

REV. C
AS39029™/73

FEDERAL SUPPLY CLASS
5935

RATIONALE

LIMITED SCOPE REVISION IS REQUIRED TO DELETE MIL-DTL-83527 FROM THE DOCUMENT TITLE, TO DELETE THE RELATED FOOTNOTE FROM TABLE 2 AND TO UPDATE THE SAE TITLE INFORMATION THAT WAS NOT UPDATED AS A RESULT OF REVISION B.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39029.

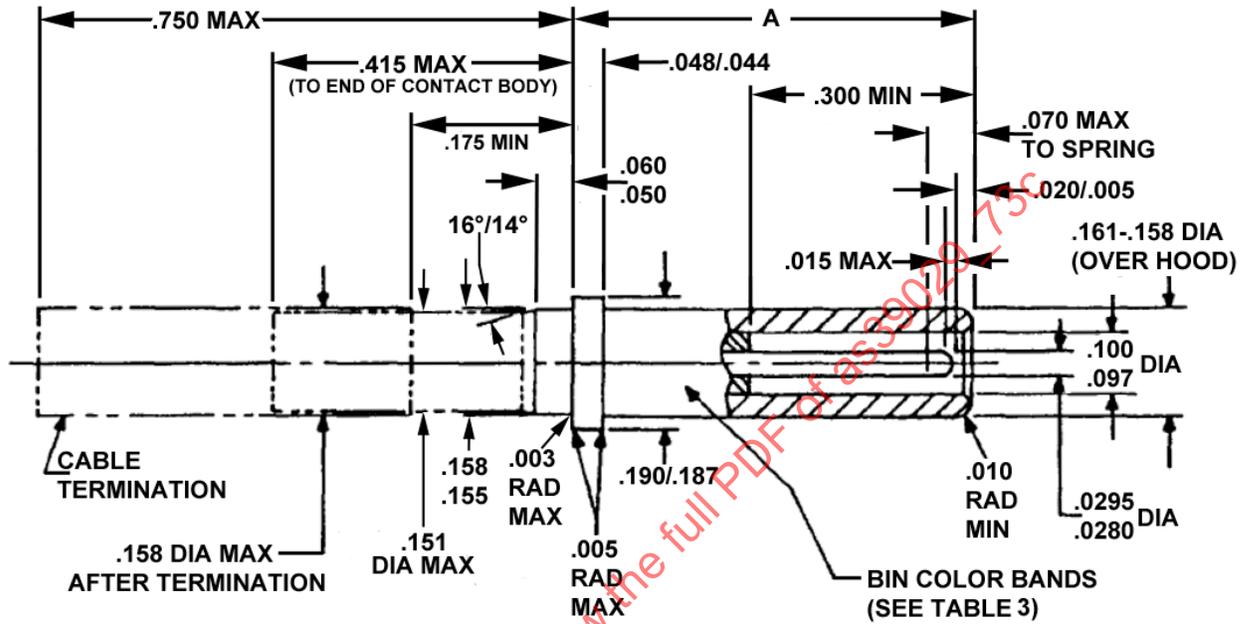
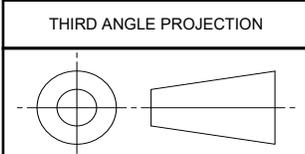


FIGURE 1 - CONNECTOR CONTACT CONFIGURATION/DIMENSIONS

TABLE 1 - FIGURE 1 METRIC EQUIVALENTS

INCH	MILLIMETERS	INCH	MILLIMETERS	INCH	MILLIMETERS
.003	0.08	.048	1.22	.155	3.94
.005	0.13	.050	1.27	.158	4.01
.010	0.25	.060	1.52	.161	4.09
.015	0.38	.070	1.78	.175	4.45
.020	0.51	.087	2.21	.190	4.83
.0280	0.71	.097	2.46	.300	7.62
.0295	0.75	.100	2.54	.750	19.05
.044	1.12	.151	3.84		

For more information on this standard, visit
<https://www.sae.org/standards/content/AS39029/73C/>



CUSTODIAN: AE-8C1

PROCUREMENT SPECIFICATION: AS39029



AEROSPACE STANDARD

CONTACTS, ELECTRICAL CONNECTORS, SOCKET,
SOLDER, REMOVABLE, SHIELDED, SIZE 12
(FOR MIL-DTL-83723 SERIES III CONNECTORS)

