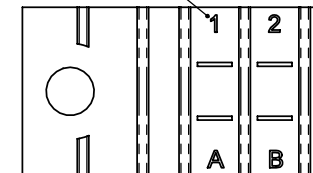


| REVISIONS |         |                                            |           |     |
|-----------|---------|--------------------------------------------|-----------|-----|
| REV.      | ECO. NO | DESCRIPTION                                | DATE      | BY  |
| A         | 1268    | INITIAL RELEASE                            | 2/3/07    | MV  |
| B         | 1390    | ADD CURRENT RATING TO F MATERIAL           | 6/18/2007 | MNH |
| C         | 1662    | UPDATE DRAWING FORMAT & PART NUMBER CODING | 4/23/2008 | VJ  |

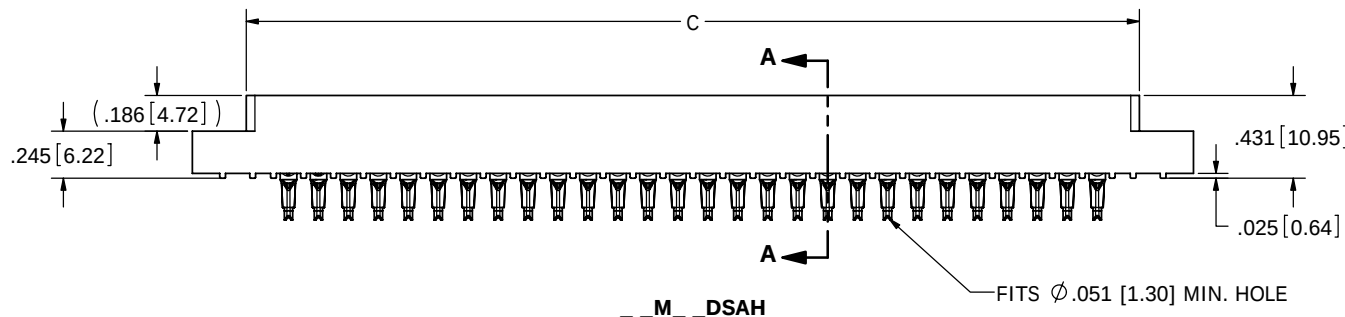
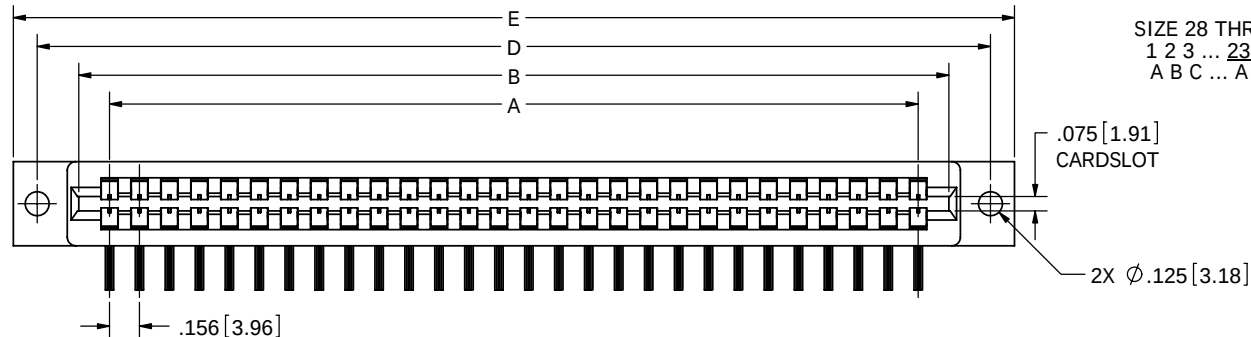
CONTACT MARKINGS  
(LETTERS G, I, O, & Q NOT USED)

SIZE 02 THRU 25:  
1 2 3 ... 23 24 ...  
A B C ... AA BB ...

SIZE 28 THRU 44:  
1 2 3 ... 23 24 ...  
A B C ... A B ...



