



# Certificate of Compliance

**Certificate:** 1043778 (LR 7189-190)

**Master Contract:** 164196

**Project:** 70038856

**Date Issued:** 2015-07-09

**Issued to:** Tyco Electronics Corporation  
2901 Fulling Mill Rd  
Mail Stop 140-08  
Middletown, Pennsylvania 17057-3163  
USA  
**Attention:** Leon D. Cuthie

*The products listed below are eligible to bear the CSA Mark shown*



**Issued by:** *Michael Chung*  
Michael Chung

## PRODUCTS

**CLASS 6233 01 - RECEPTACLES-Attachment Plug Type and Plugs**

Special use "HERMETIC CLUSTER BLOCK" connectors Series 84330, 171370, 171370-5, 170851, 180928, 281006, 368600, 521776, 880631, 1217187, 1380145, 2232326, rated 8A, 115/230V.

## APPLICABLE REQUIREMENTS

CSA Std. C22.2 No. 182.3-M1987, 1<sup>st</sup> Ed - Special Use Attachment Plugs, Receptacles, and Connectors



## *Supplement to Certificate of Compliance*

**Certificate:** 1043778 (LR 7189-190)

**Master Contract:** 164196

*The products listed, including the latest revision described below,  
are eligible to be marked in accordance with the referenced Certificate.*

### **Product Certification History**

<b>Project</b>	<b>Date</b>	<b>Description</b>
70038856	2015-07-09	Add Series 171370-5.
70033057	2015-05-20	Add Series 2232326-1.
2587131	2012-12-17	Contact Part No 62131 revised drawing.
2553253	2012-10-19	Contact Part No 62131 one alternate material.
1840455	2006-10-10	Alternate contact Part No 62131-7 (item 2b).
1773944	2006-04-11	Add Series 521776 and 1217187.
1257271	2001-11-27	Add Series 880631.
1220205	2001-07-20	Add Series 1380145 and alternate contact.
1043778	2001-07-16	One alternate body material and consolidate Reports LR 7189-30, LR 7189-77 (Sub-Reports LR 30036-1,-2,-3, -5, -7 and LR 89365-1) and LR 7189-214 into Report 1043778.
-190	1990-09-07	Original Certification Series 281006.



# Descriptive Report and Test Results

**MASTER CONTRACT:** 164196

**REPORT:** 1043778

**PROJECT:** 70038856

**Edition 1:** September 7, 1990; Application LR 7189-190 - Toronto  
Issued by Paul Johnson, C.E.T.; Reviewed by Vic O. Roslin, P. Eng.

**Edition 2:** July 16, 2001; Project 1043778 - Toronto  
Issued by Bruce Wright, Technologist

Report Reissued  
Figures Added: Figs 3 to 10

**Edition 9:** May 21, 2015; Project 70033057 - Toronto  
Issued by Michael Chung; Reviewed by Mike W. Gryschuk, C.E.T.

Report Reissued  
Figures Added: Fig 15

**Edition 10:** July 9, 2015; Project 70038856 - Toronto  
Issued by Michael Chung

Report Reissued  
Figures Added: Fig 16

Contents: Certificate of Compliance - Pages 1 to 1  
Supplement to Certificate of Compliance - Pages 1 to 1  
Description and Tests - Pages 1 to 7  
Figures - 1 to 16 (in Documentum)

## PRODUCTS

CLASS 6233 01 - RECEPTACLES - Attachment Plug Type and Plugs

Special use "HERMETIC CLUSTER BLOCK" connectors Series 84330, 171370, 171370-5, 170851, 180928, 281006, 368600, 521776, 880631, 1217187, 1380145, 2232326, rated 8A, 115/230V.

## APPLICABLE REQUIREMENTS

CSA Std. C22.2 No. 182.3-M1987, 1<sup>st</sup> Ed - Special Use Attachment Plugs, Receptacles, and Connectors

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178 Rexdale Boulevard, Toronto, ON, Canada M9W 1R3  
Telephone: 416.747.4000 1.800.463.6727 Fax: 416.747.4149 www.csagroup.org

### **MARKINGS**

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The Submitter's name ("TYCO")/tradename ("AMP")/trademark/file ("164196 or "LR 7189") and the CSA Mark are permanently ink-stamped, moulded, embossed, etc. The Series may appear on each device. The Submitter's identification, the CSA Mark, the electrical rating, the Series designation, the Cat No (where applicable) and the following (or equivalent) wording: "CAUTION: NOT FOR INTERRUPTING CURRENT" and "ATTENTION: NE PAS UTILISER POUR COUPER LE COURANT" appear on or in the smallest package.

### **ALTERATIONS**

See "Markings" above.

### **FACTORY TESTS**

None.

### **SPECIAL INSTRUCTIONS FOR FIELD SERVICES**

1. Component descriptions marked with either the "(INT)" or "(INT\*)" identifiers may be substituted with other components providing the requirements specified under the notes in the "Description" are complied with (Reference only).

### **COMPONENT SPECIAL PICKUP**

1. Component descriptions marked with the identifier "(CT)" are subject to annual pickup and Conformity Testing (Reference only).

**DESCRIPTION**

Notes:

1. Component Substitution (Reference only)
  - a) Critical components (those identified by mfr name, cat no), which are NOT identified with either "INT" or "INT\*" are not eligible for substitution without evaluation and report updating
  - b) The term "INT" means a "Certified" and/or "Listed" (or a "Recognized" and/or "Accepted") component may be replaced by one "Certified" and/or "Listed" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application; providing the applicable country identifiers are included and requirements in item "d" below are complied with.
  - c) The Term "INT\*" means a "Recognized" and/or "Accepted" component may be replaced by one "Recognized" and/or "Accepted" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application, providing the applicable country identifiers are included, the component is **also** CSA Certified, the requirements in item "d" below are complied with and any "conditions of suitability" for the component (as recorded in this descriptive report) are complied with.
  - d) Components which have been substituted, must be of an equivalent rating, configuration (size, orientation, mounting) and the applicable minimum creepage and clearance distances are to be maintained from live parts to bonded metal parts and secondary parts.
  - e) Substitution of a "Certified" and/or "Listed" component with a component that is "Recognized" or "Accepted" is not permitted without evaluation and report updating.

Conditions of Acceptability:

1. Not for interrupting current.
2. Supplied only to manufacturers, as components, for the assembly of Certified electrical equipment, where the acceptability of the suitability of the combination in the end use is determined by CSA Group.
3. Prefixes and suffixes maybe added.

Project 70038856: Add Series 171370-5 (Part A).

Project 70033057: Add Series 2232326 (Part B).

Project 2587131: Contact Part No 62131 revised drawing (item 2b), see Fig 2.

Project 2553253: Alternate contact material Part No 62131-3 (item 2b).

Project 1840455: Alternate contact Part No 62131-7 (item 2b), see Fig 2.

Project 1773944: Add Series 521776 and 1217187.

Project 1257271: Add Series 880631.

Project 1220205: Add Series 1380145 and alternate contact Part No 62131 (item 2b).

Project 1043778: Alternate body material Arnite T08 200 (item 1c) and consolidate Reports LR 7189-30, LR 7189-77 (Sub-Reports LR 30036-1,-2,-3, -5, -7 and LR 89365-1) and LR 7189-214 into Report 1043778.

APP LR 7189-190: Original Certification Series 281006.

General: This report supersedes Reports LR 7189-30, LR 7189-77 (Sub-Reports LR 30036-1,-2,-3, -5, -7 and LR 89365-1) and LR 7189-214, see Figs 1 to 14.

Part A - "HERMETIC CLUSTER BLOCKS"

General: These connectors have 3-poles and are crimped to Nos 16-18 AWG conductors, see Figs 1 to 15.

