REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	Add black anodized parts. Added second source.	8 Jul 1986	Christopher Rauch
B	Added dash numbers 9 through 24. Added chemical finish option. Editorial changes throughout.	25 Feb 1988	Randy Larson
C	Added dash numbers 25 through 32. Added SED symbol option. Changed several dimensions. Added note 4. Added dimension "L" to figures 1, 2, 3, and 4. Revised pin types in 3.2. Deleted finish "Y". Changed table I. Editorial changes throughout.	18 Nov 1988	Randy Larson
D	Added two materials. Added pin length dimension lines. Editorial changes throughout.	30 Mar 1989	Randy Larson
E	Changed several dimensions. Editorial changes throughout.	22 May 1990	Randy Larson
F	Changes made in accordance with NOR 5998-R002-92	22 Jul 1992	Randy Larson
G	PIN structure altered for bent leg, added anodizing for colors and passivation finish, printed wiring board mounting location, and location of SED symbol figure. Updated drawings, document, and editorial changes throughout. Update CAGE CODE to 037Z3.	25 Sep 1995	John F. Raye
H	Section 2 updated to remove cancelled documents and add the superseding replacements. Added an additional source of supply. Editorial changes throughout.	30 Aug 2002	Thomas M. Hess

PREVIOUS CAGE CODE 14933 SUPERSEDED BY 037Z3.

THE ORIGINAL FIRST PAGE OF THIS DRAWING HAS BEEN REPLACED.

Prepared in accordance with ASME–Y14.100

Selected item drawing

REV	H	H																				
PAGE	17	18																				

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

PMIC N/A	**PREPARED BY** Christopher Rauch	**DEFENSE SUPPLY CENTER, COLUMBUS** **COLUMBUS, OH 43216-5000** **http://www.dscc.dla.mil/programs/milspec/docsearch.asp**
Original date of drawing 17 Apr 1985	**CHECKED BY** Randy Larson	**TITLE:** **EXTRACTOR, ELECTRICAL CARD, METAL**
	APPROVED BY Ivan Jones	
	SIZE A / **CODE IDENT. NO.** 14933	**DWG NO.** 84191
	REV H	**PAGE** 1 **OF** 18

AMSC N/A

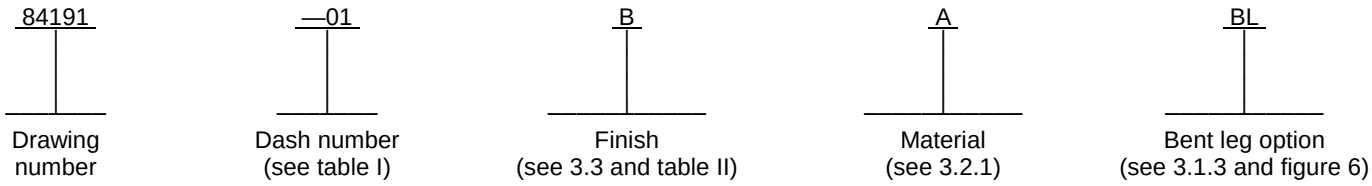
5998-E039

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

1. SCOPE

1.1 Scope. This drawing describes the requirements for a family of metal extractors intended to aid in removing circuit card assemblies or printed wiring assemblies from their installed positions.

1.2 Part or Identifying Number (PIN). The complete PIN shall be as shown in the following example:



NOTE: Select extractor configuration (dash number), finish, material, and options from the above paragraph as shown in the following examples:

Example 1: 84191–347A (DSCC drawing 84191 extractor, electrical card, metal with the following selections; angled handle without locking tab (figure 2), 5/16 (.165 mm) thick boards, mounting pin length is .312 (7.93 mm) inches long, right hand, has purple anodized finish, made from .063 (1.60 mm) thick aluminum alloy in accordance with AMS-QQ-A-225/7 or AMS-QQ-A-250/8, and does not have bent leg (figure 2, right hand).

Example 2: 84191–37ETBL (DSCC drawing 84191 extractor, electrical card, metal with the following selections; straight handle with locking tab (figure 4), 5/16 (.165 mm) thick boards, mounting pin length is .312 (7.93 mm) inches long, left hand, has gold chemical film finish with ESD symbol, made from .063 (1.60 mm) thick aluminum alloy in accordance with AMS-QQ-A-225/8 or AMS-QQ-A-250/11, and has bent leg (figure 6, left hand).

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

DEPARTMENT OF DEFENSE

MIL-C-5541 - Chemical Conversion Coatings on Aluminum Alloys.
MIL-A-8625 - Anodic Coating for Aluminum and Aluminum Alloys.

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-130 - Identification Marking Of U.S. Military Property.
MIL-STD-1285 - Marking of Electrical and Electronic Parts.

(Unless otherwise indicated, copies of federal and military specifications and standards are available from the Document Automation and Production Services (DAPS), Building 4D (DPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DoDISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation (see 6.2).

ASTM INTERNATIONAL (ASTM)

ASTM A666 - Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

(Application for copies should be addressed to ASTM International, 100 Barr Harbor Drive, West Coshohocken, PA 19428-2959.)

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE AMS-QQ-P-35 - Passivation Treatments for Corrosion-Resistant Steel.
SAE AMS-QQ-A-225/7 - Aluminum Alloy 5052, Bar, Rod, and Wire; Rolled, Drawn or Cold Finished.
SAE AMS-QQ-A-225/8 - Aluminum Alloy 6061, Bar, Rod, Wire and Special Shapes; Rolled, Drawn or Cold Finished.
SAE AMS-QQ-A-250/8 - Aluminum Alloy 5052, Plate and Sheet.
SAE AMS-QQ-A-250/11 - Aluminum Alloy 6061, Plate and Sheet.

(Application for copies should be addressed to the SAE World Headquarters, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

(Non-Government standards and other publications are normally available from the organizations which prepare or which distribute the documents. These documents also may be available in or through libraries or other informational services. They are also distributed among technical groups and using Federal agencies.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Interface and physical dimensions. See table I and figures 1 through 7.

3.1.1 Extractor orientation with board. See figure 1.

3.1.2 Standard straight leg configuration. Standard (straight) leg shall be as illustrated in figures 1 through 5. Standard (straight) leg will be blank for the suffix digit in the PIN, see 1.2.

3.1.3 Optional bent leg configuration. Bent leg (option BL) is available for all configurations. The bent leg option shall be as illustrated in figure 6. Bent leg (option BL) shall include the suffix "BL" in the PIN, see 1.2.

