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SAE AS34591

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FEDERAL SUPPLY CLASS  
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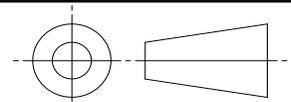
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THIRD ANGLE PROJECTION



CUSTODIAN: AE-8C1

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**

CONNECTOR, PLUG, ELECTRICAL, SELF-LOCKING, COUPLING NUT, REAR RELEASE, CRIMP CONTACT, AN TYPE

**SAE AS34591**  
SHEET 1 OF 6

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ISSUED 1998-01 REAFFIRMED 2003-11 STABILIZED 2012-01

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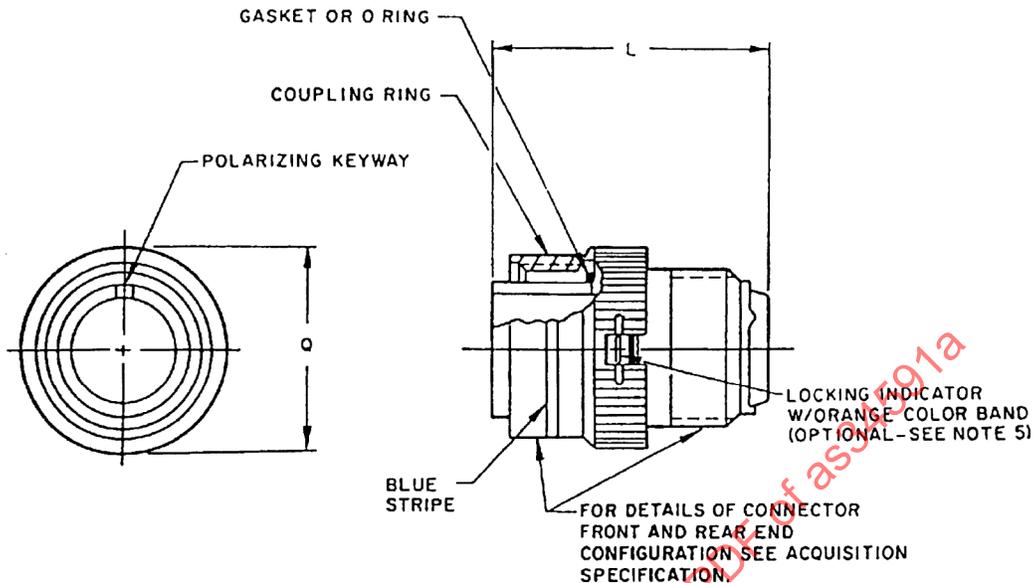
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THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION: MIL-C-5015.



**CLASSES K, L, AND W ENVIRONMENT RESISTANT**

CLASS K CONNECTORS WITH ELECTROLESS NICKEL FINISH INACTIVE FOR NEW DESIGN AFTER 11 JUNE 1974. USE CLASS KT OR KS.

**NOTES**

1. DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES DECIMALS  $\pm 0.16$ .
2. DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH ANSI-Y14 5M-82
3. MIL-C-5015 CRIMP CONTACT FRONT AND REAR RELEASE CONNECTORS AND SOLDER CONTACT CONNECTORS ARE INTERMATEABLE.
4. UNLESS OTHERWISE SHOWN, CORRESPONDING FEATURES OF PIN AND SOCKET CONTACT CONNECTORS ARE IDENTICAL
5. A LOCKING INDICATOR IS PERMITTED AS AN OPTIONAL DESIGN FEATURE. AN EXPLANATION OF THE OPERATION AND FUNCTION OF THE LOCKING FEATURE SHALL BE PROVIDED BY THE MANUFACTURER
6. EXTRACTION TOOL M81969/14-03 SHALL BE USED TO REMOVE SIZE 16 CONTACTS THAT ARE CRIMPED TO MIL-W-25038 OR MIL-C-27500 FIRE ZONE WIRE

