

REV.
A

AS39029/32

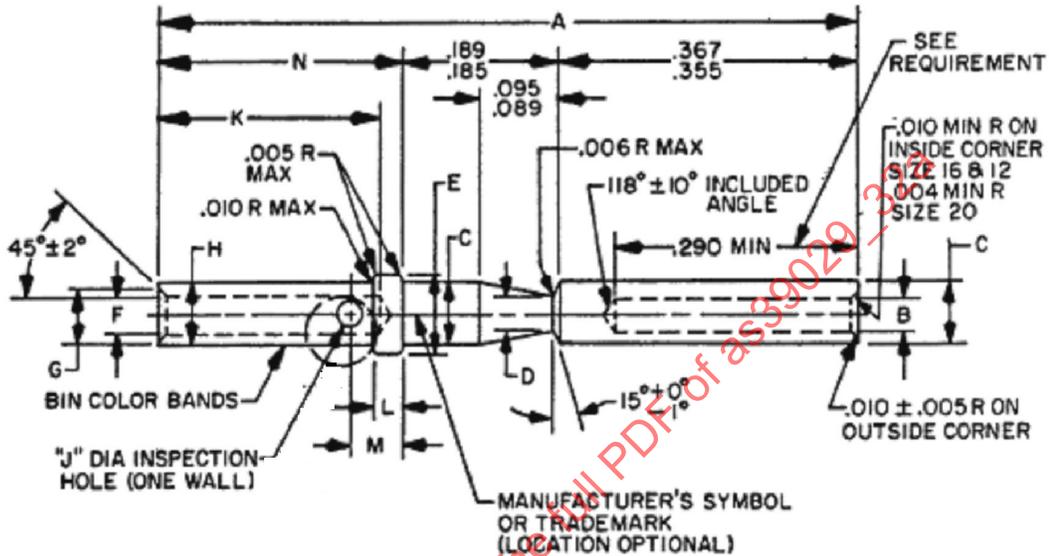
RATIONALE

FEDERAL SUPPLY CLASS
5999

REVISE TO INCLUDE COMMENTS RECEIVED BY THE GOVERNMENT AND INDUSTRY SINCE 1988, INCORPORATES VARIOUS AMENDMENTS, REMOVE GOVERNMENT JARGON AS A RESULT OF THE WORD-FOR-WORD TRANSFERENCE OF AS39029 TO SAE, UPDATE SPECIFICATION REFERENCES, ALIGN SPECIFICATIONS WITH SAE GUIDELINES AS NEEDED, AND REVIEW SPECIFICATIONS FOR KNOWN TECHNICAL PROBLEMS.

NOTICE

THE REQUIREMENTS FOR PROCURING THE CONTACTS DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE LATEST ISSUE OF: SAE AS39029.



SOCKET INTERFACE DESIGN FOR ALL BIN CODES
WIRE BARREL DESIGN FOR BIN CODES 247 THRU 258 (SIZES 16 AND 12 CONTACTS)

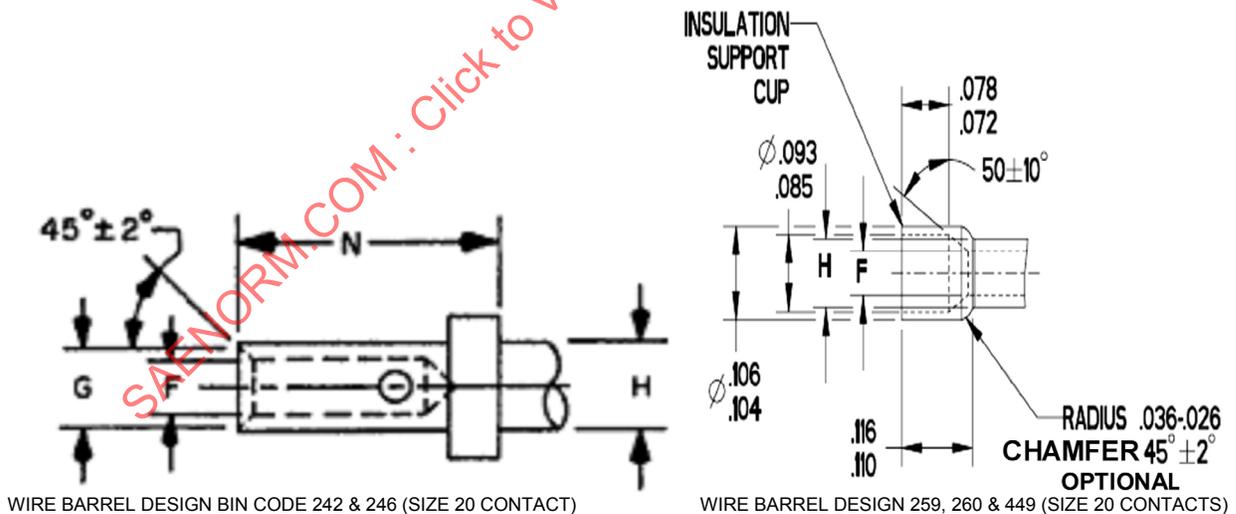
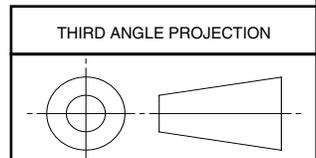