1. Body: Moulded of the materials below, for specific Series and Figures see the following table.

Type	Designation	Manufacturer	UL Flame Class	UL RTI Strength	UL CTI
a) PBTP	Pocan B1505	Albis Plastics	HB, 0.80mm	140°C, 1.50mm	600V+
b) PBTP	Ultradur B4500	BASF	HB, 0.75mm	140°C, 3.00mm	600V+
c) PBTP	Arnite T08 200	DSM Eng	HB, 0.75mm	125°C, 0.75mm	600V+
d) PBTP	Valox 310SE0(w)	Sabic	V-0, 0.71mm	140°C, 0.71mm	175-249V
e) PBTP	Valox 420(w)	Sabic	HB, 0.84mm	130°C, 0.38mm	600V+
f) PBTP	Valox 420SE0(f2)(GG)	Sabic	V-2, 0.40mm	140°C, 0.71mm	175-249V

Series	Figure
84330	6
171370	3
171370-5	16
170851	5
180928	9
281006	1
368600	8
521776	13
880631	12
1217187	14
1380145	11

2. Contacts: Specific Part Nos and Figures are as follows.

- a) Part No 61503 - Copper alloy, optional plating, see Fig 10.
- b) Series 62131 - (Four) Part Nos 62131-3, 62131-5, 62131-6, 62131-7 as below, see Fig 2.
  - Part No 62131-3 - H03 Tin-brass, tin plated or brass, tin plated.
  - Part No 62131-5 - H03 Tin-brass, unplated.
  - Part No 62131-6 - H03 Tin-brass, tin plated.
  - Part No 62131-7 - Copper alloy, tin plated.
- c) Part No 84331 - Copper alloy, optional plating, see Fig 7.
- d) Part No 170063 - Copper alloy, optional plating, see Fig 4.

Part B - Series 2232326

General: Series 2232326 is the same as 1380145, in Part A, except Series 2232326 is 9.1mm high instead of 7.9mm for Series 1380145 and Series 2232326 uses contact Series 62131, see Figs 2, 15.

1. Body: Same (PBTP) as (item 1, Part A), see Fig 15.
2. Contacts: (Three) Series 62131 (item 2b, Part A), Part Nos 62131-3, 62131-5, 62131-6, 62131-7, see Fig 2.

**TEST HISTORY**

APP LR 7189-190: The following test was required.

Std: 182.3-M1987      Device: Hermetic Cluster Block      Series: 281006      Rated: 8.0A, 230V

Sample						Tests
1	2	3	4	5	6	
OK	OK	OK	OK	OK	OK	Aging 173°C for 168 hours (Std. 158-1987 used as reference value).

Results: Satisfactory.

Project 1043778: See following satisfactory test results.

(Extracted from Report LR 7189-30)

- i) Heating Test - Test duration of 19 hours, 13.4 amperes, 21°C ambient, temperature of phenolic body (27°C).
- ii) Reliability of Cord Connector Test - P/N 61503 crimped to 16 AWG wire with a 20Lb force for 3 min.
- iii) Retention of Cap Test - Cat No 180928 subjected to 10 conditioning cycles of connecting and disconnecting with mating connector, finally then subjected to 3 lb pull at the connection.

(Tested under this Project 1043778)

Std: 182.3-M1987      Device: Hermetic Cluster Block      Series: 281006      Rated: 8.0A, 230V

Samples			Tests	Wire	Freq	Volts	Amps
1	2	3					
OK	OK	OK	6.2 Lead Security - 44.5N for 1 min	No 16	-	-	-
OK	OK	OK	6.2 Lead Security - 44.5N for 1 min	No 18	-	-	-
25/26	25/27	26/29	6.5 Temperature - Ambient 21°C; 8C° max rise	No 18	60Hz	Low	8.0
OK	OK	OK	6.6 Dielectric Strength - for 1 min	No 18	60Hz	1460	-

Results: Satisfactory.

Project 1220205: Due to the similarities of previously Certified Series 84330, no further testing was required.

Project 1257271: Since housing is identical to previously Certified Series 84330, no further tests were required.

Project 1773944: Since new connectors Series 521776 and 1217187 have the same rating, pitch, body materials and contacts as Series 281006, Certified in this Report, and differ by the body of Series 521776 being pointed and the base of Series 1217187 being rectangular, no tests were required.

Project 1840455: Since new contact Part No 62131-7 is the same as previously evaluated contacts Part Nos 62131-3, -4, -5 (item 2b), except for specifying the copper alloy material as "H06", no further tests were required.



Project 2553253: Only the following tests were deemed necessary.

Std: 182.3-M1987      Device: Female "Hermetic Cluster Block"      Contact: P/N 63131-3      Rated: 8.0A, 230V

Samples			Tests	Wire	Freq	Volts	Amps
1							
OK	OK	OK	6.2 Lead Security - 44.5N for 1 min	No 18	-	-	-
OK	OK	OK	6.2 Lead Security - 66.7N for 1 min	No 16	-	-	-
28/32	41/31	-	6.5 Temperature - Ambient 23°C; 18C° max Rise	No 16	60Hz	Low	8.0
OK	OK	-	6.6 Dielectric Strength - for 1 min	No 16	60Hz	1500	-

Std: 182.3-M1987      Device: Male "Hermetic Cluster Block"      Contact: N/A      Rated: 8.0A, 230V

Samples			Tests	Wire	Freq	Volts	Amps
1	2	3					
30/32	40/31	-	6.5 Temperature - Ambient 23°C; 17C° max Rise	No 16	60Hz	Low	8.0
OK	OK	-	6.6 Dielectric Strength - for 1 min	No 16	60Hz	1500	-

Note: The female and male "Hermetic Cluster Block" connectors were mated for temperature tests.

Results: Satisfactory.

Project 2587131: Since this covered a revised contact Part No 62131 drawing, Fig 2, no tests were needed.

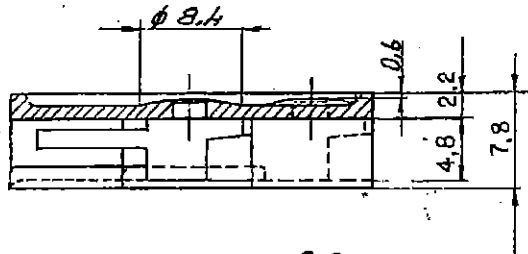
Project 70033057: Since new Series 2232326 is the same as Series 1380145, in Part A, and Series 2232326 increase in height compared to Series 1380145 did not affect the rating, pitch, body materials, contacts, no tests were required.

Project 70038856: Since new Series 171370-5 is the same as existing Series 171370, in Part A, except Series 171370-5 body is moulded of previously evaluated PBTP material 420SE0 (item f, Part A), no tests were needed.

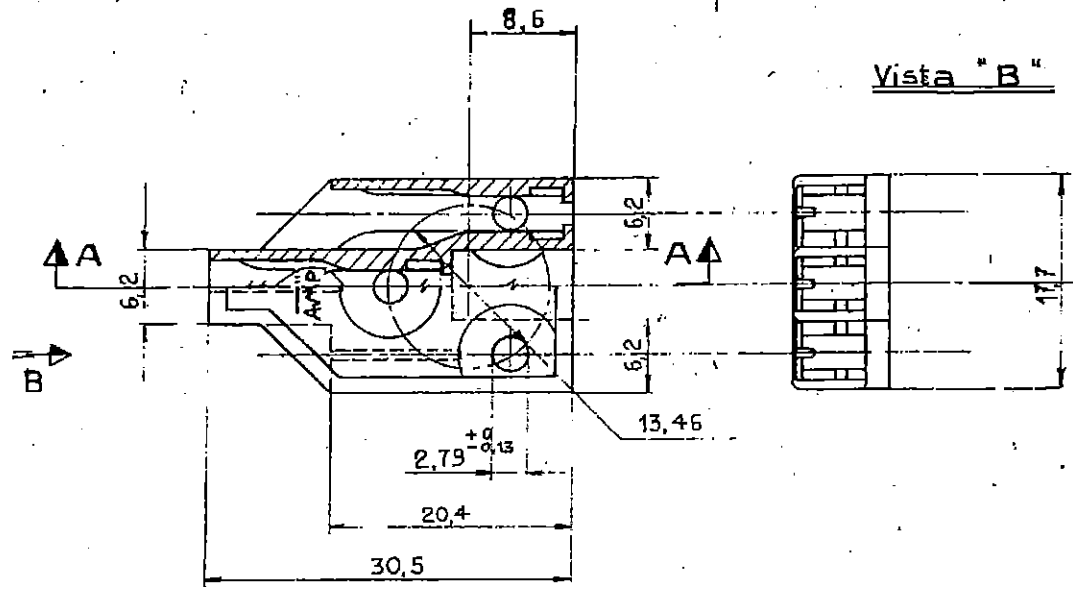
---End of Report---

NUMERO  
C-281006

Sezione A-A



Vista "B"



