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REV.
D

AS39029/63

FEDERAL SUPPLY CLASS
5935

RATIONALE

REVISION IS REQUIRED TO CHANGE THE NON-MAGNETIC BIN CODE PART NUMBER FROM 656 TO 928 TO ALLOW THE USE OF AVAILABLE NON-OUTGASSING INKS FOR THE COLOR BANDS AND TO CHANGE TABLE 1 FOOTNOTE 1 TO ALIGN WITH RECOMMENDED WORDING FOR THE AS39029//58 NON-MAGNETIC PART NUMBER FOOTNOTE.

NOTICE

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

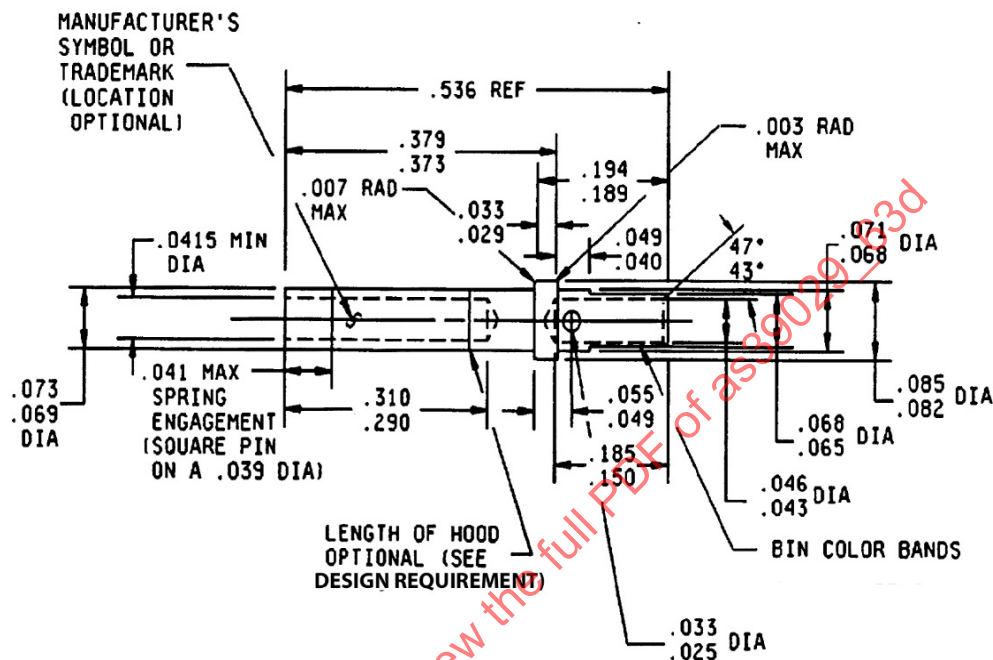
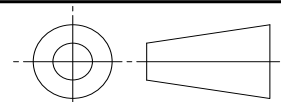


FIGURE 1 - DIMENSIONS AND CONFIGURATION

| INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
|--------|------|--------|-------|--------|------|--------|-------|
| .003 | 0.08 | .0415 | 1.054 | .071 | 1.80 | .290 | 7.37 |
| .007 | 0.18 | .043 | 1.09 | .073 | 1.85 | .310 | 7.87 |
| .025 | 0.64 | .046 | 1.17 | .082 | 2.08 | .373 | 9.47 |
| .029 | 0.74 | .049 | 1.24 | .085 | 2.16 | .379 | 9.63 |
| .033 | 0.84 | .055 | 1.40 | .150 | 3.81 | .536 | 13.61 |
| .039 | 0.99 | .065 | 1.65 | .185 | 4.70 | | |
| .040 | 1.02 | .068 | 1.73 | .189 | 4.80 | | |
| .041 | 1.04 | .069 | 1.75 | .194 | 4.93 | | |

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on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS39029/63D>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029



AEROSPACE STANDARD

(R) CONTACTS, ELECTRICAL CONNECTOR,
SOCKET, CRIMP REMOVABLE
(FOR MIL-DTL-24308 CONNECTORS)