FIGURE 1- AS39029/32 SOCKET CONTACT



CUSTODIAN: SAE AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029



AEROSPACE STANDARD

(R) CONTACTS, ELECTRICAL CONNECTOR, SOCKET, CRIMP REMOVABLE (FOR MIL-DTL-26482 SERIES 1, MIL-DTL-26500 AND MIL-DTL-26518 CONNECTORS)

AS39029/32
SHEET 1 OF 5

REV.
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ISSUED 2001-03 REVISED 2007-11

TABLE 1 - CONTACT DIMENSIONS

| BIN CODE | A REF | B MIN DIA | C DIA | D DIA | E DIA | F DIA | G DIA | H DIA | J DIA | K MIN | L | M | N |
|--------------------------------|-----------------|-----------|--------------|--------------|----------------------------------|--------------|--------------|--------------|--------------|-------|--------------|--------------|--------------|
| 242, 243, 244, 245, & 246 | .854 (21.69) | .041 5 | .078 .076 | .052 .048 | .103 (2.62) .100 (2.54) | .050 .048 | .064 .060 | .078 .076 | .032 .026 | .250 | .033 .029 | .053 .068 | .308 .304 |
| 247, 248, 249, 250, 251, & 252 | .844 (21.44) | .064 | .113 .110 | .087 .083 | .148 (3.76) .144 (3.66) | .068 .066 | .092 .080 | .105 .101 | .042 .036 | .236 | .048 .044 | .068 .085 | .298 .294 |
| 253, 254, 255, 256, 257, & 258 | .844 (21.44) | .095 5 | .161 .158 | .135 .131 | .202 (5.13) .198 (5.03) | .102 .098 | .135 .115 | .153 .147 | .042 .036 | .236 | .048 .044 | .068 .085 | .298 .294 |
| 259, 260, & 449 | .854 (21.69) | .041 5 | .078 .076 | .052 .048 | .103 (2.62) .100 (2.54) | .050 .048 | N/A | .078 .076 | .032 .026 | .267 | .033 .029 | .053 .068 | .308 .304 |