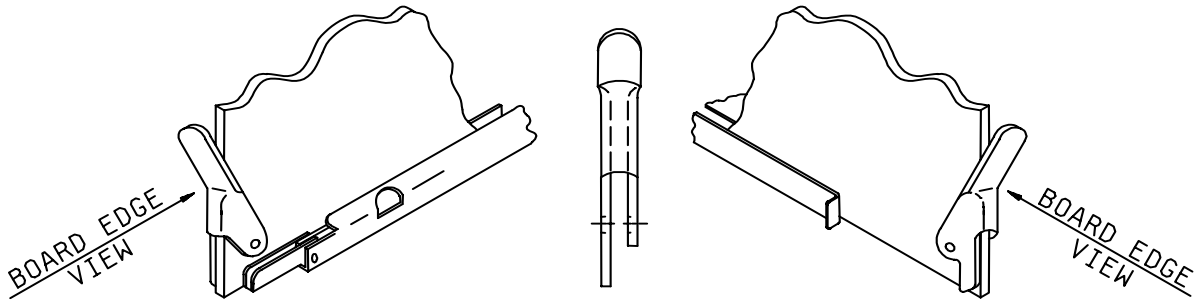
3.1.4 Circuit card mounting location. Circuit card mounting location, see figure 7.

3.2 Materials.

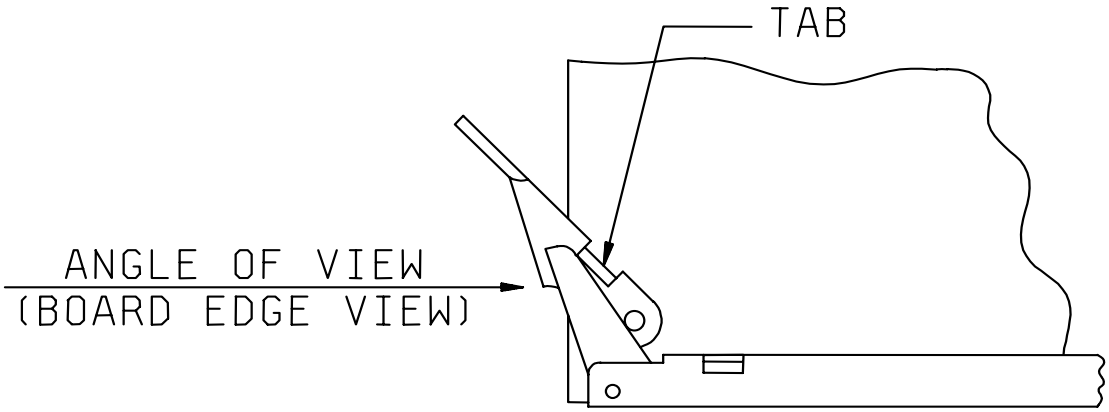
3.2.1 Extractor. The extractor shall be fabricated from one of the materials listed below. The material shall be as specified in the PIN, see 1.2.

PIN designator	Material
A	Aluminum alloy 5052-H32, .063 inch (1.60 mm) thick in accordance with AMS QQ-A-225/7 or AMS-QQ-A-250/8.
S	Stainless steel, type 301 or type 304 in accordance with ASTM A666.
T	Aluminum alloy 6061-T6, .063 inch (1.60 mm) thick in accordance with AMS-QQ-A-225/8 or AMS-QQ-A-250/11.

3.2.2 Mounting pin. Mounting pin shall be made of stainless steel (CRES 302).



VIEW OF RIGHT HAND EXTRACTOR FROM BOTH SIDES OF BOARD

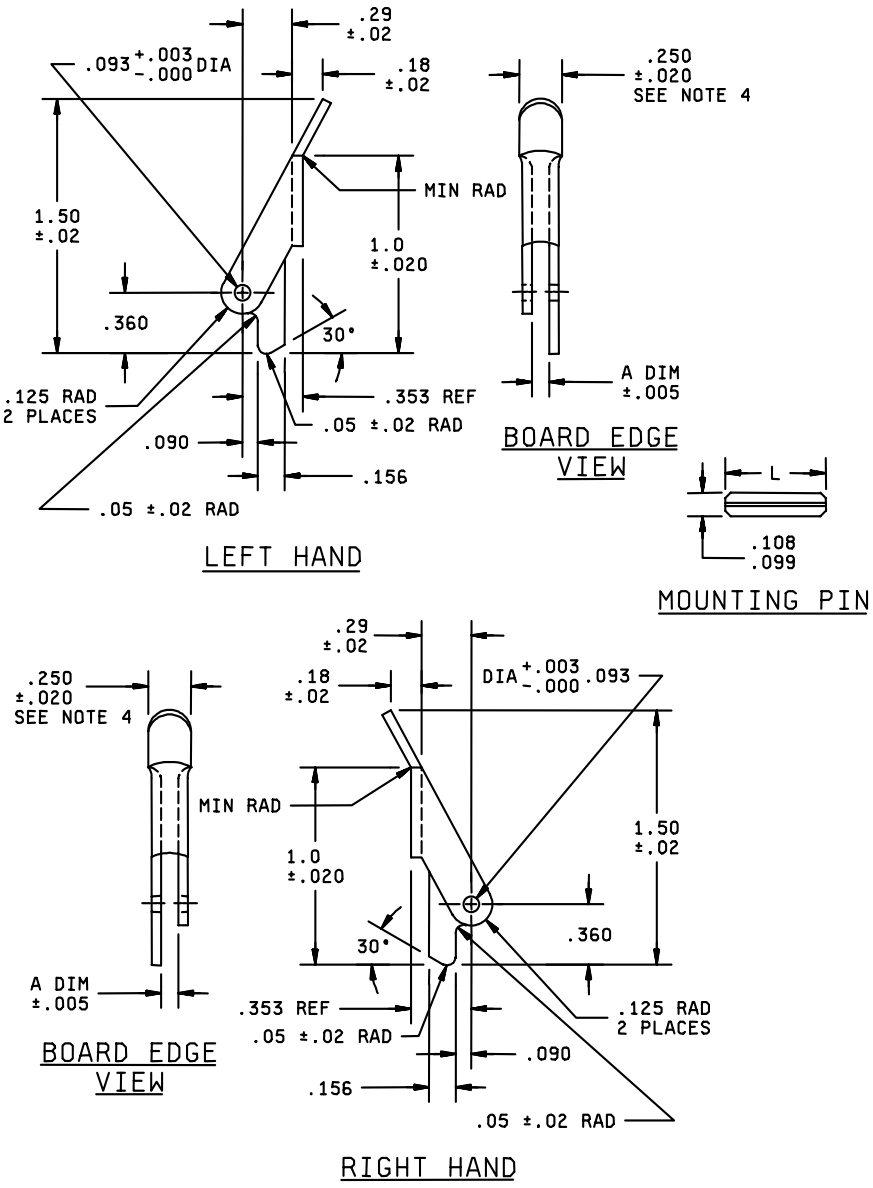


VIEW OF RIGHT HAND EXTRACTOR WITH TAB RELEASE

NOTE:

1. Retainer must be in the unlocked position before extractor may be used.

FIGURE 1. Extractor orientation with board.