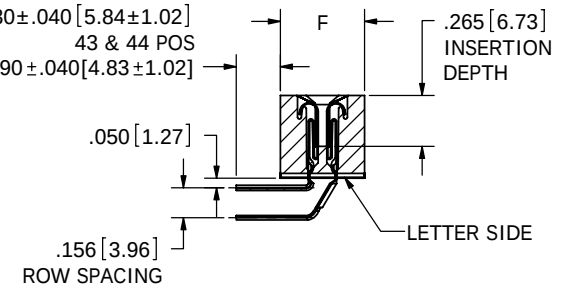
**CONTACT ID  
SCALE 3:1  
(PINS OMITTED FOR CLARITY)**



\_\_ M \_\_ DSAH

FITS Ø.051 [1.30] MIN. HOLE

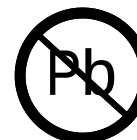
02 THRU 25 POS  
.270 ± .040 [6.86 ± 1.02]  
28 THRU 36 POS  
.230 ± .040 [5.84 ± 1.02]  
43 & 44 POS  
.190 ± .040 [4.83 ± 1.02]



**SECTION A-A**

# NOTES:

1. INSULATOR MATERIAL: SEE PART NUMBER CODING.
2. CONTACT MATERIAL: SEE PART NUMBER CODING.
3. PLATING: SEE PART NUMBER CODING.
4. TEMPERATURE: SEE PART NUMBER CODING.
5. PROCESSING TEMP: SEE PART NUMBER CODING.
6. UL FLAMMABILITY RATING: 94V-0.
7. VOLTAGE RATING: 1800 VDC MINIMUM AT SEA LEVEL.
8. CURRENT RATING: SEE PART NUMBER CODING.
9. VOLTAGE DROP: 30 MILLI VOLT AT RATED CURRENT.
10. INSULATION RESISTANCE: 5000 MEGA OHMS.
11. CONNECTOR IDENTIFICATION: THE PART SHALL BE MARKED WITH A PART NUMBER AND BARCODE.
12. BOARD THICKNESS ACCOMMODATED: .062 ± .008 [1.57 ± 0.20].
13. BOARD INSERTION FORCE: 16 OZ MAX PER CONTACT PAIR WHEN USING A .062 [1.57] TEST BLADE.  
INTERNAL INSPECTION TO BE PER SULLIN'S WORK INSTRUCTION W17.3-01.
14. BOARD WITHDRAWAL FORCE: 1 OUNCE MINIMUM PER CONTACT PAIR USING .062 [1.57] PCB.

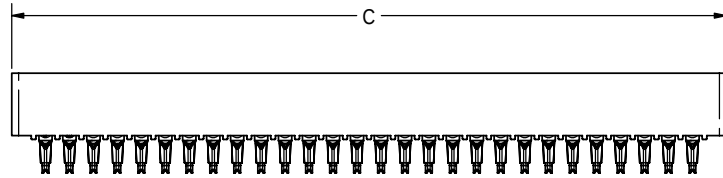
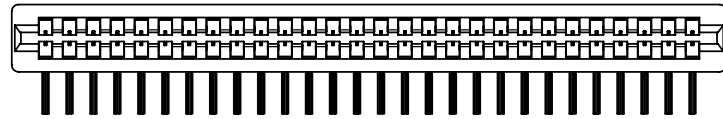


RoHS COMPLIANT

## CUSTOMER COPY

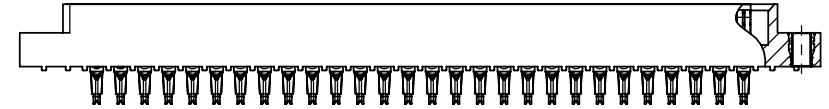
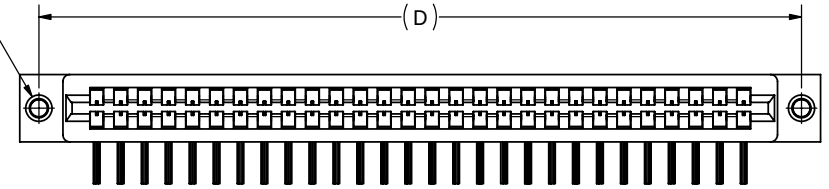
|                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                 |              |                                                                                       |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------|-------------|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN INCHES[MM]<br>TOLERANCES:<br>ANGULAR: ± 30°<br>.XX ± .02 [508]<br>.XXX ± .005 [127]<br>XXXX ± .0005 [0127]<br>SURFACE FINISH: 63 Ra<br>REMOVE ALL BURRS AND SHARP EDGES .010 MAX<br><br>INTERPRET DIMENSIONS AND GEOMETRIC<br>TOLERANCING<br>PER: ANSI Y14.5M-1994 | DATE                                                                                                                                                                                                                                                            | NAME         |  |             |
|                                                                                                                                                                                                                                                                                                                     | DRAWN                                                                                                                                                                                                                                                           | 2/3/2007     |                                                                                       | MV          |
|                                                                                                                                                                                                                                                                                                                     | THE INFORMATION HEREIN CONTAINS<br>PROPRIETARY INFORMATION OF<br>SULLINS ELECTRONICS AND IS NOT<br>TO BE REPRODUCED, USED OR<br>DISCLOSED TO OTHERS FOR ANY<br>PURPOSE EXCEPT AS SPECIFICALLY<br>AUTHORIZED IN WRITING BY AN<br>OFFICER OF SULLINS ELECTRONICS. |              |                                                                                       | DESCRIPTION |
|                                                                                                                                                                                                                                                                                                                     | EDGECARD, .156 CC, RAB                                                                                                                                                                                                                                          |              |                                                                                       | PART NUMBER |
|                                                                                                                                                                                                                                                                                                                     | M DSA                                                                                                                                                                                                                                                           |              |                                                                                       |             |
|                                                                                                                                                                                                                                | SIZE                                                                                                                                                                                                                                                            | DWG. NO.     | REV                                                                                   |             |
|                                                                                                                                                                                                                                                                                                                     | C                                                                                                                                                                                                                                                               | C10890       | C                                                                                     |             |
|                                                                                                                                                                                                                                                                                                                     | SCALE: 2:1                                                                                                                                                                                                                                                      | SHEET 1 OF 3 |                                                                                       |             |