TABLE 2 - MARKING AND DESIGN CHARACTERISTICS

| BIN CODES | COLOR BANDS | | | MATING END SIZE | WIRE BARREL SIZE | TYPE | CLASS |
|-----------|-------------|--------|--------|-----------------|------------------|----------------------------|-------|
| | 1ST | 2ND | 3RD | | | | |
| 242 | RED | YELLOW | RED | 20 | 20 | A | A |
| 243 | RED | YELLOW | ORANGE | 20 | 20 | C-IRON | A |
| 244 | RED | YELLOW | YELLOW | 20 | 20 | C-NICKEL-CHROMIUM | A |
| 245 | RED | YELLOW | GREEN | 20 | 20 | C- NICKEL-ALUMINUM/SILICON | A |
| 246 | RED | YELLOW | BLUE | 20 | 20 | C- COPPER-NICKEL ALLOY | A |
| 247 | RED | YELLOW | VIOLET | 16 | 16 | A | A |
| 248 | RED | YELLOW | GRAY | 16 | 16 | A | B |
| 249 | RED | YELLOW | WHITE | 16 | 16 | C-IRON | A |
| 250 | RED | GREEN | BLACK | 16 | 16 | C-NICKEL-CHROMIUM | A |
| 251 | RED | GREEN | BROWN | 16 | 16 | C- NICKEL-ALUMINUM/SILICON | A |
| 252 | RED | GREEN | RED | 16 | 16 | C- COPPER-NICKEL ALLOY | A |
| 253 | RED | GREEN | ORANGE | 12 | 12 | A | A |
| 254 | RED | GREEN | YELLOW | 12 | 12 | A | B |
| 255 | RED | GREEN | GREEN | 12 | 12 | C-IRON | A |
| 256 | RED | GREEN | BLUE | 12 | 12 | C-NICKEL-CHROMIUM | A |
| 257 | RED | GREEN | VIOLET | 12 | 12 | C- NICKEL-ALUMINUM/SILICON | A |
| 258 | RED | GREEN | GRAY | 12 | 12 | C- COPPER-NICKEL ALLOY | A |
| 259 | RED | GREEN | WHITE | 20 | 20 | A | A |
| 260 | RED | BLUE | BLACK | 20 | 20 | A | B |
| 449 | YELLOW | YELLOW | WHITE | 20 | 20 | A | B |

TABLE 3 - TOOL REQUIREMENTS

| BIN CODE | BASIC CRIMPING TOOL | POSITIONER | INSTALLING TOOL | REMOVAL TOOL | |
|--------------------------------|---|---|---------------------------------|---------------|-----------------|
| | | | | WIRED CONTACT | UNWIRED CONTACT |
| 242, 243, 244, 245, & 246 | M22520/1-01 OR M22520/2-01 OR M22520/7-01 | M22520/1-02 RED OR M22520/2-02 OR M22520/7-02 | M81969/14-10 OR M81969/17-03 | M81969/19-06 | M81969/30-05 |
| 247, 248, 249, 250, 251, & 252 | M22520/1-01 OR M22520/7-01 | M22520/1-02 BLUE OR M22520/7-03 | M81969/14-03 OR M81969/17-04 | M81969/19-01 | M81969/30-06 |
| 253, 254, 255, 256, 257, & 258 | M22520/1-01 | M22520/1-02 YELLOW | M81969/14-04 OR M81969/17-05 | M81969/19-02 | M81969/30-07 |
| 259, 260, & 449 | M22520/1-01 OR M22520/2-01 OR M22520/7-01 | M22520/1-02 RED OR M22520/2-02 OR M22520/7-02 | M81969/14-10 OR M81969/17-03 | M81969/19-06 | M81969/30-05 |

TABLE 4 - PART NUMBERS

| AS39029 PART NUMBER | BIN CODE | SUPERSEDING PART NUMBER(S) | AS39029 PART NUMBER | BIN CODE | SUPERSEDING PART NUMBER(S) |
|---------------------|----------|----------------------------|---------------------|----------|-----------------------------------|
| M39029/32-242 | 242 | MS3193-20-20A | M39029/32-252 | 252 | MS3193-16-16C3 |
| M39029/32-243 | 243 | MS3193-20-20C4 | M39029/32-253 | 253 | MS3193-12-12A |
| M39029/32-244 | 244 | MS3193-20-20C1 | M39029/32-254 | 254 | MS24255-12S |
| M39029/32-245 | 245 | MS3193-20-20C2 | M39029/32-255 | 255 | MS3193-12-12C4 |
| M39029/32-246 | 246 | MS3193-20-20C3 | M39029/32-256 | 256 | MS3193-12-12C1 |
| M39029/32-247 | 247 | MS3193-16-16A | M39029/32-257 | 257 | MS3193-12-12C2 |
| M39029/32-248 | 248 | MS24255-16S | M39029/32-258 | 258 | MS3193-12-12C3 |
| M39029/32-249 | 249 | MS3193-16-16C4 | M39029/32-259 | 259 | MS3193A20-20A |
| M39029/32-250 | 250 | MS3193-16-16C1 | M39029/32-260 | 260 | MS24255-20S |
| M39029/32-251 | 251 | MS3193-16-16C2 | M39029/32-449 | 449 | MS39029/32-20-20 M39029/32-261 |

REQUIREMENTS: REQUIREMENTS SHALL CONSIST HEREIN AND AS39029.