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ISSUED 2000-07 REAFFIRMED 2014-08 REVISED 2021-06

TABLE 2 - FIGURE 1 DIMENSIONS

BIN CODE	A
396, 397, 398	.500 (12.7) .492 (12.50)
555	.715 (18.16) .705 (17.91)

TABLE 3 - DESIGN AND DIMENSIONS

BIN CODE	COLOR BAND			CABLE ACCOMMODATION (SEE FIGURE 2)				SHIELD PREPARATION TECHNIQUE	TEST CABLES	TYPE	CLASS
	1 ST	2 ND	3 RD	A 1/	B 2/	C 3/	D 4/				
396	ORANGE	WHITE	BLUE	.026 (0.66) MAX .011 (0.28) MIN	.105 (2.67) MAX .093 (2.36) MIN	.124 (3.15) MAX .112 (2.84) MIN	.145 (3.68) MAX .120 (3.05) MIN	STRAIGHT	M17/095-RG180	D	A
397	ORANGE	WHITE	VIOLET	.026 (0.66) MAX .011 (0.28) MIN	.081 (2.06) MAX .055 (1.40) MIN	.099 (2.51) MAX .077 (1.96) MIN	.140 (3.56) MAX .094 (2.39) MIN	STRAIGHT	M17/094-RG179		
				.026 (0.66) MAX .011 (0.28) MIN	.045 (1.14) MAX .030 (0.76) MIN	.099 (2.51) MAX .077 (1.96) MIN AFTER FOLDBACK	.140 (3.56) MAX .094 (2.39) MIN AFTER BUILD-UP	FOLDBACK	M17/093-RG178		
398	ORANGE	WHITE	GRAY	24 AND 26 AWG TWISTED PAIR				N/A	TWISTED PAIR 24 AND 26 AWG PER MIL-DTL- 55021		
555	GREEN	GREEN	GREEN	.026 (0.66) MAX .011 (0.28) MIN	.081 (2.06) MAX .055 (1.40) MIN	.099 (2.51) MAX .077 (1.96) MIN	.140 (3.56) MAX .094 (2.39) MIN	STRAIGHT	M17/094-RG179		

- 1/ A. CONDUCTOR DIAMETER.
2/ B. DIELECTRIC DIAMETER.
3/ C. SHIELD DIAMETER.
4/ D. JACKET DIAMETER.

TABLE 4 - TOOLS

BIN CODE	STANDARD FIXTURE		REPAIR FIXTURE	HEATING TOOL	INSTALLING AND REMOVAL TOOL
	BASIC FIXTURE	ADAPTER			
396, 397, 398	AD-1319 RAYCHEM 1/	AT-1319-19 RAYCHEM 1/	AD-1494 RAYCHEM 1/	2/	M81969/14-04
555	AD-1319 RAYCHEM 1/	AT-1319-25 RAYCHEM 1/	AD-1569 RAYCHEM 1/	2/	M81969/14-04

- 1/ OR EQUIVALENT.
2/ HEAT GUN USED FOR INSTALLATION OF THE CONTACT IS APPROVED BY THE PROCURING ACTIVITY BASED ON THE APPLICATION REQUIREMENTS. HEAT GUN TYPES MAY INCLUDE THE HT-900B, MCH-100 OR EQUIVALENT.

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TABLE 5 - PART NUMBERS

PART NUMBER	BIN CODE	SUPERSEDES
M39029/73-396	396	M39029/73-12A
M39029/73-397	397	M39029/73-12C
M39029/73-398	398	M39029/73-12B
M39029/73-555	555	NONE

TABLE 6 - CONTACT ENGAGEMENT AND SEPARATION FORCES

TEST PIN DIAMETER (INCH)	MINIMUM SEPARATION FORCE (OUNCES)		MAXIMUM ENGAGEMENT FORCE (OUNCES)		MAXIMUM AVERAGE ENGAGEMENT FORCE
	INITIAL	AFTER CONDITIONING	INITIAL	AFTER CONDITIONING	
.0950 (2.41) + .0002 (0.01) - .0000 (0.00)	N/A	N/A	30	36	N/A
.0930 (2.36) + .0000 (0.00) - .0002 (0.01)	3.0	2.5	N/A	N/A	N/A