AS39029/63
SHEET 1 OF 4

REV.
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TABLE 1 - DESIGN CHARACTERISTICS

| BIN CODE | COLOR BANDS | | | MATING END SIZE | WIRE BARREL SIZE | TYPE | CLASS |
|----------|-----------------|-----------------|-----------------|--------------------|---------------------|------|-------|
| | 1 ST | 2 ND | 3 RD | | | | |
| 368 | ORANGE | BLUE | GRAY | 20 | 20 | A | A |
| 928 1/ | BLUE | GREEN | BLUE | 20 | 20 | A | A |

1/ CONTACT IS INTENDED FOR USE WITH MIL-DTL-24308 CLASS M AND N NON-MAGNETIC CONNECTORS ONLY. THE FINISH SHALL BE GOLD PLATING IN ACCORDANCE WITH ASTM B488, TYPE II, CODE C, CLASS 1.27 OVER A SUITABLE UNDERPLATE. SILVER AND/OR NICKEL SHALL NOT BE USED AS AN UNDERPLATE.

TABLE 2 - TOOLS

| BIN CODE | BASIC CRIMPING | POSITIONER | INSTALLING AND REMOVAL TOOLS |
|----------|----------------|-------------|-----------------------------------|
| 368, 928 | M22520/2-01 | M22520/2-08 | M81969/39-01 OR M81969/1-02 |

TABLE 3 - PART NUMBER

| BIN CODE | PART NUMBER | SUPERSEDED PART NUMBER |
|----------|---------------|---------------------------|
| 368 | M39029/63-368 | M24308/10-1 |
| 928 | M39029/63-928 | ----- |

REQUIREMENTS: ALL REQUIREMENTS SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39029.

1. DESIGN:

CONTACTS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1 AND TABLE 1. DIMENSIONS ARE IN INCHES. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY. DIMENSIONS SHOWN APPLY AFTER PLATING. MACHINED SURFACES TO HAVE 63 (RA) OR BETTER PER ASME B46.1 UNLESS OTHERWISE SPECIFIED. REMOVE ALL BURRS AND SHARP EDGES .003 INCH (0.08 MM) MAXIMUM UNLESS OTHERWISE SPECIFIED. ALL DIAMETERS TO BE CONCENTRIC WITH EACH OTHER WITHIN .004 INCH (0.10 MM) TIR. THE MECHANICAL PRESSURE MEMBER SHALL BE SHROUDED. HOODS, IF USED, SHALL CONFORM TO THE REQUIREMENTS SPECIFIED HEREIN. MAXIMUM ALLOWABLE GAP BETWEEN HOOD AND BODY OF CONTACT IS .010 INCH (0.254 MM). AN ALTERNATE DESIGN OF THE WIRE BARREL LEAD-IN ANGLE SHALL BE AS FOLLOWS: SIZE 20 - BLEND RADIUS .015 INCHES ± .005 INCHES.

2. TOOLS:

TOOLS REQUIRED FOR CRIMPING CONTACTS TO THE WIRE/CABLE AND THE INSTALLING/REMOVAL FROM THE CONNECTOR SHALL BE IN ACCORDANCE WITH TABLE 2.

3. PART NUMBERS:

CONTACT PART NUMBERS SHALL BE IN ACCORDANCE WITH TABLE 3. SUPERSEDED PART NUMBERS ARE AS SPECIFIED.

4. MATERIALS:

MATERIALS SHALL BE IN ACCORDANCE WITH AS39029.

OUTGASSING REQUIREMENT:

PART NUMBER M39029/63-928 SHALL MEET THE OUTGASSING REQUIREMENTS OF ASTM E595. THE REQUIREMENT MAY BE VERIFIED BY CERTIFICATION. CONTACT THE QUALIFYING ACTIVITY FOR DETAILS CONCERNING THE CERTIFICATION PROCESS.

| | | | |
|---|--|-----------------------------------|-------------------------|
|  | AEROSPACE STANDARD | AS39029/63 SHEET 2 OF 4 | REV. D |
| | (R) CONTACTS, ELECTRICAL CONNECTOR, SOCKET, CRIMP REMOVABLE (FOR MIL-DTL-24308 CONNECTORS) | | |

RESIDUAL MAGNETISM REQUIREMENT:

PART NUMBER M39029/63-928 SHALL ALSO MEET THE RESIDUAL MAGNETISM. CONTACT HOODS MAY BE OF AN ALTERNATE MATERIAL TO MEET THE RESIDUAL MAGNETISM REQUIREMENT, HOWEVER THE CONTACTS MUST MEET ALL OTHER REQUIREMENTS OF AS39029 AND THIS DETAIL SHEET. WHEN TESTED WITH THE APPLICABLE MIL-DTL-24308 CONNECTOR, THE RESIDUAL MAGNETISM SHALL NOT EXCEED 200 GAMMA. THE FOLLOWING DETAILS SHALL APPLY:

ACCEPTABLE TEST METHOD.