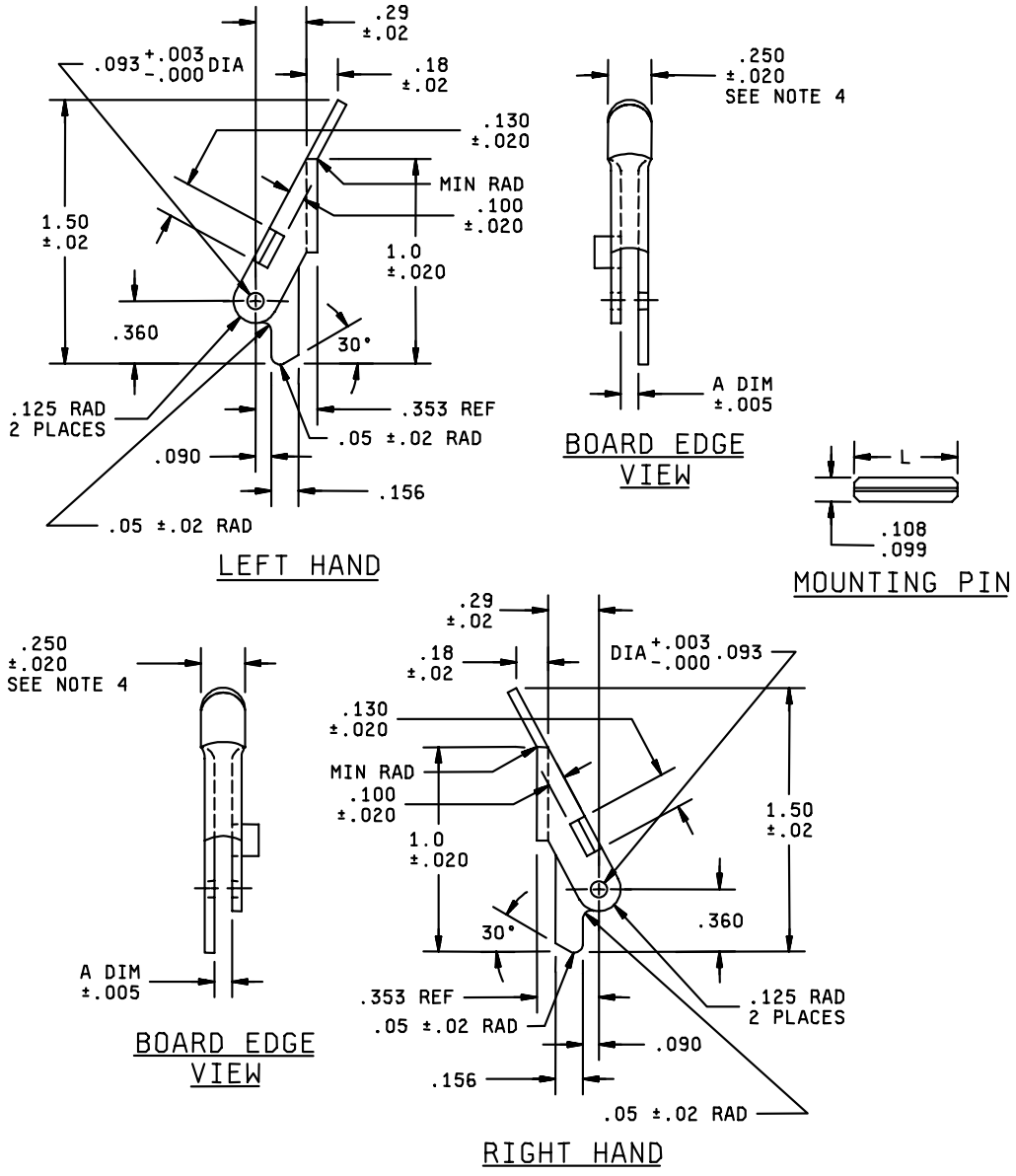


Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.001	0.03	.006	0.15	.090	2.29	.108	2.74	.180	4.60	.353	8.97
.003	0.08	.020	0.51	.093	2.36	.125	3.18	.250	6.35	.360	9.14
.005	0.13	.050	1.27	.099	2.51	.156	3.96	.290	7.40	1.000	25.40
										1.500	38.10

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are .010 (0.25 mm).
4. Width dimension shall be .290 ± .020 inch (7.37 mm ± 0.51 mm) when board width dimension A increases to .142 (3.61 mm) or .165 inch (4.19 mm), see table I.

FIGURE 2. Angled handle, without locking tab (dash numbers 01 through 08, 33 and 34).