DIMENSIONS IN INCHES DO NOT SCALE PRINT


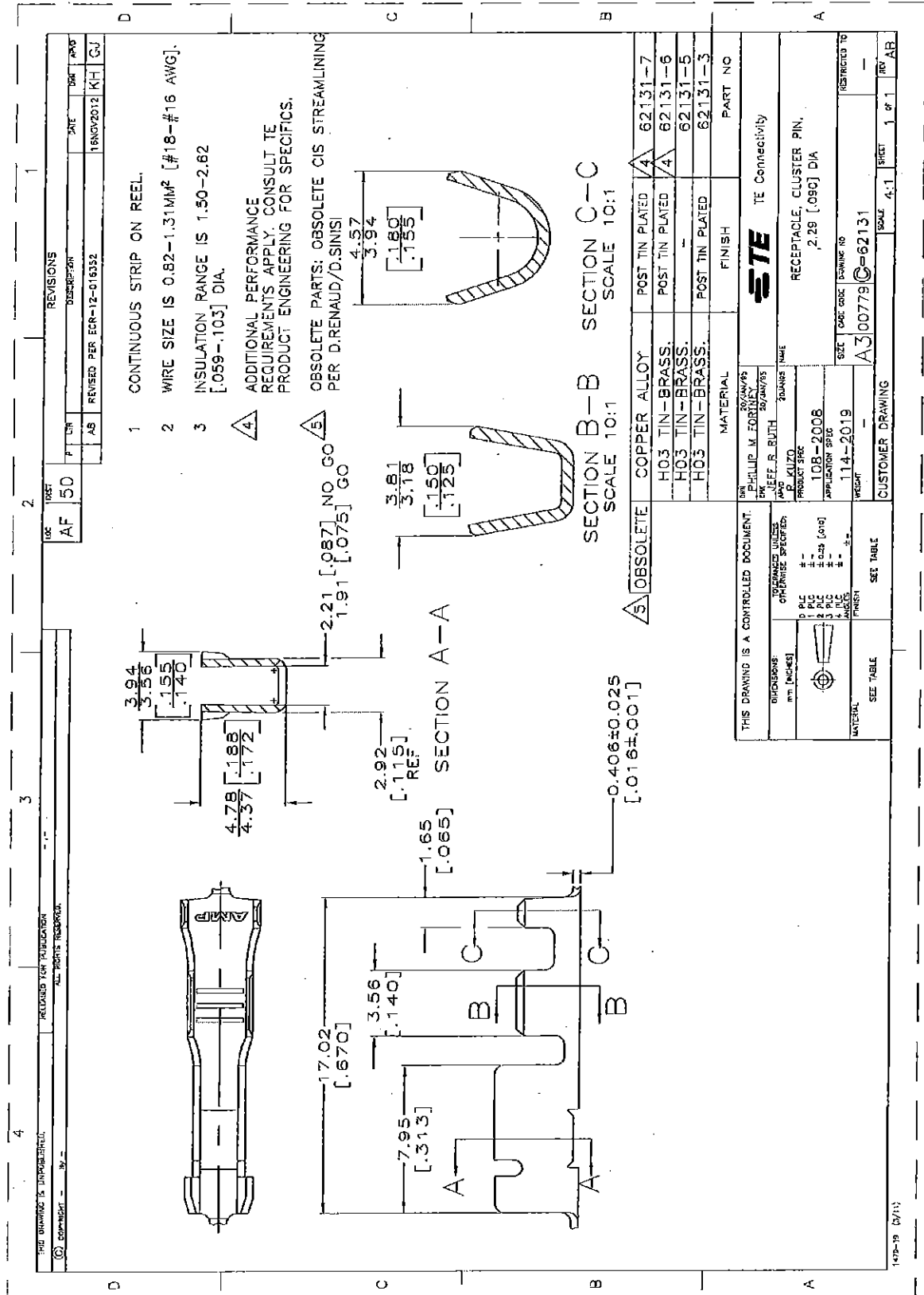
					© 19 BY AMP INCORPORATED. ALL RIGHTS RESERVED. AMP PRODUCTS COVERED BY PATENTS AND OR PATENTS PENDING.			CUSTOMER COPY REFERENCE ONLY		
E	Aggiunto materiale	EB		22-2 84	MATERIAL AND FINISH			 AMP ITALIA VIA CERVI 15 COLLEGNO (TORINO)		
D	AGGIUNTA NERVATURA NELLE CAVITÀ	R		7-5-80	POLIESTERE TERMOPLASTICO; VLOX 310, OPPURE ULTRADUR B 4500					
C	MODIFICATO	FR.		7-5-80	WIRE	RANGE	INSULATION	TYPE		
B	In Produzione	FR.		21-78						
A	P.N. ERA 1A-77-5593	FR.		3-2-78						
LTR	REVISION RECORD	DR	CHK	DATE	TOLERANCE EXCEPT AS NOTED	SCALE	LOC	NO	REV	
DR	Enalbelli 14-12-77	DE			$\pm 0,3 - 1^{\circ} 0'$	2:1	I	A	C-281006	
CHK	FR.	APF			NAME					
					CLUSTER BLOCK HOUSING .090" DIA					

FIG 1  
Project 70038856  
Report 1043778  
Contract 164196  
LR 7189-190



REV	DATE	DESCRIPTION	BY	CHK	APP
1	18NOV2012	REVISED PER ECR-12-016352	KH	GJ	

- 1 CONTINUOUS STRIP ON REEL.
- 2 WIRE SIZE IS 0.82-1.31MM<sup>2</sup> [#18-#16 AWG].
- 3 INSULATION RANGE IS 1.50-2.62 [.059-.103] DIA.
4. ADDITIONAL PERFORMANCE REQUIREMENTS APPLY. CONSULT TE PRODUCT ENGINEERING FOR SPECIFICS.
5. OBSOLETE PARTS: OBSOLETE CIS STREAMLINING PER D.RENAUD/D.SINIS

SECTION	SCALE	POST TIN PLATED	PART NO
SECTION B-B	SCALE 10:1	POST TIN PLATED	62131-7
SECTION C-C	SCALE 10:1	POST TIN PLATED	62131-6
		POST TIN PLATED	62131-5
		POST TIN PLATED	62131-3

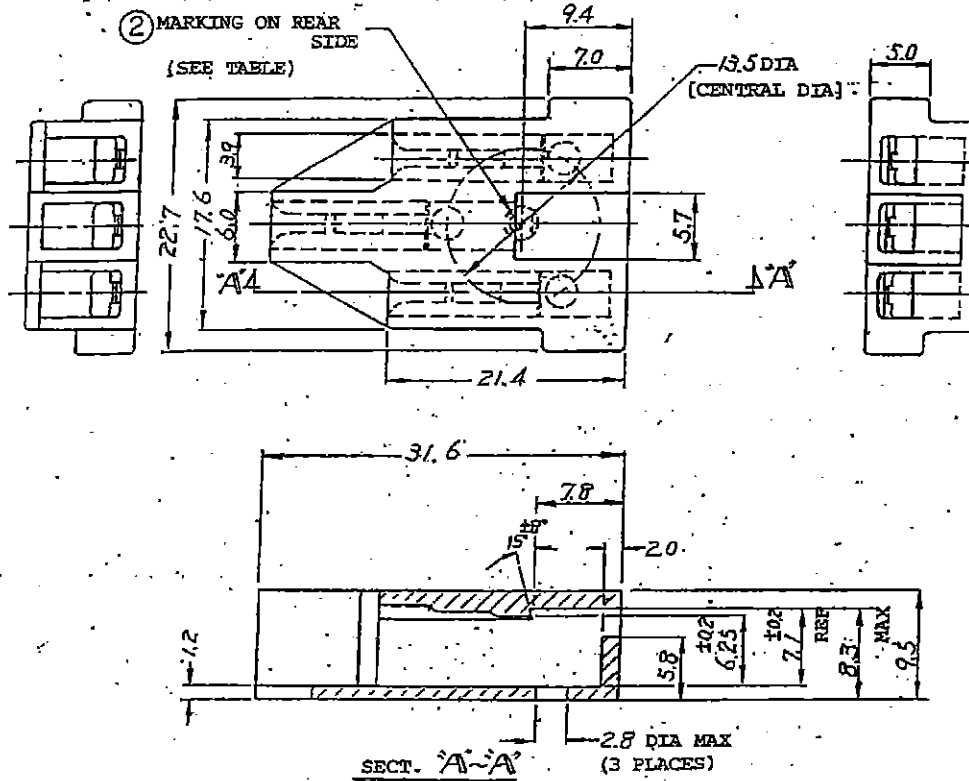
THIS DRAWING IS A CONTROLLED DOCUMENT		STE TE Connectivity	
DESIGNED BY	PHILIP M. FORNEY	PRODUCT SPEC	RECEPTACLE, CLUSTER PIN
CHECKED BY	PHILIP M. FORNEY	APPLICATION SPEC	.228 [.09C] DIA
APPROVED BY	PHILIP M. FORNEY	WEIGHT	A3100779C=62131
DATE	11/4/2019	RESTRICTED TO	