SCALE: 2:1 SHEET 1 OF 3



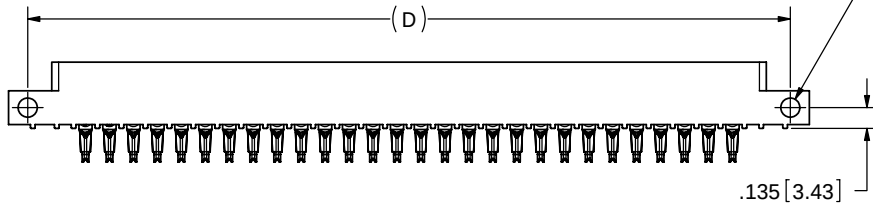
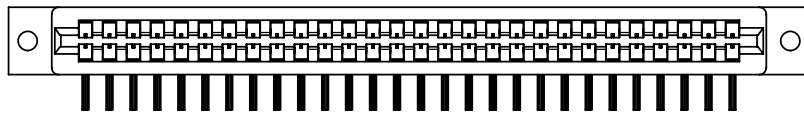
--M\_DSAN

2X #4-40  
THREADED  
INSERT

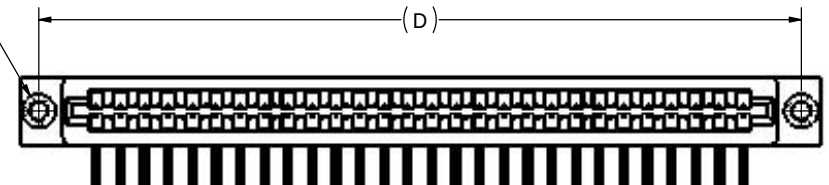


--M\_DSAI

2X FLOATING BOBBIN  
 $\phi .116 [2.95]$  CLEARANCE  
FOR # 4 SCREW

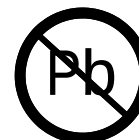


--M\_DSAS



--M\_DSAF

## CUSTOMER COPY



RoHS COMPLIANT

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES[MM]  
TOLERANCES:  
ANGULAR:  $\pm 30^\circ$   
.XX $\pm$  .02 [.508]  
.XXX $\pm$  .005 [.127]  
XXXX $\pm$  .0005 [.0127]  
SURFACE FINISH: 63 Ra  
REMOVE ALL BURRS AND SHARP EDGES .010 MAX  
INTERPRET DIMENSIONS AND GEOMETRIC  
TOLERANCING  
PER: ANSI Y14.5M-1994

| DRAWN                                                                                                                                                                                                                                                           | DATE     | NAME |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------|
|                                                                                                                                                                                                                                                                 | 2/3/2007 | MV   |
| THE INFORMATION HEREIN CONTAINS<br>PROPRIETARY INFORMATION OF<br>SULLINS ELECTRONICS AND IS NOT<br>TO BE REPRODUCED, USED OR<br>DISCLOSED TO OTHERS FOR ANY<br>PURPOSE EXCEPT AS SPECIFICALLY<br>AUTHORIZED IN WRITING BY AN<br>OFFICER OF SULLINS ELECTRONICS. |          |      |

|                                                                                       |            |
|---------------------------------------------------------------------------------------|------------|
|  |            |
| DESCRIPTION<br>EDGE CARD, .156 CC, RAB                                                |            |
| PART NUMBER<br>M_DSA                                                                  |            |
| SIZE<br>C                                                                             | REV<br>C   |
| DWG. NO.<br>C10890                                                                    | SCALE: 2:1 |