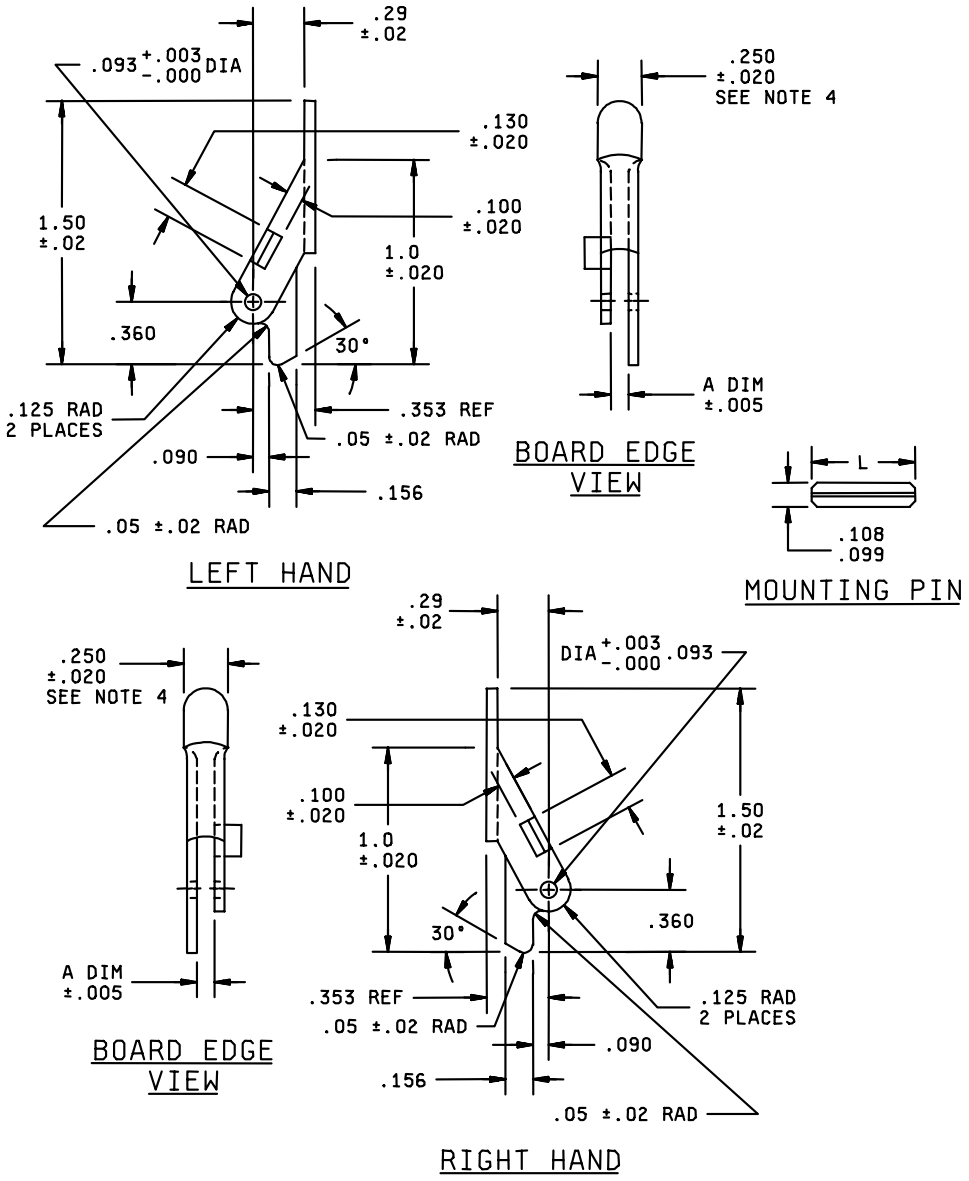


Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.003	0.08	.050	1.27	.099	2.51	.125	3.18	.180	4.60	.353	8.97
.005	0.13	.090	2.29	.100	2.54	.130	3.30	.250	6.35	.360	9.14
.020	0.51	.093	2.36	.108	2.74	.156	3.96	.290	7.40	1.000	25.40
										1.500	38.10

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are .010 (0.25 mm).
4. Width dimension shall be .290 ± .020 inch (7.37 mm ± 0.51 mm) when board width dimension A increases to .142 (3.61 mm) or .165 inch (4.19 mm), see table I.

FIGURE 3. Angled handle, with locking tab (dash numbers 09 through 16, 35 and 36).

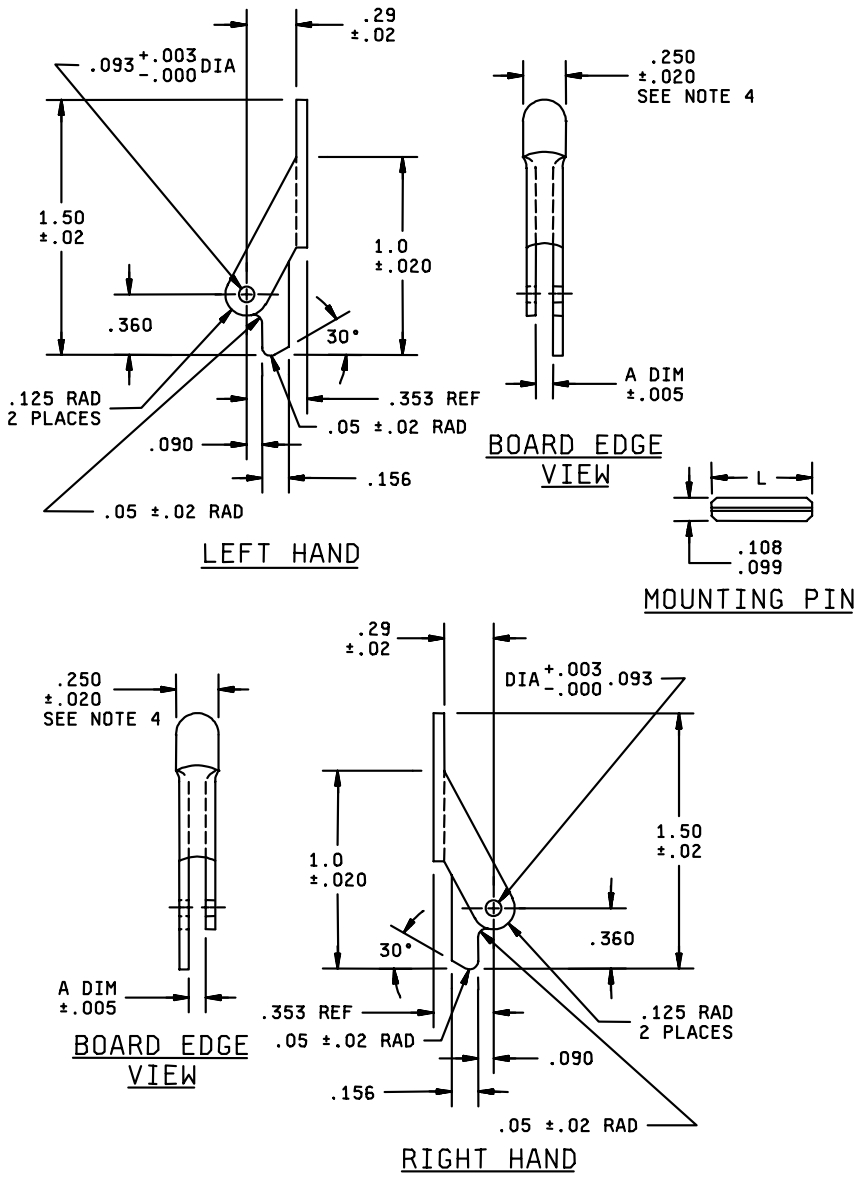


Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.003	0.08	.050	1.27	.099	2.51	.125	3.18	.250	6.35	.360	9.14
.005	0.13	.090	2.29	.100	2.54	.130	3.30	.290	7.40	1.000	25.40
.020	0.51	.093	2.36	.108	2.74	.156	3.96	.353	8.97	1.500	38.10

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are .010 (0.25 mm).
4. Width dimension shall be .290 ± .020 inch (7.37 mm ± 0.51 mm) when board width dimension A increases to .142 (3.61 mm) or .165 inch (4.19 mm), see table I.

FIGURE 4. Straight handle, with locking tab (dash numbers 17 through 24, 37 and 38).