DESCRIPTION	SEE TABLE	SCALE	4:1	SHEET	1 of 1	REV	AR
-------------	-----------	-------	-----	-------	--------	-----	----

147-19 (2/11)

FIG 2  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190

NUMBER 171370



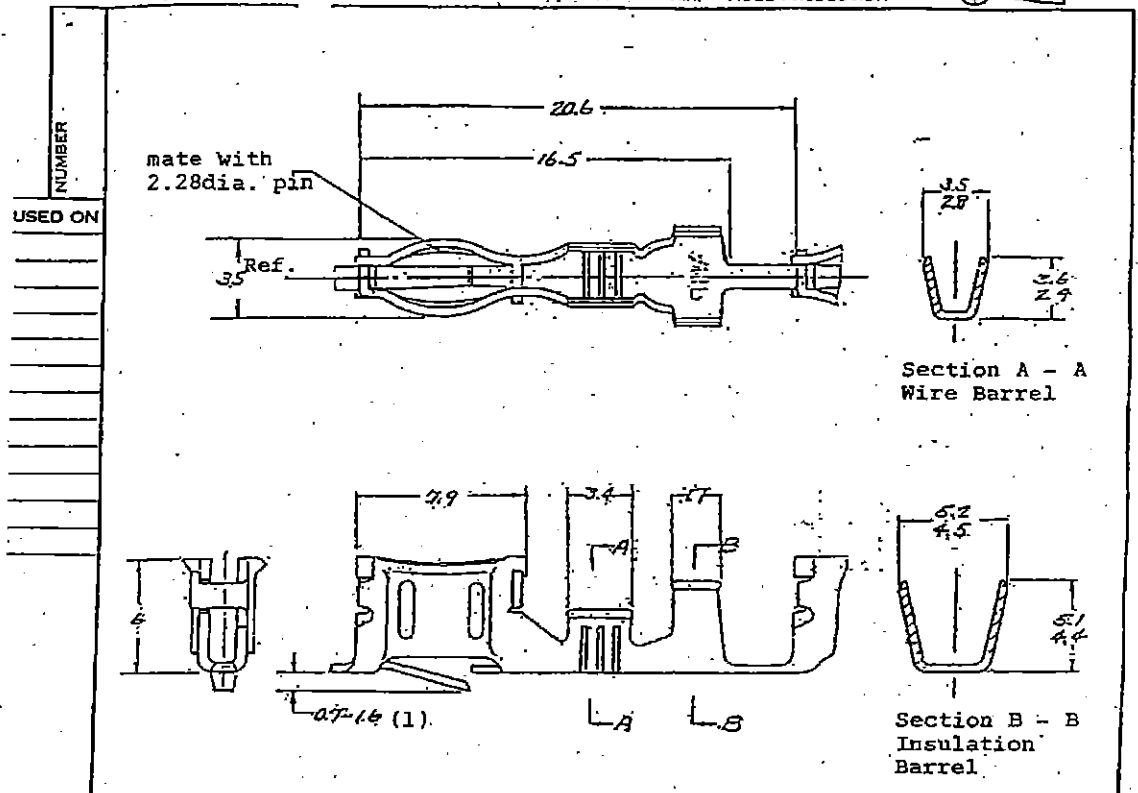
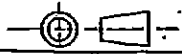
- NOTES: 1. GENERAL TOLERANCE : ±0.4  
 2. APPLICABLE P-IN RECEPTACLE P/N : 170063  
 3. PRODUCT SPEC. NO. 108-5143

X	171370-3	PBT	NATURAL	NO
	171370-2	PHENOLIC	BLACK	YES
	171370-1	"	"	NO
	P/N	MATERIAL	COLOR	MARKING

DIMENSIONS IN INCHES & MILLIMETERS DO NOT SCALE PRINT

MATERIAL SEE TABLE		HEAT TREAT — / — / —		COATING OR PLATING SEE TABLE	
UNLESS OTHERWISE SPECIFIED, BREAK SHARP EDGES .015 (0.38) R MAX OTHERWISE ANGLES: ±0°30' (±0.51) SPECIFIED: .000 (0.00) ±0.13 / .0000 ±0.0005 (0.0007 ±0.013)					
FIRST USED WIRE RANGE: CLASS				TYPE UL & CSA APPLICATION	
PPP	AREA	SCALE	AMP		
DR	DATE		AMP (Japan), Ltd. TOKYO, JAPAN		
APP M. J. [Signature]		DATE 5/10/84	LEG JA	NO 171370	REV A
A! REDRAWN W/CHANGE		REL D. [Signature]	CLUSTER BLOCK		
LTP	REVISION RECORD	ECN	DATE		

FIG 3  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190



- Note: (1) Lance Height after crimping  
 2. Product Specification 108-5143 expecting the requirement of crimp strength is 8Kg min.  
 3. Applicable housing: 170851-1, 171370-1, -3  
 4. Wire Range 0.50 - 1.43mm, AWG20 - 16  
 5. Insulation Dia. 2.0 - 3.40mm

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170063-2	Ph-Bz 0.4lt	tin
Part Number	Material	Finish

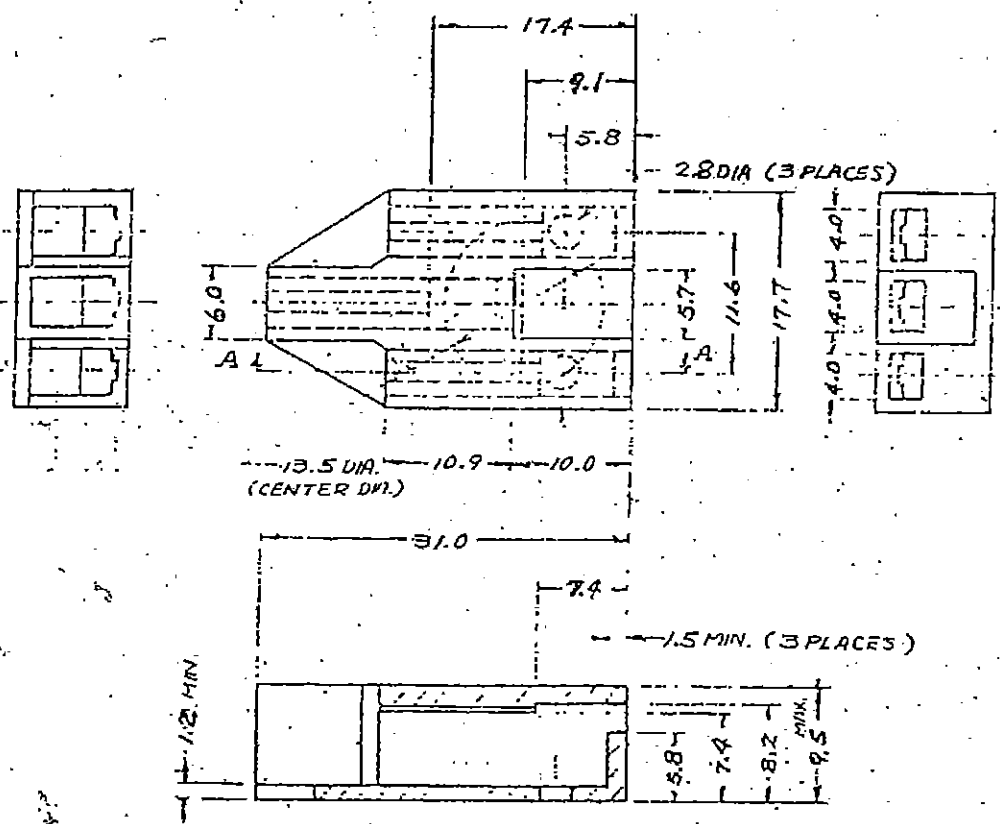
PRINT DST	LTR	REVISION RECORD	ECN	DATE	UNLESS OTHERWISE SPECIFIED	REMOVE BURRS BREAK SHARP EDGES 0.4R MAX	✓		
					MATERIAL	See Table	DR	M. Fujita	APP
					HEAT TREAT	-	CHK	[Signature]	REL
					COATING OR PLATING	See Table	AMP (JAPAN), LTD. Tokyo, Japan		
					TERMINAL	FIRST USED	LOC	SIZE	NO
		J	A	170063	G				
SCALE					SNAP IN CLUSTER RECEPTACLE				

