

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

AS39029/22

FEDERAL SUPPLY CLASS
5935

NOTICE

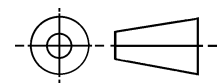
THIS DOCUMENT HAS BEEN TAKEN DIRECTLY FROM U.S. MILITARY SPECIFICATION MIL-C-39029/22B AND CONTAINS ONLY MINOR EDITORIAL AND FORMAT CHANGES REQUIRED TO BRING IT INTO CONFORMANCE WITH THE PUBLISHING REQUIREMENTS OF SAE TECHNICAL STANDARDS. THE INITIAL RELEASE OF THIS DOCUMENT IS INTENDED TO REPLACE MIL-C-39029/22B. ANY PART NUMBERS ESTABLISHED BY THE ORIGINAL SPECIFICATION REMAIN UNCHANGED.

THE ORIGINAL MILITARY SPECIFICATION WAS ADOPTED AS AN SAE STANDARD UNDER THE PROVISIONS OF THE SAE TECHNICAL STANDARDS BOARD (TSB) RULES AND REGULATIONS (TSB 001) PERTAINING TO ACCELERATED ADOPTION OF GOVERNMENT SPECIFICATIONS AND STANDARDS. TSB RULES PROVIDE FOR (A) THE PUBLICATION OF PORTIONS OF UNREVISED GOVERNMENT SPECIFICATIONS AND STANDARDS WITHOUT CONSENSUS VOTING AT THE SAE COMMITTEE LEVEL, AND (B) THE USE OF THE EXISTING GOVERNMENT SPECIFICATION OR STANDARD FORMAT.

UNDER DEPARTMENT OF DEFENSE POLICIES AND PROCEDURES, ANY QUALIFICATION REQUIREMENTS AND ASSOCIATED QUALIFIED PRODUCTS LISTS ARE MANDATORY FOR DOD CONTRACTS. ANY REQUIREMENT RELATING TO QUALIFIED PRODUCTS LISTS (QPL'S) HAS NOT BEEN ADOPTED BY SAE AND IS NOT PART OF THIS SAE TECHNICAL DOCUMENT.

SAENORM.COM : Click to view the full PDF of as39029_22

THIRD ANGLE PROJECTION



PREPARED BY SAE SUBCOMMITTEE AE-8C1

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

CONTACTS, ELECTRICAL, CONNECTOR, SOCKET, CRIMP REMOVABLE
(FOR MIL-T-81714 TERMINAL JUNCTION SYSTEM SERIES II AND MIL-C-81511
SERIES 3 AND 4 CLASS L CONNECTORS)

AS39029/22
SHEET 1 OF 8

ISSUED 2001-03 REAFFIRMED 2008-04

Copyright © 2008 SAE International
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Fax: 724-776-0790

Tel: 724-776-4970 (outside USA)
Email: CustomerService@sae.org SAE WEB ADDRESS: <http://www.sae.org>

THE COMPLETE REQUIREMENTS FOR ACQUIRING THE CONTACTS DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF SPECIFICATION MIL-C-39029.