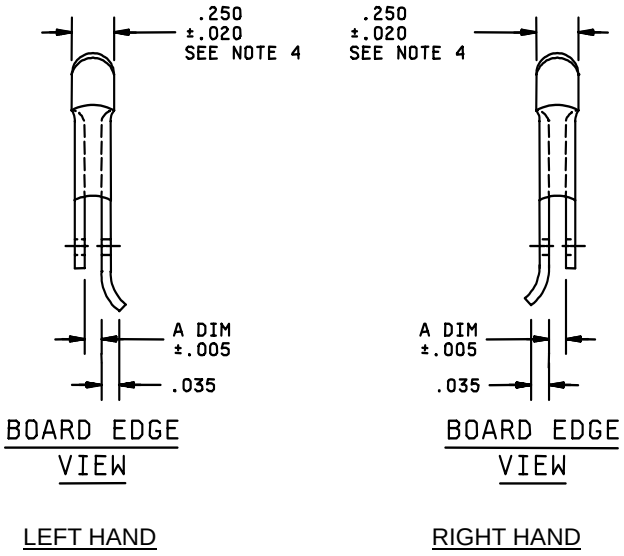


Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.003	0.08	.050	1.27	.099	2.51	.125	3.18	.250	6.35	.360	9.14
.005	0.13	.090	2.29	.100	2.54	.130	3.30	.290	7.40	1.000	25.40
.020	0.51	.093	2.36	.108	2.74	.156	3.96	.353	8.97	1.500	38.10

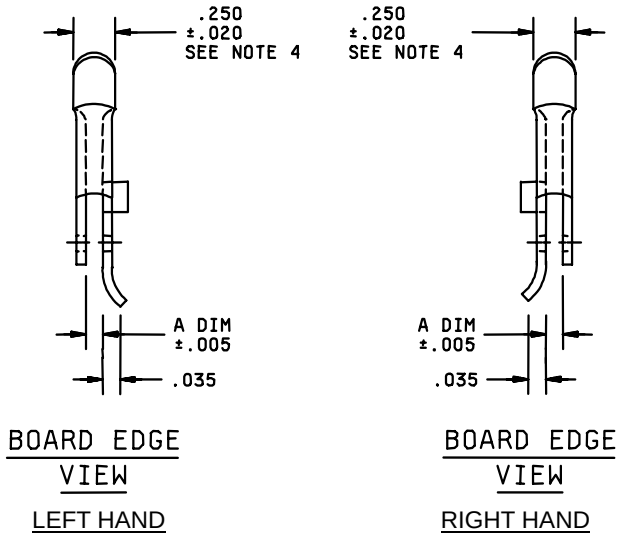
NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are .010 (0.25 mm).
4. Width dimension shall be .290 ± .020 inch (7.37 mm ± 0.51 mm) when board width dimension A increases to .142 (3.61 mm) or .165 inch (4.19 mm), see table I.

FIGURE 5. Straight handle, without locking tab (dash numbers 25 through 32, 39 and 40).



Bent leg (option BL) without tabs, figures 2 and 5.



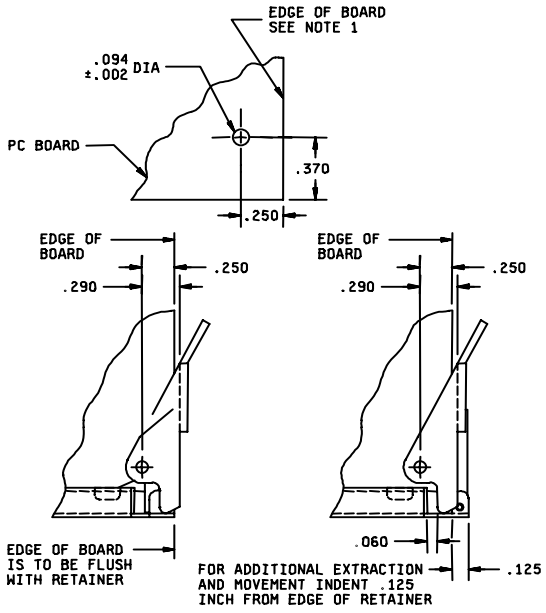
Bent leg (option BL) with tabs, figures 3 and 4.

Inches	mm	Inches	mm	Inches	mm	Inches	mm
.005	0.13	.020	0.51	.035	0.89	.250	6.35

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are .010 (0.25 mm).
4. Width dimension shall be .290 ± .020 inch (7.37 mm ±0.51 mm) when board width dimension A increases to .142 (3.61 mm) or .165 inch (4.19 mm), see table 1.
5. Bent leg (option BL) is available for all configurations, figures 1 through 5. Bent leg option shall include a suffix "BL" in the PIN, see 1.2, 3.1.3 and table I.

FIGURE 6. Bent leg (option BL) configurations.



VIEW OF RIGHT HAND EXTRACTOR WITH BOARD MOUNTING INFORMATION

Inches	mm	Inches	mm	Inches	mm	Inches	mm
.002	0.05	.094	2.38	.250	6.35	.370	9.40
.060	1.52	.125	3.18	.290	7.37		

NOTES:

1. Edge of printed board is to be flush with end of extractor and retainer or indent .12 (3.05 mm) inch from edge of retainer for more extraction and movement.
2. Dimensions are in inches. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are .02 (0.5 mm).

Figure 7. Circuit card mounting location.

TABLE I. Design and dimensions.

PIN designation 84191- 1/	Dimension "A" 2/		Dimension "L"		Configuration L = left hand R = right hand	Figure
Angled handle, without locking tabs						
	Inches	mm	Inches	mm		
01*@##	.040	(1.02)	.188	(4.78)	L	2
02*@##	.040	(1.02)	.188	(4.78)	R	2
03*@##	.075	(1.91)	.188	(4.78)	L	2
04*@##	.075	(1.91)	.188	(4.78)	R	2
05*@##	.105	(2.67)	.250	(6.35)	L	2
06*@##	.105	(2.67)	.250	(6.35)	R	2
07*@##	.142	(3.61)	.250	(6.35)	L	2
08*@##	.142	(3.61)	.250	(6.35)	R	2

See footnotes at end of table.

TABLE I. Design and dimensions. – Continued.