AMP 4020-22 (JIS)  
REV. 5 83

FIG 4  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190

C-170851

- 1 AS SHOWN



SECT. A-A

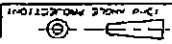
NOTE:

1. TO BE USED WITH TERMINAL 170063.

PHENOLIC RESIN BLACK		IMPROVE ALSO STRENGTH AND DURABILITY OF PRODUCTS COLLECTED BY PATENTS AND OR OTHER RIGHTS	
PHENOLIC RESIN BLACK		TOKYO JAPAN	
REVISION RECORD NO. 1 DATE 1/10/55	DESIGNED BY DRAWN BY CHECKED BY	U.S. STOCK NO. 2-1 LUG SEC. BY NO. J A C-170851	J A C-170851
CLUSTER BLOCK			

FIG 5  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190

B4330



METRIC

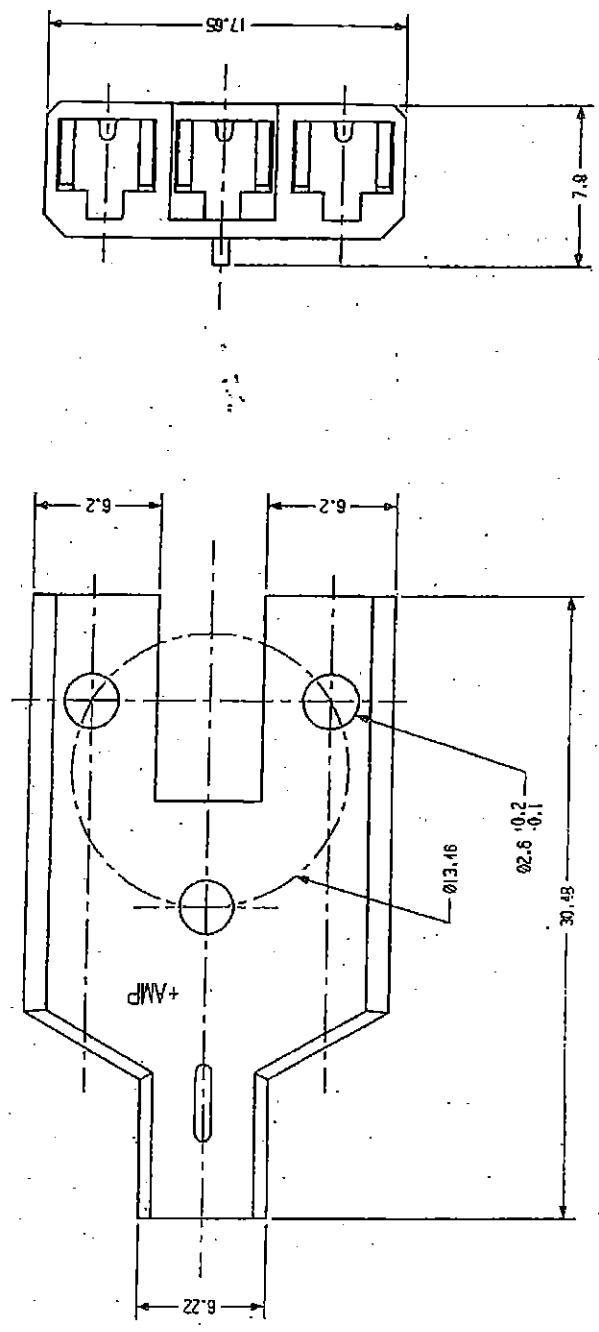
DIMENSIONS IN MM, DO NOT SCALE PRINT

Sheet 01 of 1

PRELIMINARY

NOTES:

- 1. AMP APPLICATION SPEC 114-2019
- 2. AMP PRODUCT SPEC 108-2008
- △ MATERIAL: NATURAL COLOR THERMOPLASTIC FLAME RETARDANT, 80V-0 RATED



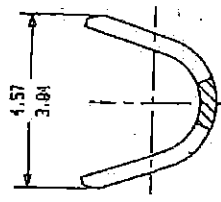
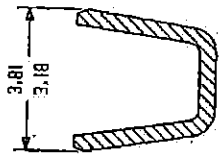
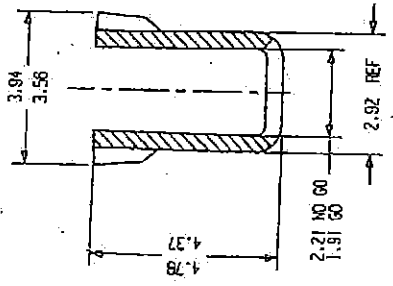
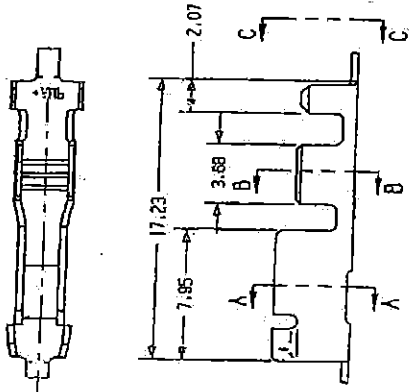
Copyright © 1995 AMP Manufacturing Singapore Pte. Ltd. All Rights Reserved.		Copyright © 1995 AMP Manufacturing Singapore Pte. Ltd. All Rights Reserved.	
TYPE NUMBER	31-01-2008 17-03 10-201	DESCRIPTION	CLUSTER BLOCK, 2,29 (1,080) DIA
MATERIAL	2.1-2.8 mm IF FINISH	FINISH	
DESIGNER	W. VALEE	DESIGN	A.SOH
DATE	12 SEP 08	APPROVED BY	PETER DE JONG
REVISED RECORD	01 OK DATE	REVISED RECORD	01 OK DATE
REV	DATE	REV	DATE
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98		98	
99		99	
100		100	

