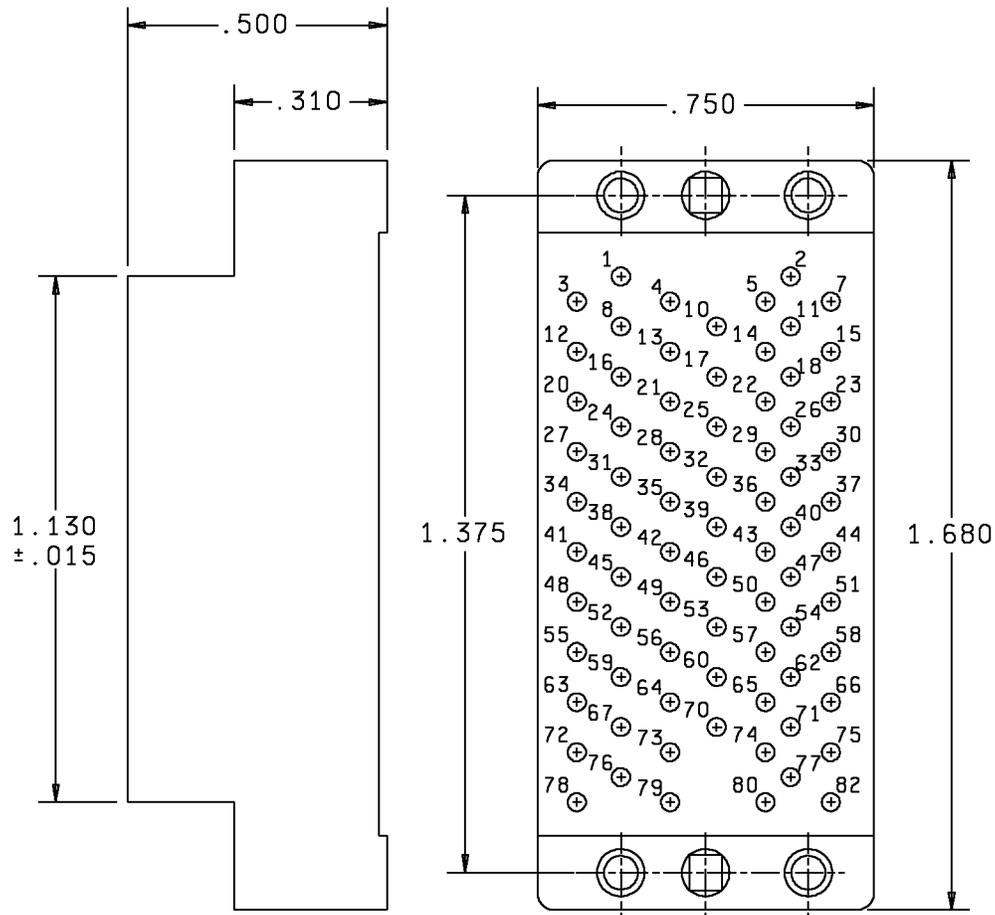


29 POSITIONS

MATING FACE OF FEMALE CONNECTOR

FIGURE 3. Insert arrangements - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
		REV C	PAGE 13