SHEET 2 OF 3

|             |                |                |        |               |        |               |        |               |        |               |        | Only applies for<br>PPS/ PEEK<br>insulators with<br>threaded inSArts<br>or floats |        |               |       |      |
|-------------|----------------|----------------|--------|---------------|--------|---------------|--------|---------------|--------|---------------|--------|-----------------------------------------------------------------------------------|--------|---------------|-------|------|
| PART NUMBER | NO. OF<br>POS. | A ± .008[0.20] |        | B ±.008[0.20] |        | C ±.015[0.38] |        | D ±.010[0.25] |        | E ±.020[0.51] |        | E ±.020[0.51]                                                                     |        | F ±.005[0.13] |       |      |
|             |                | IN             | MM     | IN            | MM     | IN            | MM     | IN            | MM     | IN            | MM     | IN                                                                                | MM     | IN            | MM    |      |
| M02DSAN     | 2              | 0.156          | 3.96   | 0.476         | 12.09  | 0.596         | 15.14  | "N" MOUNTING  |        |               |        |                                                                                   |        |               | 0.325 | 8.26 |
| M03DSAN     | 3              | 0.312          | 7.92   | 0.632         | 16.05  | 0.752         | 19.10  |               |        |               |        |                                                                                   |        |               |       |      |
| M06DSA      | 6              | 0.780          | 19.81  | 1.100         | 27.94  | 1.220         | 30.99  | 1.533         | 38.94  | 1.782         | 45.26  | 1.882                                                                             | 47.80  |               |       |      |
| M08DSA      | 8              | 1.092          | 27.74  | 1.412         | 35.86  | 1.532         | 38.91  | 1.845         | 46.86  | 2.094         | 53.19  | 2.194                                                                             | 55.73  |               |       |      |
| M10DSA      | 10             | 1.404          | 35.66  | 1.724         | 43.79  | 1.844         | 46.84  | 2.157         | 54.79  | 2.406         | 61.11  | 2.506                                                                             | 63.65  |               |       |      |
| M11DSA      | 11             | 1.560          | 39.62  | 1.880         | 47.75  | 2.000         | 50.80  | 2.313         | 58.75  | 2.562         | 65.07  | 2.662                                                                             | 67.61  |               |       |      |
| M12DSA      | 12             | 1.716          | 43.59  | 2.036         | 51.71  | 2.156         | 54.76  | 2.469         | 62.71  | 2.718         | 69.04  | 2.818                                                                             | 71.58  |               |       |      |
| M15DSA      | 15             | 2.184          | 55.47  | 2.504         | 63.60  | 2.624         | 66.65  | 2.937         | 74.60  | 3.186         | 80.92  | 3.286                                                                             | 83.46  |               |       |      |
| M18DSA      | 18             | 2.652          | 67.36  | 2.972         | 75.49  | 3.092         | 78.54  | 3.405         | 86.49  | 3.654         | 92.81  | 3.754                                                                             | 95.35  |               |       |      |
| M22DSA      | 22             | 3.276          | 83.21  | 3.596         | 91.34  | 3.716         | 94.39  | 4.029         | 102.34 | 4.278         | 108.66 | 4.378                                                                             | 111.20 |               |       |      |
| M24DSA      | 24             | 3.588          | 91.14  | 3.908         | 99.26  | 4.028         | 102.31 | 4.341         | 110.26 | 4.590         | 116.59 | 4.690                                                                             | 119.13 |               |       |      |
| M25DSA      | 25             | 3.744          | 95.10  | 4.064         | 103.23 | 4.184         | 106.27 | 4.497         | 114.22 | 4.746         | 120.55 | 4.846                                                                             | 123.09 |               |       |      |
| M28DSA      | 28             | 4.212          | 106.98 | 4.532         | 115.11 | 4.652         | 118.16 | 4.965         | 126.11 | 5.214         | 132.44 | 5.314                                                                             | 134.98 |               |       |      |
| M36DSA      | 36             | 5.460          | 138.68 | 5.780         | 146.81 | 5.900         | 149.86 | 6.213         | 157.81 | 6.462         | 164.13 | 6.562                                                                             | 166.67 | 0.438         | 11.13 |      |
| M43DSA      | 43             | 6.552          | 166.42 | 6.872         | 174.55 | 6.992         | 177.60 | 7.305         | 185.55 | 7.554         | 191.87 | 7.654                                                                             | 194.41 |               |       |      |
| M44DSA      | 44             | 6.708          | 170.38 | 7.028         | 178.51 | 7.148         | 181.56 | 7.461         | 189.51 | 7.710         | 195.83 | 7.810                                                                             | 198.37 | 0.500         | 12.70 |      |