CLUSTER BLOCK

FIG 6  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190

NOTES:  
 △ MATERIAL: TEMP 3 PANDOR BRONZE  
 △ FINISH: POST TIN AMP SPEC: 112-16-3

PRELIMINARY



SECTION A-A  
SCALE 10:1

SECTION B-B  
SCALE 10:1

VIEW C-C  
SCALE 10:1

SECTION A-A  
SCALE 10:1

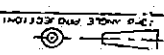
VIEW C-C  
SCALE 10:1

LR 71899A-244-F16.5

COMPONENT: 1009		COMPONENT: 1009		COMPONENT: 1009	
AMP MANUFACTURING SINGAPORE PTE. LTD.		AMP MANUFACTURING SINGAPORE PTE. LTD.		AMP MANUFACTURING SINGAPORE PTE. LTD.	
ALL DIMENSIONS IN MILLIMETERS		ALL DIMENSIONS IN MILLIMETERS		ALL DIMENSIONS IN MILLIMETERS	
ITEM NO: 1009		ITEM NO: 1009		ITEM NO: 1009	
MATERIAL: 1.0-1.5mm (AMP 10-20)		MATERIAL: 1.0-1.5mm (AMP 10-20)		MATERIAL: 1.0-1.5mm (AMP 10-20)	
FINISH: 2.12 (0.08)		FINISH: 2.12 (0.08)		FINISH: 2.12 (0.08)	
DR: 1.504		DR: 1.504		DR: 1.504	
DATE: 01/01/01		DATE: 01/01/01		DATE: 01/01/01	
BY: PETER DE JONG		BY: PETER DE JONG		BY: PETER DE JONG	
CHECKED: 01/01/01		CHECKED: 01/01/01		CHECKED: 01/01/01	
APPROVED: 01/01/01		APPROVED: 01/01/01		APPROVED: 01/01/01	
TITLE: 02.28 CLUSTER PIN RECEPTACLE		TITLE: 02.28 CLUSTER PIN RECEPTACLE		TITLE: 02.28 CLUSTER PIN RECEPTACLE	
REVISIONS:		REVISIONS:		REVISIONS:	
NO.	DATE	BY	REASON	REV.	REV.
1	01/01/01	01	01	0	0
2	01/01/01	01	01	0	0
3	01/01/01	01	01	0	0
4	01/01/01	01	01	0	0
5	01/01/01	01	01	0	0
6	01/01/01	01	01	0	0
7	01/01/01	01	01	0	0
8	01/01/01	01	01	0	0
9	01/01/01	01	01	0	0
10	01/01/01	01	01	0	0
11	01/01/01	01	01	0	0
12	01/01/01	01	01	0	0
13	01/01/01	01	01	0	0
14	01/01/01	01	01	0	0
15	01/01/01	01	01	0	0
16	01/01/01	01	01	0	0
17	01/01/01	01	01	0	0
18	01/01/01	01	01	0	0
19	01/01/01	01	01	0	0
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22	01/01/01	01	01	0	0
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24	01/01/01	01	01	0	0
25	01/01/01	01	01	0	0
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92	01/01/01	01	01	0	0
93	01/01/01	01	01	0	0
94	01/01/01	01	01	0	0
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96	01/01/01	01	01	0	0
97	01/01/01	01	01	0	0
98	01/01/01	01	01	0	0
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CUSTOMER DRAWING

B4331

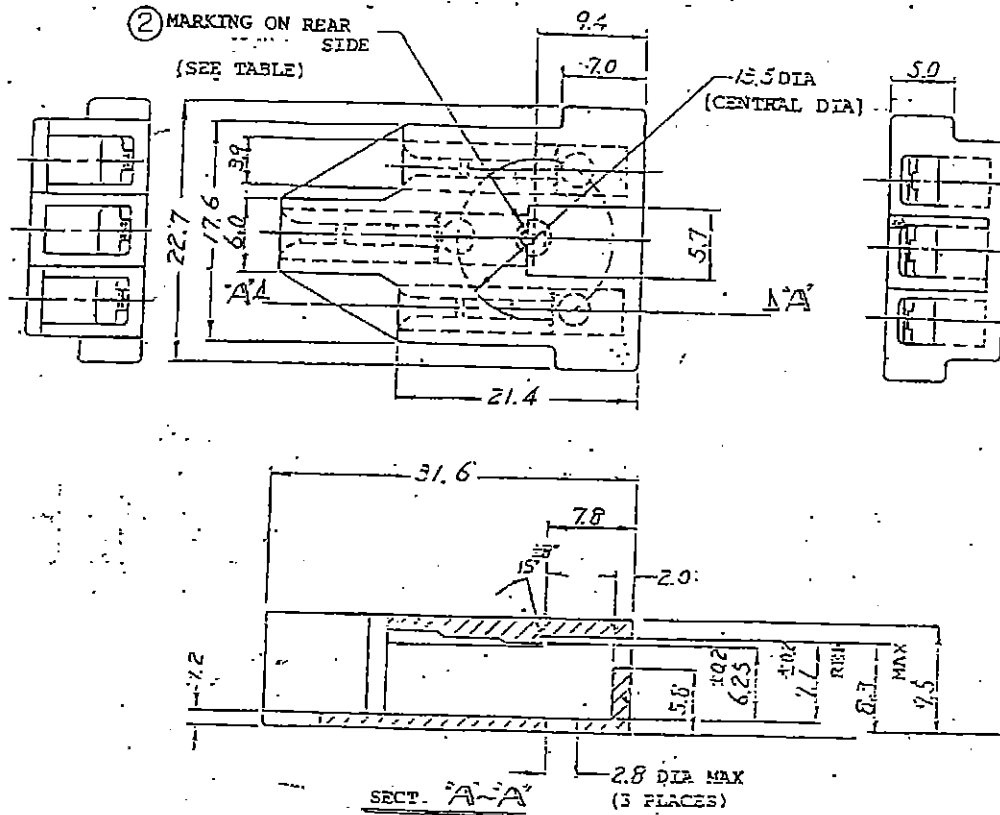


METRIC

DIMENSIONS IN MM - DO NOT SCALE PRINT



171370

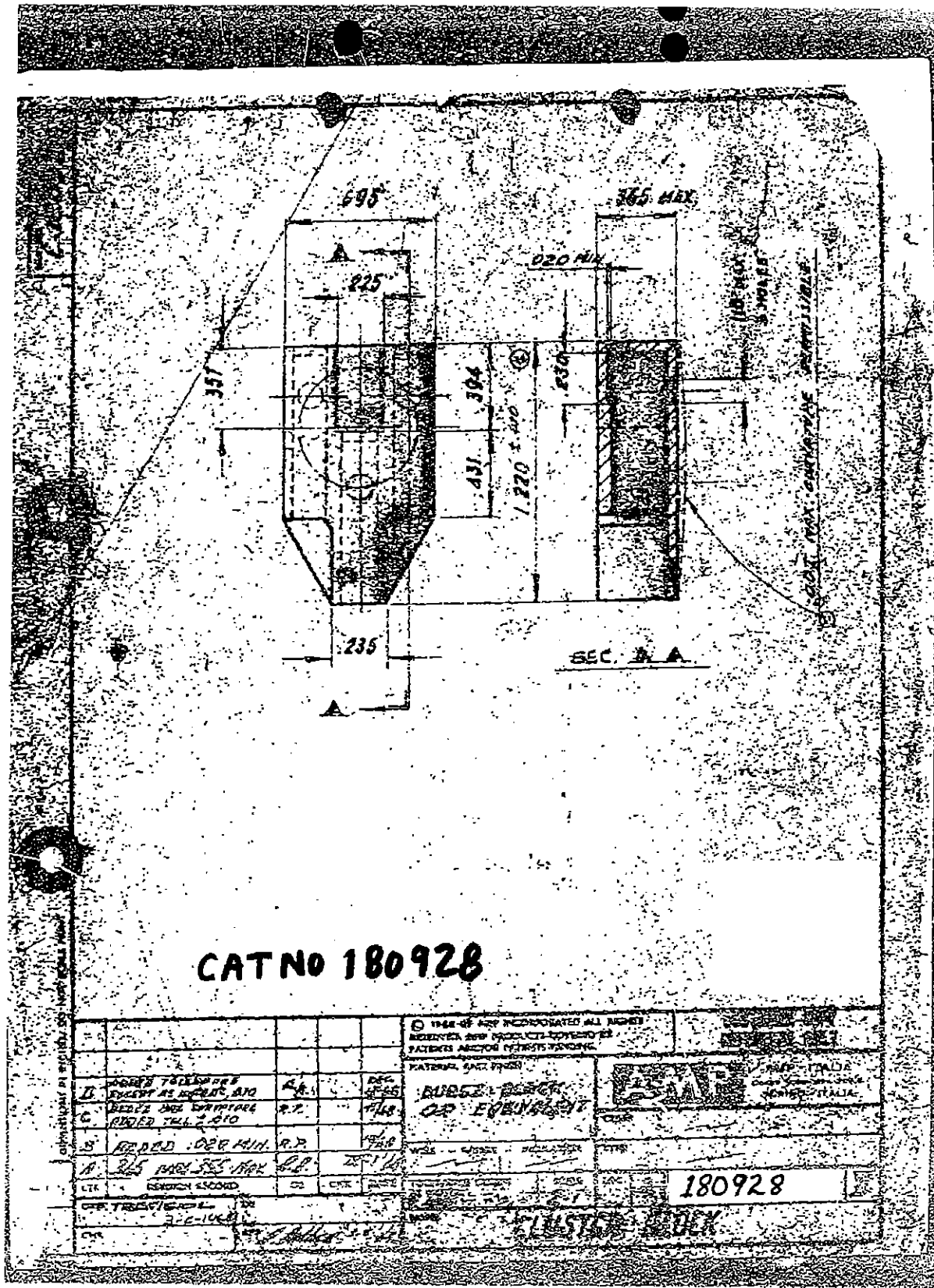


- NOTES: 1. GENERAL TOLERANCE : ±0.4  
 2. APPLICABLE PIN RECEPTACLE P/N : 170063  
 3. PRODUCT SPEC. NO. 108-5143

368600	PST	NATURAL	NO
P/N	MATERIAL	COLOR	MARKING

	MATERIAL	HEAT TREAT	COATING OR PLATING
	SEE TABLE		SEE TABLE
	UNLESS OTHERWISE SPECIFIED, BREAK SHARP EDGES .015 (0.0018 IN.) MAX		
	OTHERWISE ANGLES: ±0°30'		
	SPECIFIED: .0001 ± .0005 (0.0013) .0000 ± .0005 (0.0001) ± .0015		
FIRST USED	WIRE RANGE	CLASS	TYPE
			UL & CSA APPLICATION
APP	AREA	SCALE	
OR			
DATE	APP	REL	LCC
3/10/84	J. A. [Signature]	3/18/84	JIA
			NAME
			368600
			REV A
A REDRAWN W/CHANGE	CLUSTER BLOCK		
LTR	REVISION RECORD	ECN	DATE