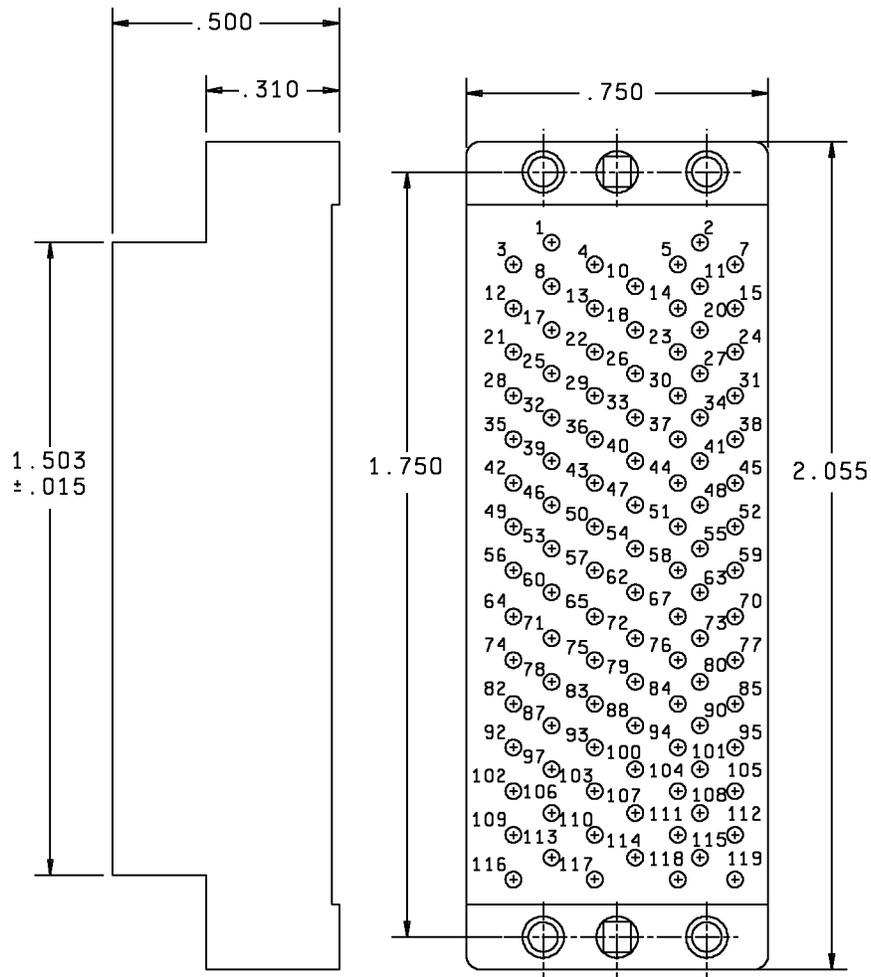


75 POSITIONS

MATING FACE OF FEMALE CONNECTOR

FIGURE 3. Insert arrangements - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
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104 POSITIONS

MATING FACE OF FEMALE CONNECTOR

FIGURE 3. Insert arrangements - Continued.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43216-5000	SIZE A	CAGE CODE 037Z3	DWG NO. 86040
		REV C	PAGE 15

Inches	mm	Inches	mm
.003	0.08	.532	13.51
.004	0.10	.656	16.66
.005	0.13	.750	19.05
.008	0.20	.781	19.84
.015	0.38	.875	22.23
.02	0.5	1.094	27.79
.091	2.31	1.130	28.70
.130	3.30	1.34	34.0
.171	4.34	1.375	34.93
.21	5.3	1.503	38.18
.270	6.86	1.680	42.67
.310	7.87	1.750	44.45
.50	12.7	2.055	52.20

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are $\pm .02$ (0.50 mm) for two place decimals and $\pm .015$ (0.38 mm) for three place decimals.
4. Tolerance between any two adjacent contact centers shall be $\pm .004$ (0.10 mm). Tolerance between any two contact center, other than adjacent contacts, shall be $\pm .006$ (0.15 mm).
5. Contact letter identification may be located on either side of the contact hole. All letters shall appear on the front and rear face of each insert.
6. Inserts shall be used with guide pin assemblies or jackscrew assemblies.
7. Insert material: Shall be in accordance with MIL-DTL-28748.
8. Shape of .008 inch (0.20 mm) pads optional.

FIGURE 3. Insert arrangements - Continued.

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Approved sources of supply are listed herein. Additional sources will be added as they become available. The vendors listed herein have agreed to this drawing and certifications of compliance have been submitted to DSCC-VAI.

DSCC drawing PIN	Vendor CAGE number	Vendor's similar PIN <u>1/</u>
86040-09XX1A 86040-75XX1A 86040-104XX1A	28198	SGMC09XX SGMC75XX SGMC104XX

1/ Caution: Parts must be purchased to this DSCC PIN to assure that all performance requirements and tests are met.

Vendor
CAGE
number

Vendor name
and address

28198

Positronic Industries, Incorporated
423 N. Campbell Street
P.O. Box 8247
Springfield, MO 65801-8247

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43216-5000

SIZE
A

CAGE CODE

037Z3

REV

D

DWG NO.

86040

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