PIN designation 84191- 1/	Dimension "A" 2/		Dimension "L"		Configuration L = left hand R = right hand	Figure
Angled handle, with locking tab						
	Inches	mm	Inches	mm		
09*@##	.040	(1.02)	.188	(4.78)	L	3
10*@##	.040	(1.02)	.188	(4.78)	R	3
11*@##	.075	(1.91)	.188	(4.78)	L	3
12*@##	.075	(1.91)	.188	(4.78)	R	3
13*@##	.105	(2.67)	.250	(6.35)	L	3
14*@##	.105	(2.67)	.250	(6.35)	R	3
15*@##	.142	(3.61)	.250	(6.35)	L	3
16*@##	.142	(3.61)	.250	(6.35)	R	3
Straight handle, with locking tab:						
	Inches	mm	Inches	mm		
17*@##	.040	(1.02)	.188	(4.78)	L	4
18*@##	.040	(1.02)	.188	(4.78)	R	4
19*@##	.075	(1.91)	.188	(4.78)	L	4
20*@##	.075	(1.91)	.188	(4.78)	R	4
21*@##	.105	(2.67)	.250	(6.35)	L	4
22*@##	.105	(2.67)	.250	(6.35)	R	4
23*@##	.142	(3.61)	.250	(6.35)	L	4
24*@##	.142	(3.61)	.250	(6.35)	R	4
Straight handle, without locking tab:						
	Inches	mm	Inches	mm		
25*@##	.040	(1.02)	.188	(4.78)	L	5
26*@##	.040	(1.02)	.188	(4.78)	R	5
27*@##	.075	(1.91)	.188	(4.78)	L	5
28*@##	.075	(1.91)	.188	(4.78)	R	5
29*@##	.105	(2.67)	.250	(6.35)	L	5
30*@##	.105	(2.67)	.250	(6.35)	R	5
31*@##	.142	(3.61)	.250	(6.35)	L	5
32*@##	.142	(3.61)	.250	(6.35)	R	5
Angled handle, without locking tabs						
	Inches	mm	Inches	mm		
33*@##	.165	(4.19)	.312	(7.92)	L	2
34*@##	.165	(4.19)	.312	(7.92)	R	2
Angled handle, with locking tab						
	Inches	mm	Inches	mm		
35*@##	.165	(4.19)	.312	(7.92)	L	3
36*@##	.165	(4.19)	.312	(7.92)	R	3
Straight handle, with locking tab:						
	Inches	mm	Inches	mm		
37*@##	.165	(4.19)	.312	(7.92)	L	4
38*@##	.165	(4.19)	.312	(7.92)	R	4
Straight handle, without locking tab:						
	Inches	mm	Inches	mm		
39*@##	.165	(4.19)	.312	(7.92)	L	5
40*@##	.165	(4.19)	.312	(7.92)	R	5

1/ Asterisk (*) denotes finish (see 3.3). Ampersand (@) denotes material (see 3.2). Pound signs (##) denotes leg configuration for bent leg (option BL, when used), (see 3.1.3).
2/ Dimension "A" denotes the slot width to accommodate the various thickness of circuit cards.

3.3 Finish option. Finish option materials shall be as specified in table II; however, when a definite material is not specified, a material shall be used which will enable the metal extractors for use with circuit card assemblies or printed circuit boards to meet the performance requirements of this drawing. Finish option materials designator from table II shall be included in the PIN.

3.3.1 Anodize. Anodize plate finish shall be in accordance with MIL-A-8625, type II, class 2. Anodize plated finish parts shall include a suffix in the PIN, see 1.2 and table II.

3.3.1.1 Black anodize. Black anodize plated finish shall include a suffix "B" in the PIN, see 1.2 and table II.

3.3.1.2 Red anodize. Red anodize plated finish shall include a suffix "1" in the PIN, see 1.2 and table II.

3.3.1.3 Blue anodize. Blue anodize plated finish shall include a suffix "2" in the PIN, see 1.2 and table II.

3.3.1.4 Green anodize. Green anodize plated finish shall include a suffix "3" in the PIN, see 1.2 and table II.

3.3.1.5 Yellow anodize. Yellow anodize plated finish shall include a suffix "4" in the PIN, see 1.2 and table II.

3.3.1.6 Orange anodize. Orange anodize plated finish shall include a suffix "6" in the PIN, see 1.2 and table II.

3.3.1.7 Purple anodize. Purple anodize plated finish shall include a suffix "7" in the PIN, see 1.2 and table II.

3.3.1.8 Gray anodize. Gray anodize plated finish shall include a suffix "8" in the PIN, see 1.2 and table II.

3.3.1.9 Brown anodize. Brown anodize plated finish shall include a suffix "9" in the PIN, see 1.2 and table II.

3.3.1.10 Clear anodize. Clear anodize plated finish shall include a suffix "0" in the PIN, see 1.2 and table II.

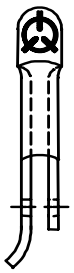
3.3.2 Chemical film (gold). Chemical film (gold) plate finish shall be in accordance with MIL-C-5541, class 1A. Chemical film (gold) plated finish parts shall include a suffix "C" in the PIN, see 1.2 and table II. Note: Finish C is identical to yellow chromate.

TABLE II. Metal extractors finishes.

PIN finish designator	Finish	Plating requirement	Paragraph
C 1/	Chemical film (gold)	MIL-C-5541, class 1A	3.3.2
E 2/	Chemical film (gold)	MIL-C-5541, class 1A	3.3.3
P	Passivate	AMS-QQ-P-35	3.3.4
3/	Anodize	MIL-A-8625, type II, class 2	3.3.1
B	Black anodize	MIL-A-8625, type II, class 2	3.3.1.1
1	Red anodize	MIL-A-8625, type II, class 2	3.3.1.2
2	Blue anodize	MIL-A-8625, type II, class 2	3.3.1.3
3	Green anodize	MIL-A-8625, type II, class 2	3.3.1.4
4	Yellow anodize	MIL-A-8625, type II, class 2	3.3.1.5
6	Orange anodize	MIL-A-8625, type II, class 2	3.3.1.6
7	Purple anodize	MIL-A-8625, type II, class 2	3.3.1.7
8	Gray anodize	MIL-A-8625, type II, class 2	3.3.1.8
9	Brown anodize	MIL-A-8625, type II, class 2	3.3.1.9
0	Clear anodize	MIL-A-8625, type II, class 2	3.3.1.10

1/ Finish C is identical to yellow chromate.
2/ With Sensitive Electronic Device (SED) symbol (see 3.6.1).
3/ PIN finish designator 5 is not used.

3.3.3 Chemical film (gold) with optional SED symbol. Chemical film (gold) with optional SED symbol plate finish shall be in accordance with MIL-C-5541, class 1A. Chemical film (gold) plated finish parts shall include a suffix "E" in the PIN, see 1.2 and table II. See marking requirements for SED symbol (see 3.6.1 and figure 8).



BOARD EDGE
VIEW

VIEW OF RIGHT HAND EXTRACTOR WITH SED SYMBOL

NOTES:
1. SED symbol shall be located approximately as shown, see 3.6.1.
2. Symbol shall be permanently marked in black in accordance with MIL-STD-130.
3. Diameter shall be .130 ± .010 inches (3.30 ± 0.25 mm).

Figure 8. Right hand extractor with SED symbol mounting location.

3.3.4 Passivation steel plate. Passivation steel plate finish shall be in accordance with AMS-QQ-P-35. Passivation steel plated finish parts shall include a suffix "P" in the PIN, see 1.2 and table II.

3.4 Mounting pin. All parts shall be supplied with one mounting pin. Mounting pin may be rolled spring or spiral type. Chamfered corners of the mounting pin are optional.

3.5 Certificate of compliance. A certificate of compliance shall be required from manufacturers requesting to be a suggested source of supply.