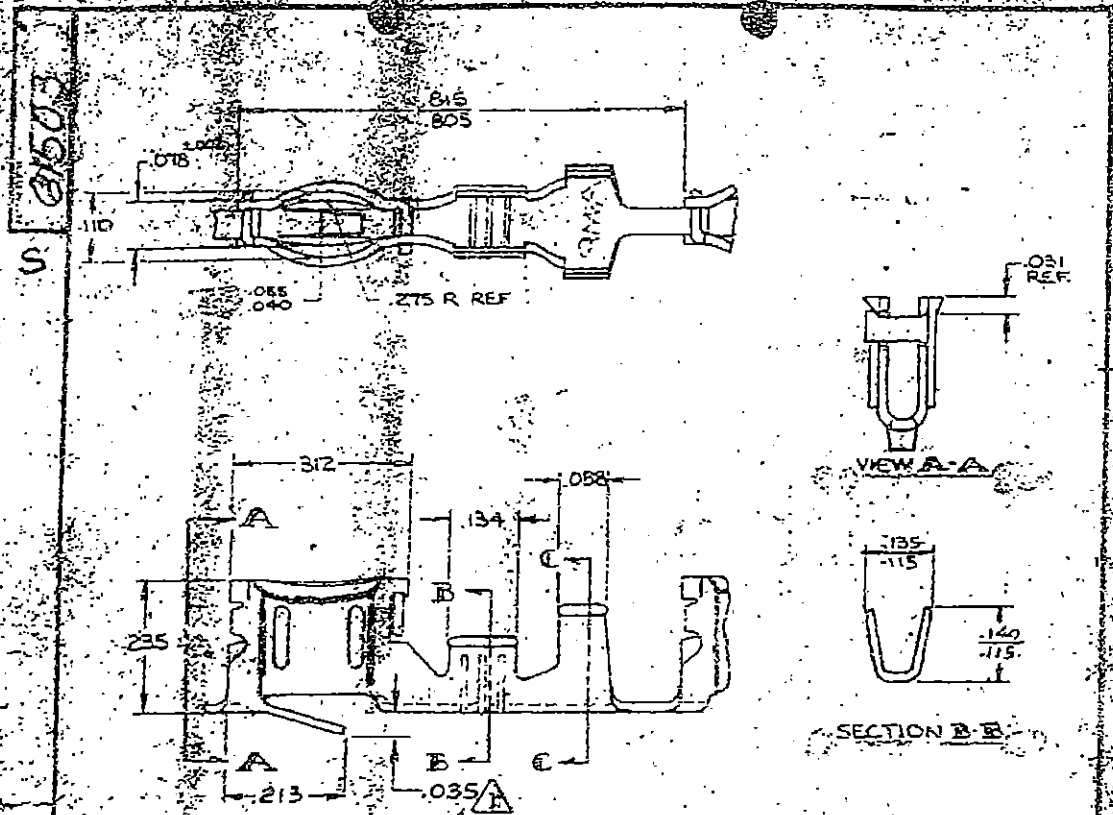
FIG 8  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190



CATNO 180928

© 1942-48 ALL RIGHTS RESERVED AND PRODUCTS COVERED BY PATENTS AND/OR TRADEMARKS. MATERIAL SPEC. 17000				MADE IN ITALY MADE IN ITALY	
D. POWER TAKEOFF EXCEPT AS NOTED, A10	R.P.	DEC 27 1948	RUBBER BELT OR EQUIVALENT		
C. BELT AND SUPPORT RUBBER TALL 2.510	R.P.	1/48	RUBBER BELT OR EQUIVALENT		
B. BELT AND SUPPORT RUBBER TALL 2.510	R.P.	1/48	RUBBER BELT OR EQUIVALENT		
A. BELT AND SUPPORT RUBBER TALL 2.510	R.P.	1/48	RUBBER BELT OR EQUIVALENT		
LIT. SEARCH 450000	02	020	180928		
DE TREVISO S.p.A. 31040-1000	MADE IN ITALY				

FIG 9  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190



WIRE SIZE # AWG	INSULATING RANGE	MATERIAL AND FINISH	TERMINAL NUMBER
16-18	135-160	065-PROS. BRONZE-NONE	61503-1
16-18	135-160	06-PROS. BRONZE-TIN	61503-2
16-18	135-160	04-2E-TIN-NONE	61503-3
16-18	135-160	016-2E-CU-TIN	61503-4
16-18	135-160	016-PROS. BRONZE-SILVER	61503-5

△ TO BE SET BY APPLICATOR.

DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED

CUSTOMER DRAWING

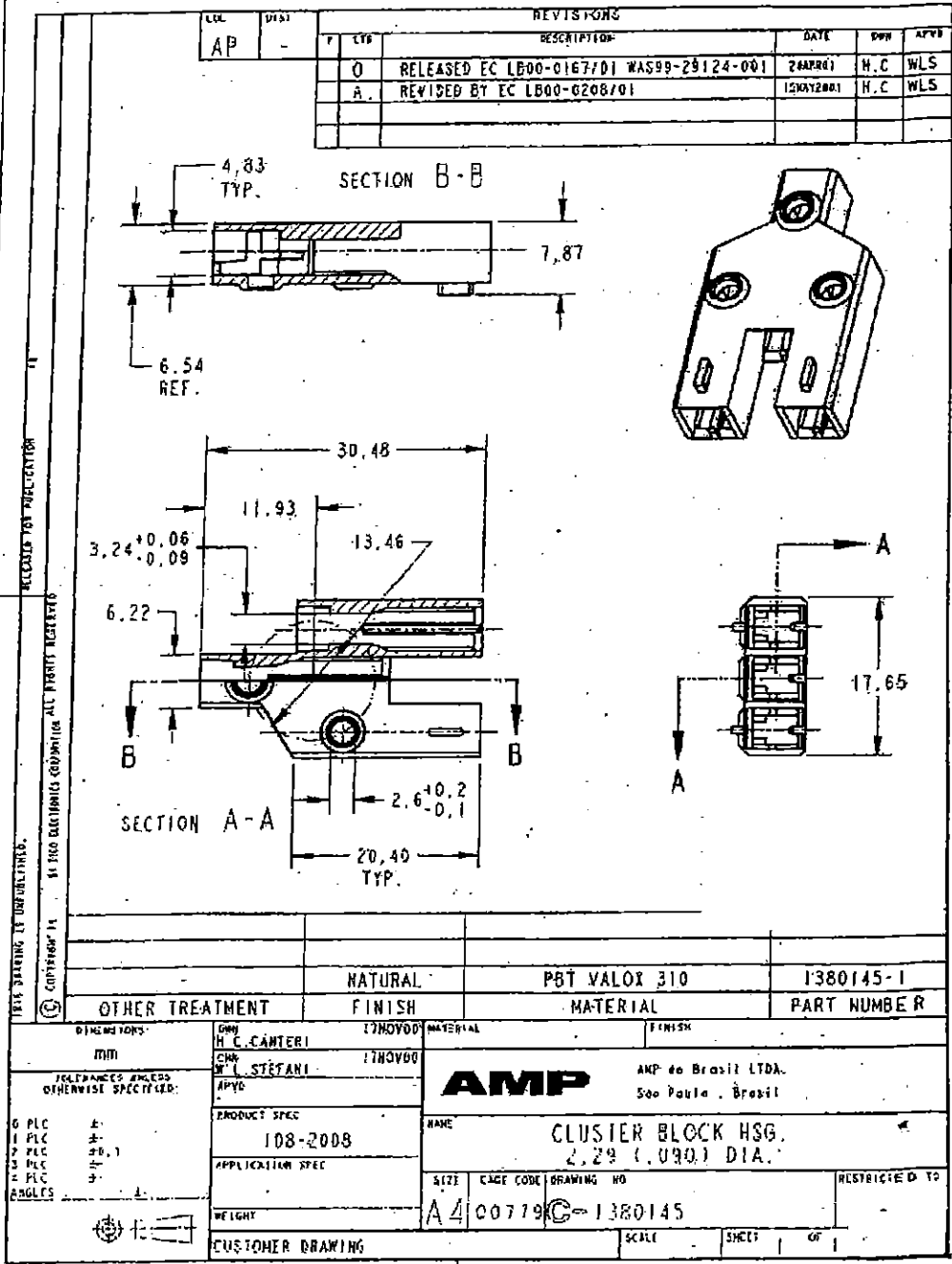
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61503