1. DESIGN:

CONTACT SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1, TABLES 1 AND 2. DIMENSIONS ARE IN INCHES AND SHOWN AFTER PLATING. UNLESS OTHERWISE SPECIFIED, SPHERICAL END DIMENSIONS SHALL CONFORM TO AS39029.

2. TOOLS:

TOOLS REQUIRED FOR CRIMPING CONTACTS TO WIRE/CABLE AND THE INSTALLING/REMOVAL FROM THE CONNECTOR SHALL BE IN ACCORDANCE WITH TABLE 3.

3. PART NUMBERS:

CONTACT PART NUMBERS SHALL BE IN ACCORDANCE WITH TABLE 4. SUPERSEDING PART NUMBERS ARE AS SPECIFIED.

4. MATERIALS:

MATERIALS SHALL BE IN ACCORDANCE WITH AS39029.

| | | | |
|---|--|-----------------------------------|-------------------------|
|  An SAE International Group | AEROSPACE STANDARD | AS39029/32 SHEET 3 OF 5 | REV. A |
| | (R) CONTACTS, ELECTRICAL CONNECTOR, SOCKET, CRIMP REMOVABLE (FOR MIL-DTL-26482 SERIES 1, MIL-DTL-26500 AND MIL-DTL-26518 CONNECTORS) | | |

5. MECHANICAL:

MECHANICAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029.

AUXILIARY PRESSURE MEMBERS OF CANTILEVER TYPE SHALL ARE NOT PERMISSIBLE. CANTILEVER PRESSURE MEMBERS THAT ARE AN INTEGRAL PART OF THE CONTACT BODY ARE PERMISSIBLE.

6. ELECTRICAL:

ELECTRICAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029.

7. ENVIRONMENTAL:

ENVIRONMENTAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029.

CLASS A CONTACTS SHALL BE VIBRATION TESTED IN ACCORDANCE WITH EIA364.28, TEST CONDITION III.

CLASS A CONTACT SHALL BE SHOCK TESTED IN ACCORDANCE WITH EIA364.27, TEST CONDITION A

CLASS B CONTACTS SHALL BE VIBRATION TESTED IN ACCORDANCE WITH EIA364.28, TEST CONDITION IV.

CLASS B CONTACTS SHALL BE SHOCK TESTED IN ACCORDANCE WITH EIA364.27, TEST CONDITION C.

8. APPLICATION NOTES:

THE AS39029/32 SOCKET CONTACT MATES DIRECTLY INTO AN AS39029/31 PIN AS SHOWN TABLE 5.

TABLE 5 - CONTACT MATING PART NUMBERS

| AS39029/32 BIN CODE | MATING AS39029/31 BIN CODE | AS39029/32 BIN CODE | MATING AS39029/31 BIN CODE |
|------------------------|----------------------------------|------------------------|----------------------------------|
| 242 | 223 | 252 | 233 |
| 243 | 224 | 253 | 234 |
| 244 | 225 | 254 | 235 |
| 245 | 226 | 255 | 236 |
| 246 | 227 | 256 | 237 |
| 247 | 228 | 257 | 238 |
| 248 | 229 | 258 | 239 |
| 249 | 230 | 259 | 240 |
| 250 | 231 | 260 | 448 |
| 251 | 232 | 449 | 627 |

ALL DIMENSIONS PROVIDED IN PARENTHESES ARE METRIC EQUIVALENTS AND ARE GIVEN FOR GENERAL INFORMATION ONLY (SEE AS39029 SECTION 6). DIMENSIONS ARE IN INCHES AND SHOWN AFTER PLATING. METRIC EQUIVALENT, TO THE NEAREST 0.01 MM, MAY BE CALCULATED BASED ON 1 INCH EQUALS 25.4 MM (SEE AS39029 SECTION 6 FOR MORE DETAILS).

INACTIVE FOR NEW DESIGN FOR MILITARY APPLICATIONS.

CLASS A CONTACTS ARE USED IN MIL-DTL-26482 SERIES 1 CONNECTORS.

CLASS B CONTACTS ARE USED IN MIL-DTL-26500 CONNECTORS.