3.6 Marking. Marking of the extractor is not required; however, each unit package shall be marked in accordance with MIL-STD-1285 and include the PIN as specified herein (see 1.2), the manufacturer's name or Commercial and Government Entity (CAGE) code, and date lot codes.

3.6.1 Sensitive Electronic Device (SED) symbol. Extractors with finish "E" shall be marked on the handle with the SED symbol in accordance with MIL-STD-130. The SED symbol shall be permanently marked in black. The SED symbol diameter shall be .130 ± .010 inch (3.30 ± 0.25 mm), see figure 8.

3.7 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.8 Workmanship. Extractors shall be processed in such a manner as to be uniform in quality and shall be free from surface and finish flaws that could affect life or serviceability. Burrs, chipping, and cracking are unacceptable.

4. VERIFICATION

4.1 Sampling and inspection. Unless otherwise specified, sampling and inspection procedures shall be performed in accordance with 4.2.

4.2 Conformance inspections.

4.2.1 Inspection of product for delivery. Inspection of product for delivery shall consist of visual and mechanical inspections of interface and physical dimensions (see 3.1), materials (see 3.2), finish (see 3.3), and workmanship (see 3.8). Criteria for defects are listed in 4.2.5.

4.2.2 Optional statement of compliance. The acquiring activity, at its discretion, may accept a statement of compliance in lieu of the manufacturer performing the inspection of product for delivery (see 6.2.c).

4.2.3 Sampling plan. A sample of parts shall be randomly selected in accordance with table III, normal sampling. If one or more defects are found, the lot shall be rejected. Criteria for defects are listed in 4.2.5.

TABLE III. Sampling plan.

Lot size	Normal	Tightened
2 to 25	3	5
26 to 50	5	6
51 to 90	6	7
91 to 150	7	11
151 to 280	10	13
281 to 500	11	16
501 to 1,200	15	19
1,201 to 3,200	18	23
3,201 to 10,000	22	29
10,001 and over	29	35

4.2.4 Rejected lots. If an inspection lot is rejected after normal sampling inspection, the manufacturer may rework it to correct the defects, or screen out the defective parts and resubmit for inspection. Resubmitted lots shall be inspected by selecting a random sample of parts in accordance with table III, tightened sampling. If one or more defects are found in this sample, the lot shall be rejected and shall not be supplied to this document. Resubmitted lots which are acceptable shall be clearly identified as reinspected lots.

4.2.5 Defective characteristics and properties. Dimensional characteristics are considered defective when out of tolerance. Physical and functional properties are considered defective when outside the specified minimum, maximum, or range as applicable. Workmanship characteristics are considered defective when they would be detrimental to the intended use, performance requirements, or environmental survival of the part.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

6.1 Intended use. Extractors conforming to this drawing are intended for use when performance specifications do not exist and qualified military devices that will perform the required function are not available for OEM application.

6.2 Ordering data. The contract or purchase order should specify the following:

a. Complete PIN (see 1.2).

b. Requirements for delivery and one copy of the conformance inspection data or certificate of compliance that parts have passed conformance inspection with each shipment of parts by the manufacturer.

c. Whether the manufacturer performs the product for delivery inspection (4.2.1) or provides an optional statement of compliance (4.2.2).

d. Requirements for notification of change in product to the contracting activity, if applicable.

e. Requirements for packaging and packing.

6.3 Replaceability. Devices covered by this drawing will replace the commercial device covered by a contractor-prepared specification or drawing.

6.4 Supersession data. See table IV.

TABLE IV. Supersession information. 1/

Superseding DSCC Drawing PIN	Superseded PIN specified within: 84191A, 8 July 1986, 84191B, 25 February 1988, 84191C, 18 November 1988.	Superseded PIN specified within 84191, 17 Apr 1985
84191-**CA	84191-**C	84191-**
84191-**BA	84191-**B	

1/ The asterisk "*" are used to denote the dash number or device numbers which did not change.

6.4.1 Finish. The original edition of this drawing covered only yellow chromate parts, which were represented by PIN's without suffix letters. PINs in subsequent revisions included suffix letters to denote various finish options. The yellow chromate finish previously offered has been deleted and superseded by the gold chemical film finish. Since these two finishes are identical, it is not practical to retain both in this drawing.

6.4.2 Material. The original edition of this drawing covered parts made only of aluminum; no specific PIN identifier was required. PINs in subsequent revisions include suffix letters to denote various material options.

6.5 Users of record. Coordination of this document for future revisions are coordinated only with the suggested sources of supply and the users of record of this document. Requests to be added as a recorded user of this drawing should be in writing to: Defense Supply Center, Columbus, ATTN: DSCC/VAC, Post Office Box 3990, Columbus, OH 43216-5000 or by telephone (614) 692-0526 or DSN 850-0526 or by electronic mail at “5998.documents@dscc.dla.mil.”

6.6 Assistance. Questions or comments pertaining to this drawing should be addressed to DSCC-VAC, 3990 East Broad Street, Columbus, OH 43213-5284; telephone (614) 692-0526; DSN 850-0526; facsimile (614) 692-6939; or by electronic mail "5998_Documents@dscc.dla.mil". Electronic copies of this document can be obtained on the World Wide Web at URL http://www.dscc.dla.mil.

6.7 Suggested sources of supply. Suggested sources of supply are listed herein. Additional sources will be added as they become available. This table is not a qualified products list or an approved source list. This vendor has submitted a certificate of compliance to DSCC; however, parts may be ordered from any manufacturer who agrees to supply items conforming to all the requirements of this drawing.