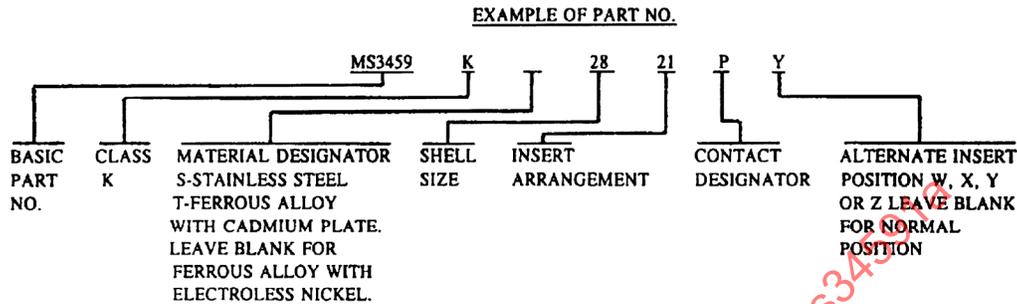
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	CONNECTOR, PLUG, ELECTRICAL, SELF-LOCKING, COUPLING NUT, REAR RELEASE, CRIMP CONTACT, AN TYPE		

TABLE I. CLASSES K, L AND W CONNECTOR DIMENSIONS.

SIZE	L MAX		Q MAX
	SIZE 16 & 12 CONTACTS	SIZE 8, 4 & 0 CONTACTS	
8S	2.031		93
10S			1.088
10SL			1.088
12S			1.213
12			1.213
14S			1.358
14			1.358
16S	2.031	2.500	1.463
16	2.125		1.463
18			1.588
20			1.713
22			1.788
24			1.963
28			2.213
32			2.463
36			2.713
40			2.963

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7. FOR INSERT ARRANGEMENTS SEE MIL-STD-1651.
8. MANUFACTURERS MAY CONTINUE TO SUPPLY MS3459C CONNECTORS FOR SIX MONTHS FROM THE DATE OF THIS REVISION, OR UNTIL THEY EXHAUST THEIR INVENTORIES, WHICHEVER COMES FIRST.
9. FOR DESIGN PURPOSES, THIS DOCUMENT TAKES PRECEDENCE OVER THE SPECIFICATIONS AND STANDARDS REFERENCED HEREIN REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID



#### REQUIREMENTS

1. QUALIFICATION - TWO CONNECTORS EACH, CONSISTING OF A QUALIFIED CLASS K WALL MOUNTING RECEPTACLE WITH PIN CONTACTS, AND A SELF-LOCKING MATING PLUG CONFORMING TO THIS DOCUMENT COMPRISE THE TEST SAMPLE. THEY SHALL BE OF A MEDIUM SHELL SIZE (18 TO 28) WITH MAXIMUM CONTACT DENSITY, AND SHALL BE FULLY WIRED WITH WIRE CONFORMING TO MIL-W-25038/1. QUALIFICATION TESTING FOR THE SELF-LOCKING PLUS SHALL CONSIST OF THE FOLLOWING TESTS, PERFORMED IN THE SEQUENCE LISTED.
  - A. VISUAL AND MECHANICAL EXAMINATION OF PRODUCT
  - B. COUPLING FORCES - SELF-LOCKING TYPE CONNECTORS SHALL MEET THE COUPLING AND UNCOUPLING FORCE REQUIREMENTS SPECIFIED IN TABLE II, BEFORE AND AFTER ANY CONDITIONING TESTS.
  - C. ICE RESISTANCE - THE TWO FULLY MATED SELF-LOCKING CONNECTORS SHALL BE IMMERSSED IN TAP WATER FOR ONE MINUTE AND THEN PLACED IN AN AMBIENT TEMPERATURE OF  $-55 \pm 5^{\circ}\text{C}$  ( $-67^{\circ}\text{F}$ ) FOR ONE HOUR A MINIMUM OF 3 SUCH CYCLES SHALL BE PERFORMED UNTIL THE CONNECTOR SURFACES ARE COMPLETELY ICED OVER. IMMEDIATELY AFTER REMOVAL FROM THE LAST CYCLE AT THE LOW AMBIENT TEMPERATURE, THE FROZEN SELF-LOCKING CONNECTORS SHALL BE UNMATED USING CONNECTOR PLIERS OR STRAP WRENCH AND REMATED THE SELF-LOCKING CONNECTORS SHALL BE CAPABLE OF FUNCTIONING DURING AND AFTER THIS TEST AND THE UNMATING PROCESS SHALL NOT CAUSE DAMAGE TO THE LOCKING MECHANISM. IN ADDITION, THE CONNECTORS SHALL MEET THE COUPLING AND UNCOUPLING FORCES OF TABLE II.

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