TABLE 7 - CONTACT RESISTANCE

BIN CODE	CABLE ACCOMMODATED	TEST CURRENT (AMPS) 1/	MAXIMUM VOLTAGE DROP (MILLIVOLTS)					
			25° +3°, -0 °C		25° +3°, 0 °C 2/		125° +3°, -0 °C	
			INNER	OUTER	INNER	OUTER	INNER	OUTER
396	M17/095-RG180	1	120	13	144	16	204	22
397	M17/093-RG178 M17/094-RG179	1	120	13	144	16	204	22
398	24 AWG TWISTED PAIR	3	57	49	68	59	97	83
	26 AWG TWISTED PAIR	2	63	51	76	61	107	87
555	M17/094-RG179	1	120	13	144	16	204	22

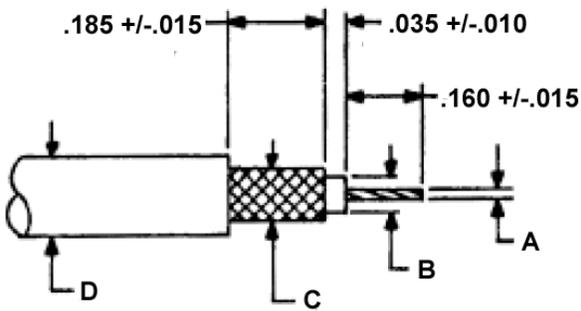
1/ AMMETER ACCURACY OF 2%.

2/ AFTER CONDITIONING.

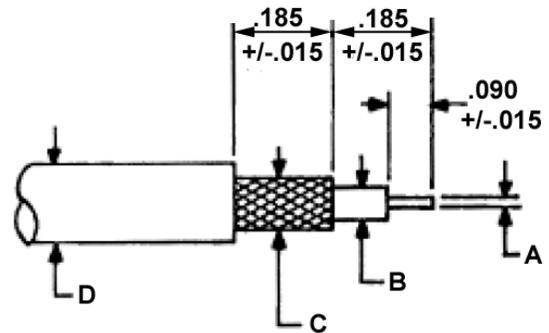
TABLE 8 - CONDUCTOR RETENTION

BIN CODE	CABLES ACCOMMODATED	MINIMUM TENSILE LOAD (POUNDS) 1/	
		INNER CONTACT	OUTER CONTACT
396	M17/095-RG180	4.5	20.0
397	M17/093-RG178	5.2	6.5
	M17/094-RG179	5.2	16.0
398	24 AWG TWISTED PAIR	15.0	15.0
	26 AWG TWISTED PAIR	10.5	10.5
555	M17/094-RG179	5.2	16.0

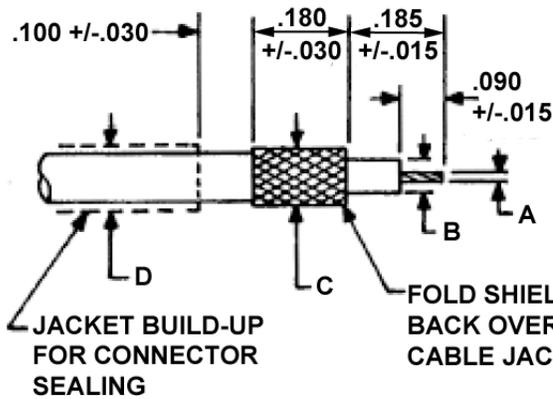
1/ BREAKAGE OF CABLE OUTSIDE OF SOLDER JOINT SHALL BE CONSIDERED PASSING.



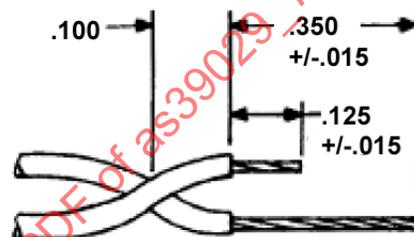
CABLE PREPARATION FOR BIN CODE 396



CABLE PREPARATION FOR BIN CODES 397 AND 555 STRAIGHT SHIELD



CABLE PREPARATION FOR BIN CODE 397 FOLDBACK SHIELD



CABLE PREPARATION FOR BIN CODE 398

FIGURE 2 - CABLE PREPARATION

TABLE 9 - FIGURE 2 METRIC EQUIVALENTS

INCH	MILLIMETER	INCH	MILLIMETERS	INCH	MILLIMETERS
.010	0.25	.090	2.29	.180	4.57
.015	0.38	.100	2.54	.185	4.70
.030	0.76	.125	3.18	.350	8.89
.035	0.89	.160	4.06		



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