PIN 84191- 1/ 2/	Vendor similar designation or type number 3/				Vendor CAGE	Vendor name, address and contact information
	Finish "C"	Anodize	Finish "E"	Finish "P" 4/		
01*@##	71-1-L	71-1072-1-L	71-1076-1-L		18915	APW / Electronic Solutions 14100 Danielson Street Poway, CA 92064-6898 Tel: (858) 679-4550 Toll Free: (800) 854-7086 Fax: (858) 679-4555 URL: www.apw.com Electronic-mail: sales.electronicsolutions@ apw.com
02*@##	71-1-R	71-1072-1-R	71-1076-1-R			
03*@##	71-2-L	71-1072-2-L	71-1076-2-L	71CR-1112-2-L		
04*@##	71-2-R	71-1072-2-R	71-1076-2-R	71CR-1112-2-R		
05*@##	71-3-L	71-1072-3-L	71-1076-3-L			
06*@##	71-3-R	71-1072-3-R	71-1076-3-R			
07*@##	71-4-L	71-1072-4-L	71-1076-4-L			
08*@##	71-4-R	71-1072-4-R	71-1076-4-R			
09*@##	71-1-L-A	71-1073-1-L	71-1077-1-L			
10*@##	71-1-R-A	71-1073-1-R	71-1077-1-R			
11*@##	71-2-L-A	71-1073-2-L	71-1077-2-L	71CR-1113-2-L		
12*@##	71-2-R-A	71-1073-2-R	71-1077-2-R	71CR-1113-2-R		
13*@##	71-3-L-A	71-1073-3-L	71-1077-3-L			
14*@##	71-3-R-A	71-1073-3-R	71-1077-3-R			
15*@##	71-4-L-A	71-1073-4-L	71-1077-4-L			
16*@##	71-4-R-A	71-1073-4-R	71-1077-4-R			
17*@##	S71-1-L-A	71-1074-1-L	71-1078-1-L			
18*@##	S71-1-R-A	71-1074-1-R	71-1078-1-R			
19*@##	S71-2-L-A	71-1074-2-L	71-1078-2-L	71CR-1114-2-L		
20*@##	S71-2-R-A	71-1074-2-R	71-1078-2-R	71CR-1114-2-R		
21*@##	S71-3-L-A	71-1074-3-L	71-1078-3-L			
22*@##	S71-3-R-A	71-1074-3-R	71-1078-3-R			
23*@##	S71-4-L-A	71-1074-4-L	71-1078-4-L			
24*@##	S71-4-R-A	71-1074-4-R	71-1078-4-R			
25*@##	S71-1-L	71-1075-1-L	71-1079-1-L			
26*@##	S71-1-R	71-1075-1-R	71-1079-1-R			
27*@##	S71-2-L	71-1075-2-L	71-1079-2-L	71CR-1115-2-L		
28*@##	S71-2-R	71-1075-2-R	71-1079-2-R	71CR-1115-2-R		
29*@##	S71-3-L	71-1075-3-L	71-1079-3-L			
30*@##	S71-3-R	71-1075-3-R	71-1079-3-R			
31*@##	S71-4-L	71-1075-4-L	71-1079-4-L			
32*@##	S71-4-R	71-1075-4-R	71-1079-4-R			

See notes at end of the table.

PIN 84191- 1/ 2/	Vendor similar designation or type number 3/				Vendor CAGE	Vendor name, address and contact information
	Finish "C"	Anodize	Finish "E"	Finish "P" 4/		
33*@##	71-5-L	71-1072-5-L	71-1076-5-L		18915	APW / Electronic Solutions 14100 Danielson Street Poway, CA 92064-6898 Tel: (858) 679-4550 Toll Free: (800) 854-7086 Fax: (858) 679-4555 URL: www.apw.com Electronic-mail: sales.electronicsolutions@ apw.com
34*@##	71-5-R	71-1072-5-R	71-1076-5-R			
35*@##	71-5-L-A	71-1073-5-L	71-1077-5-L			
36*@##	71-5-R-A	71-1073-5-R	71-1077-5-R			
37*@##	S71-5-L-A	71-1074-5-L	71-1078-5-L			
38*@##	S71-5-R-A	71-1074-5-R	71-1078-5-R			
39*@##	S71-5-L	71-1075-5-L	71-1079-5-L			
40*@##	S71-5-R	71-1075-5-R	71-1079-5-R			

1/ The asterisk (*) denotes finish (see 3.3), the ampersand (@) denotes material (see 3.2.1), and the pound signs (##) denotes leg configuration (option BL), see 3.1.3.
2/ Do not use vendor PIN's for acquisition.
3/ CAGE 18915 PIN's shown above indicate parts made of material option "A" (aluminum alloy 5052-H32) of 3.2.1. For material option "T" (aluminum alloy 6061-T6) of 3.2.1, insert "T6" immediately following the "71" (example "71T6-5-L "). For material option "S" (stainless steel, type 301 or type 304) of 3.2.1, insert "CR" immediately following the "71" (example "71CR-5-L").
4/ Extractors made of material option "S" (stainless steel) are only available to be used with .063 (0.160 mm) thick printed wiring boards.

PIN 84191- 1/ 2/	Vendor similar designation or type number 3/	DSCC drawing PIN 89064	Vendor similar designation or type number 3/	Vendor CAGE	Vendor name, address and contact information
02*@##	9191-3			24227	Teknational Industries, Inc. 391 Gregory Street Rochester, NY 14620-1327 Tel: (585) 473-6310 Fax: (585) 473-6324 E-mail: sales@teknational.com URL: www.teknational.com
03*@##	9191-4				

1/ The asterisk (*) denotes finish (see 3.3), the ampersand (@) denotes material (see 3.2.1), and the pound signs (##) denotes leg configuration (option BL), see 3.1.3.
2/ Do not use vendor PIN's for acquisition.
3/ CAGE 24227 PIN's shown indicate aluminum parts, material option "A" (aluminum alloy 5052-H32) of 3.2.1.

PIN 84191- 1/ 2/	Vendor similar designation or type number 3/				Vendor CAGE	Vendor name, address and contact information
	Finish "C"	Anodize 4/	Finish "E"	Finish "P"		
03*@##	109L	109L%	109L-SED	109CR-L	52094	Calmark Corporation 4915 Walnut Grove Ave San Gabriel, CA 91776—2099 Tel: (626) 287—0451 Fax: (626) 287—7350 E-mail: sales@calmark.com URL: www.calmark.com
04*@##	109R	109R%	109R-SED	109CR-R		
05*@##	109-3L	109-3L%	109-3L-SED	109CR-3L		
06*@##	109-3R	109-3R%	109-3R-SED	109CR-3R		
07*@##	109-4L	109-4L%	109-4L-SED	109CR-4L		
08*@##	109-4R	109-4R%	109-4R-SED	109CR-4R		
27*@##	F109L	F109L%	F109L-SED	F109CR-L		
28*@##	F109R	F109R%	F109R-SED	F109CR-R		
29*@##	F109-3L	F109-3L%	F109-3L-SED	F109CR-3L		
30*@##	F109-3R	F109-3R%	F109-3R-SED	F109CR-3R		
31*@##	F109-4L	F109-4L%	F109-4L-SED	F109CR-4L		
32*@##	F109-4R	F109-4R%	F109-4R-SED	F109CR-4R		

1/ The asterisk (*) denotes finish (see 3.3), the ampersand (@) denotes material (see 3.2.1), and the pound signs (##) denotes leg configuration (option BL), see 3.1.3.

2/ Do not use vendor PIN's for acquisition.

3/ CAGE 52094 PIN's shown above (except finish "P") indicate parts made of material option "A" (aluminum alloy 5052-H32) of 3.2.1. For material option "T" (aluminum alloy 6061-T6) of 3.2.1, insert "T6" immediately following the "109" (example "109T6L"). Finish "P" extractors are made of stainless steel, material option "S" of 3.2.1.

4/ Anodize finish parts have suffixes ("%") to indicate color.