CONNECTOR SHALL BE FULLY ASSEMBLED BEFORE TESTING. THE RESIDUAL MAGNETISM TEST SHALL BE PERFORMED IN A MAGNETICALLY QUIET AREA, I.E., WHERE MACHINES, ELECTRONIC EQUIPMENT, VEHICLES, AND PERSONNEL TRAFFIC ARE RESTRICTED. REFER TO THE TEST ARRANGEMENT OF FIGURE 2 BELOW AND PROCEED AS FOLLOWS:

- a. WARM UP THE MILLIAMMETER OR FLUX METER FOR A MINIMUM OF 15 MINUTES.
- b. MOUNT THE MAGNETOMETER PROBE IN A NON-MAGNETIC STAND IN A HORIZONTAL POSITION AT FULL CABLE LENGTH FROM THE MILLIAMMETER.
- c. WITH THE METER PRESET TO THE APPROPRIATE SCALE, ALIGN THE PROBE IN A MAGNETIC E-W DIRECTION OR ORIENT TO OBTAIN A ZERO READING ON THE METER.
- d. PASS THE CONNECTOR SPECIMEN THREE TIMES BETWEEN THE POLES OF A MAGNET WITH A FIELD STRENGTH OF 5000 GAUSS ± 5%. THE CONNECTOR SHALL NOT CONTACT THE POLE PIECES.
- e. IMMEDIATELY PLACE THE CONNECTOR TO WITHIN ONE-EIGHT (1/8) INCH OF THE PROBE TIP AND ORIENT THE SPECIMEN FOR A MAXIMUM MAGNETISM READING. THE MEASUREMENT UNIT SHALL BE IN GAMMA, WHERE ONE GAMMA IS EQUIVALENT TO 1 X 10⁻⁶ GAUSS.

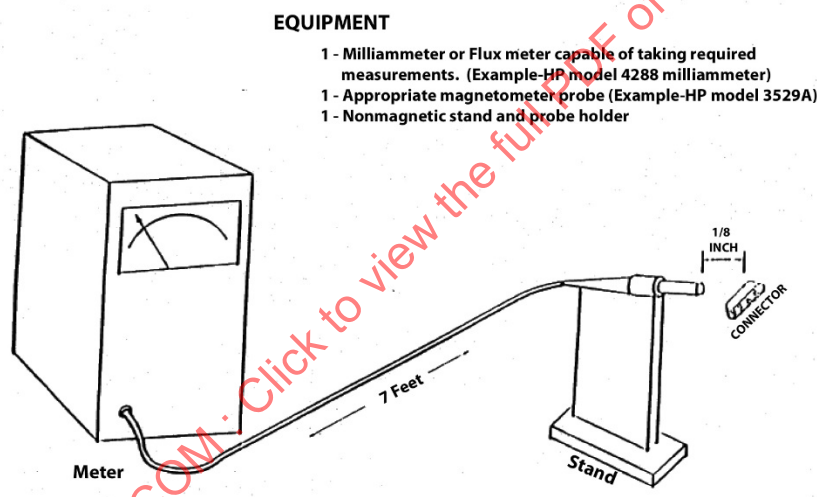


FIGURE 2 - RESIDUAL MAGNETISM TEST ARRANGEMENT

AN ALTERNATIVE RESIDUAL MAGNETISM TEST METHOD MAY BE USED WITH APPROVAL FROM THE QUALIFYING ACTIVITY.

5. MECHANICAL:

MECHANICAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029.

6. ELECTRICAL:

ELECTRICAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029.

7. ENVIRONMENTAL:

ENVIRONMENTAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029.

| | | | |
|---|--|-----------------------------------|-------------------------|
|  | AEROSPACE STANDARD | AS39029/63 SHEET 3 OF 4 | REV. D |
| | (R) CONTACTS, ELECTRICAL CONNECTOR, SOCKET, CRIMP REMOVABLE (FOR MIL-DTL-24308 CONNECTORS) | | |