JUSTICE DEPARTMENT

FIG 10  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190

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 RELEASED FOR REPLICATION

AMP 1490-10 REV 11MAY2000

FIG 11  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190

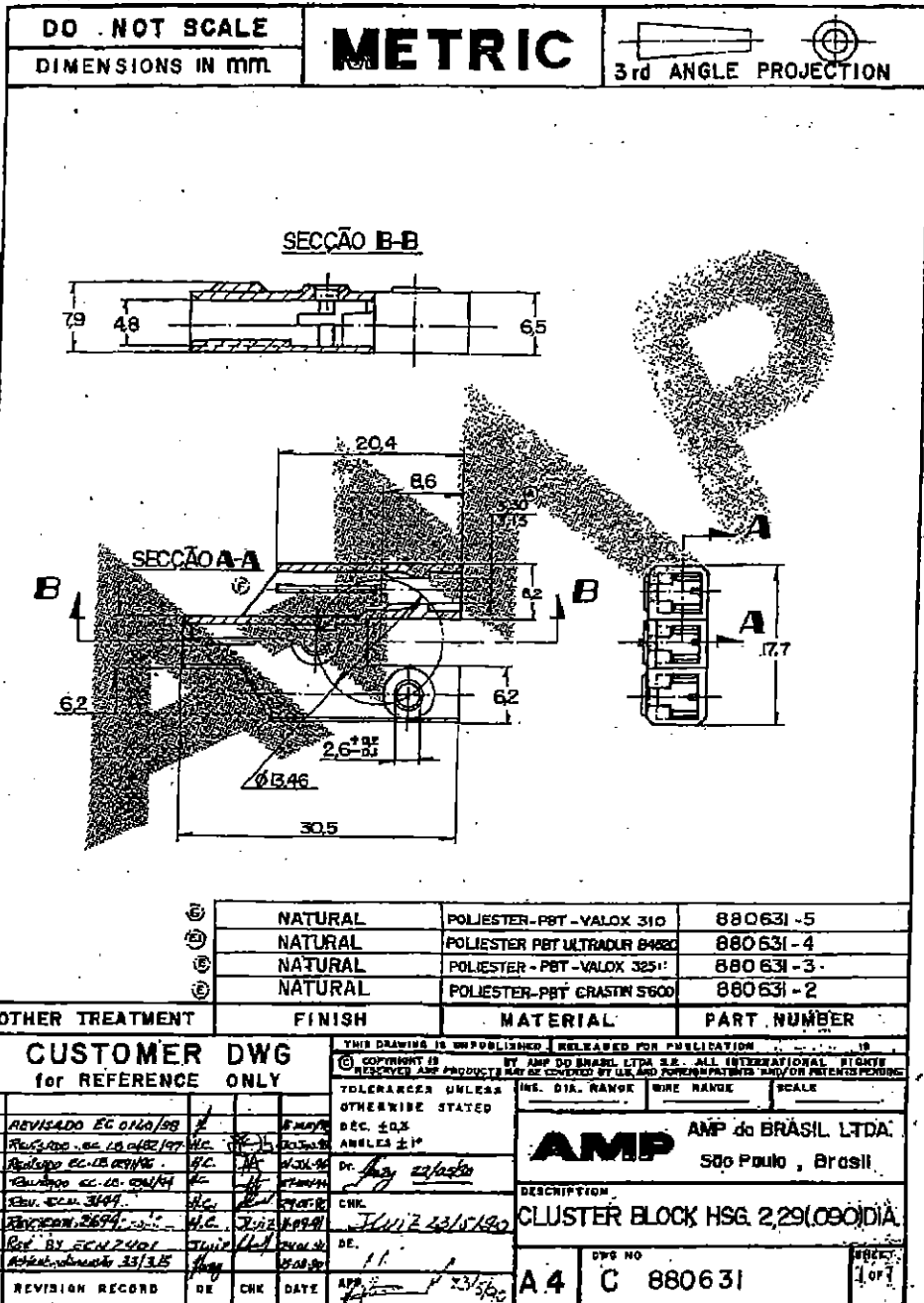
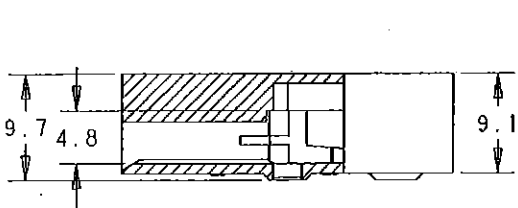


FIG 12  
 Project 70038856  
 Report 1043778  
 Contract 164196  
 LR 7189-190

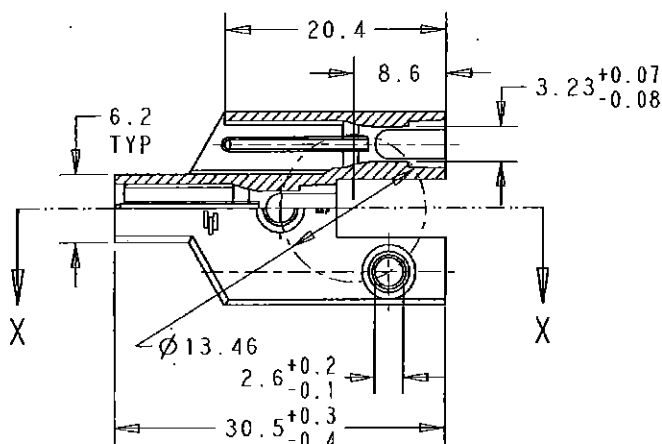
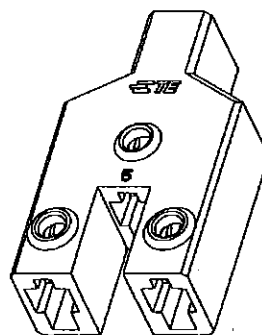




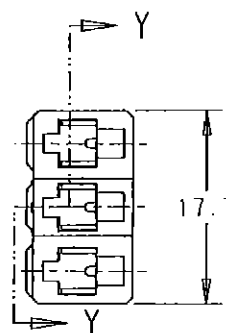
LOC	DIST	REVISIONS			
P	LTR	DESCRIPTION	DATE	DWN	APVD
CN	-	A2	CHANGE THE DIMENSION 30.5+/-0.3 TO 30.5+0.3/-0.4	11FEB2014	W.W YH.M



SECTION X-X



SECTION Y-Y



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NATURAL	PA6 WITH GLASS FIBER	
NATURAL	PBT	2232326-1
FINISH	MATERIAL	PART NUMBER

DIMENSIONS: mm TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ± 1 PLC ±0.3 2 PLC ±0.3 3 PLC ± 4 PLC ± ANGLES ±	DWN WINTER WANG 25FEB2013	MATERIAL -	FINISH -
	CRK JAIN LIU 01MAR2013	<b>TE</b> TE Connectivity	
	APVD YUHONG MAO 01MAR2013		
	PRODUCT SPEC 108-2008	NAME CLUSTER BLOCK HSG 2.29 (.090) DIA	
APPLICATION SPEC	SIZE A4	CAGE CODE 00779	DRAWING NO C-2232326
WEIGHT -	Customer Drawing		RESTRICTED TO -
	SCALE -	SHEET 1	OF 1
		REV A2	

1469-35 (3/11)

**FIG 15**  
**Project 70038856**  
**Report 1043778**  
**Contract 164196**  
**LR 7189-190**