AS39029/22

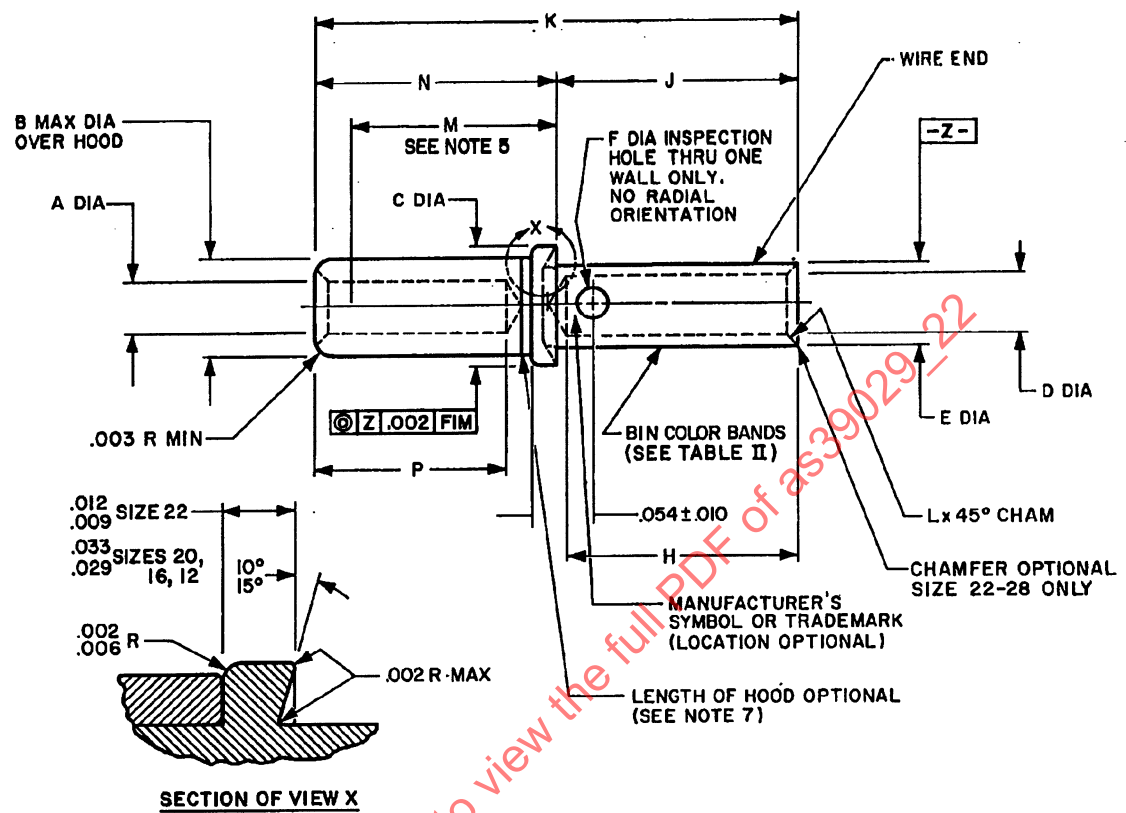


FIGURE 1 CONTACT, SOCKET SIZE 22, 20, 16.

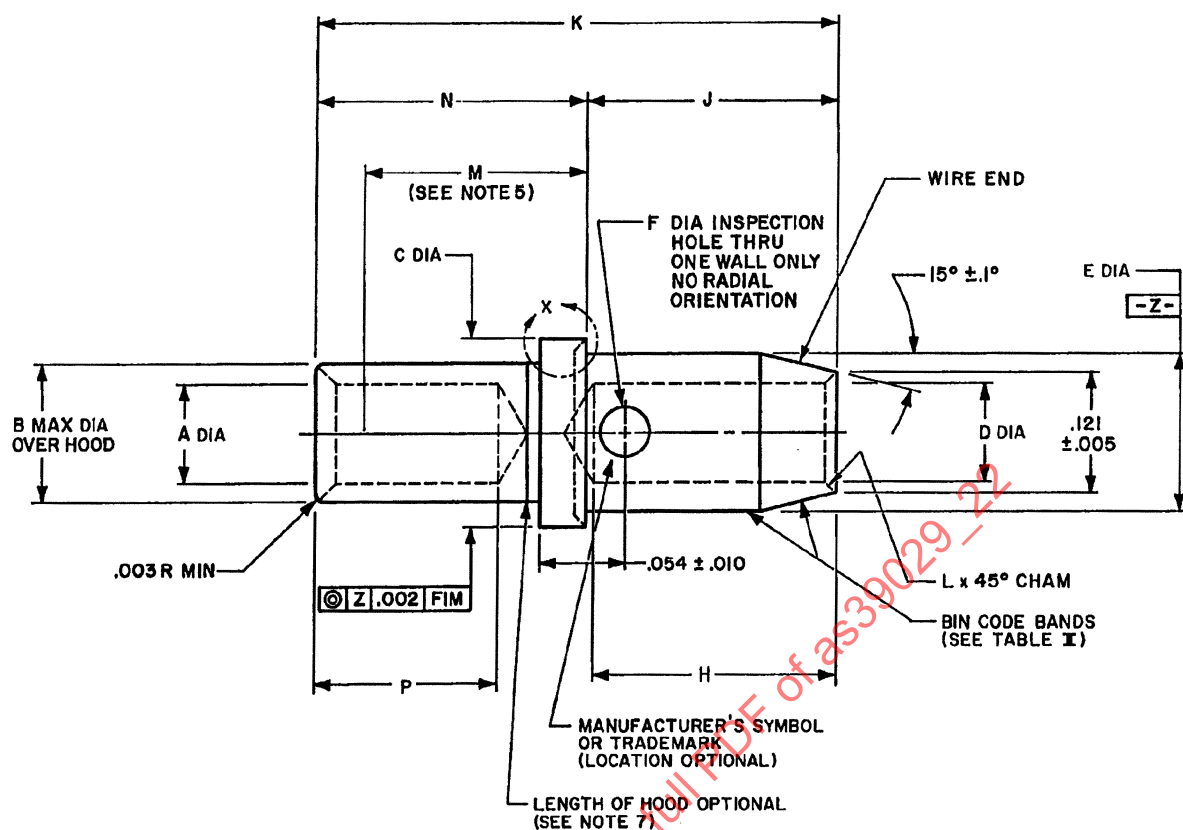


FIGURE 2. CONTACT, SOCKET SIZE 12.

INCH	mm	INCH	mm	INCH	mm	INCH	mm
.0001	0.003	.0305	0.77	.091	2.36	.150	3.81
.0012	0.03	.031	0.79	.0935	2.37	.152	3.86
.0015	0.04	.033	0.84	.094	2.39	.158	4.01
.002	0.05	.0335	0.85	.0945	2.4	.160	4.06
.0030	0.08	.0355	0.90	.095	2.41	.168	4.27
.004	0.10	.0395	1.00	.096	2.44	.170	4.32
.0050	0.13	.0405	1.03	.097	2.46	.171	4.34
.006	0.15	.042	1.07	.100	2.54	.175	4.45
.0070	0.18	.044	1.12	.101	2.57	.176	4.47
.009	0.23	.046	1.17	.102	2.59	.180	4.57
.010	0.25	.0465	1.18	.103	2.62	.187	4.75
.016	0.41	.048	1.22	.105	2.67	.188	4.78
.0180	0.46	.052	1.32	.108	2.74	.205	5.21
.019	0.48	.0600	1.52	.120	3.05	.215	5.46
.0200	0.51	.0615	1.56	.121	3.07	.220	5.59
.022	0.56	.0625	1.59	.125	3.176	.230	5.84
.023	0.58	.064	1.63	.127	3.23	.240	6.10
.027	0.69	.066	1.68	.130	3.30	.327	8.31
.029	0.74	.068	1.73	.135	3.45	.349	8.86
.0295	0.75	.070	1.78	.137	3.48	.446	11.33
.030	0.76	.076	1.93	.148	3.76		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Dimensioning and tolerancing are in accordance with ANSI Y14.5M-1982.
4. Dimensions shown apply after plating.
5. Distance between rear of contact shoulder and point at which a gage pin, of same basic diameter as mating pin contact and a square face, first engages socket contact spring member.
6. Axial concentricity: All diameters to be concentric within .004 FIM except as noted.
7. Maximum gap of .010 inch between hood and body of the contact.

TABLE I. DIMENSIONS.

BIN code	A dia	B max dia	C dia	D dia	E dia	F dia	H	J	K ref	L cham	M min	N	P
190	.033 .031	.060	.0615 .0600	.0200 .0180	.0480 .0465	.017 .013	.175 .160	.170 .160	.327	.006 .003	.130	.166 .158	.137 .120
191	.033 .031	.060	.0615 .0600	.0355 .0335	.0480 .0465	.022 .018	.175 .160	.170 .160	.327	.006 .003	.130	.166 .158	.137 .120
192	.044 .042	.076	.094 .091	.048 .046	.070 .068	.027 .023	.175 .160	.170 .160	.349	.010 .005	.150	.188 .180	.137 .120
193	.066 .064	.108	.130 .127	.068 .066	.103 .101	.027 .023	.175 .160	.170 .160	.349	.010 .005	.150	.188 .180	.137 .120
605	.100 .097	.168	.171 .168	.102 .096	.152 .148	.030 .019	.220 .205	.215 .205	.446	.016 .005	.176 .170	.240 .230	.187 .170

TABLE II. DESIGN CHARACTERISTICS

BIN code	Color bands			Mating end size	Wire barrel size	Type	Class
	1st	2nd	3rd				
<u>1</u> / 190	Brown	White	Black	22	28	A	B
191	Brown	White	Brown	22	22		
192	Brown	White	Red	20	20		
193	Brown	White	Orange	16	16		
605	Blue	Black	Green	12	12		

1/ 190 for internal black box wiring and shall not be used in airframe wiring.

TABLE III. TOOLS.

BIN code	Basic crimping tool	Positioner	Installing and removal tool
190	M22520/7-01	M22520/7-11	M81969/14-01
191	M22520/7-01	M22520/7-11	---
192	M22520/7-01	M22520/7-12	M89169/14-10
193	M22520/7-01	M22520/7-13	M81969/14-03
605	M22520/1-01	M22520/1-16	M81969/16-03 M81969/8-10

REQUIREMENTS:

Dimensions, design characteristics and configuration: See figure and Tables I and II.

Tools: See Table III.

Intended use: These contacts are for use in components designed to MIL-T-81714. In addition, these contacts replace MIL-C-39029/15 size 22-28 and size 22-22 for use with MIL-C-81511 series 3 and 4 class L.

Contact resistance: When mated to .100 depth with type A pin contacts of specified mating diameters, the contact resistance shall be as specified in Table IV.

TABLE IV. CONTACT RESISTANCE.

Engaging end size	Wire size (AWG)	Test current (amperes)	Maximum voltage drop (millivolts)		
			25° ±3°C	25° +3°C After conditioning	200° +3° -0°C
22	28	1.5	60	70	100
	32	1.0	95	105	135
22	22	5.0	70	80	120
	26	2.0	60	70	100
20	20	7.5	55	65	95
	24	3.0	45	55	80
16	16	13.0	50	60	85
	20	7.5	45	55	80
12	12 1/	23.0	60	70	100
	14	17.0	55	65	95

1/ Silver plated wire.