PART NUMBER CODING

- M - DSA -

MATERIAL (INSULATOR/CONTACT)

- E = PBT/PHOSPHOR BRONZE**  
OPERATING TEMP: -65°C TO +125°C @ 3 AMPS PER CONTACT  
OPERATING TEMP: -65°C TO +21°C @ 5 AMPS PER CONTACT  
PROCESSING TEMP: 260°C FOR 10 SECS MAX
- R = PPS/PHOSPHOR BRONZE**  
OPERATING TEMP: -65°C TO +125°C  
PROCESSING TEMP: 260°C FOR 120 SECS MAX  
CURRENT RATING PER CONTACT: 5 AMPS
- G = PA9T/PHOSPHOR BRONZE**  
OPERATING TEMP: -65°C TO +125°C  
PROCESSING TEMP: 260°C FOR 120 SECS MAX  
CURRENT RATING PER CONTACT: 5 AMPS
- H = PBT/BERYLLIUM COPPER**  
OPERATING TEMP: -65°C TO +125°C @ 3 AMPS PER CONTACT  
OPERATING TEMP: -65°C TO +105°C @ 5 AMPS PER CONTACT  
PROCESSING TEMP: 260°C FOR 10 SECS MAX
- A = PPS/BERYLLIUM COPPER**  
OPERATING TEMP: -65°C TO +150°C  
PROCESSING TEMP: 260°C FOR 120 SECS MAX  
CURRENT RATING PER CONTACT: 5 AMPS
- J = PA9T/BERYLLIUM COPPER**  
OPERATING TEMP: -65°C TO +150°C  
PROCESSING TEMP: 260°C FOR 120 SECS MAX  
CURRENT RATING PER CONTACT: 5 AMPS
- F = PPS/SPINODAL (CONSULT FACTORY)**  
AVAILABLE IN OVERALL GOLD ONLY (S OR M PLATING CODE)  
OPERATING TEMP: -65°C TO +200°C  
PROCESSING TEMP: 260°C FOR 120 SECS MAX  
CURRENT RATING PER CONTACT: 3 AMPS
- C = PPS/BERYLLIUM COPPER (CONSULT FACTORY)**  
AVAILABLE IN OVERALL GOLD ONLY (S OR M PLATING CODE)  
OPERATING TEMP: -65°C TO +200°C @ 2 AMPS PER CONTACT  
OPERATING TEMP: -65°C TO +173°C @ 3 AMPS PER CONTACT  
PROCESSING TEMP: 260°C FOR 120 SECS MAX
- W = PEEK/BERYLLIUM COPPER (CONSULT FACTORY)**  
AVAILABLE IN OVERALL GOLD ONLY (S OR M PLATING CODE)  
OPERATING TEMP: -65°C TO +250°C  
CURRENT RATING PER CONTACT: 3 AMPS  
(CONSULT FACTORY FOR OTHER MATERIALS)

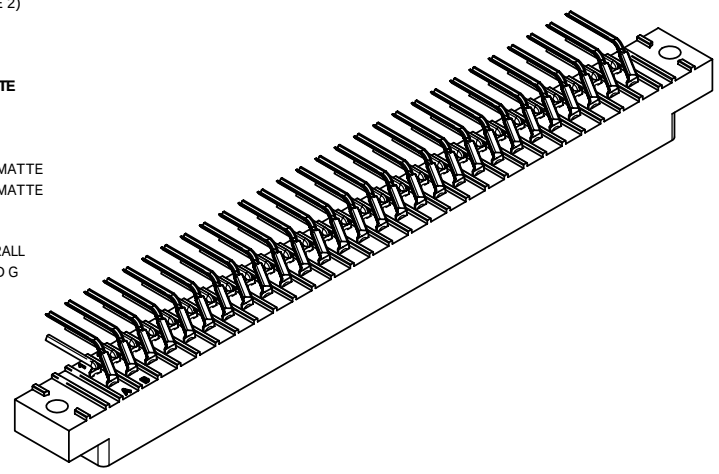
NUMBER OF POSITIONS  
(CONTACTS PER ROW)

PLATING

- ALL PLATINGS ARE LEAD FREE AND HAVE .000050" NICKEL UNDERPLATE
- CONTACT SURFACE
- G = .000010" GOLD  
Y = .000030" GOLD  
B = .000010" GOLD  
C = .000030" GOLD
- TERMINATION
- .000005" GOLD  
.000005" GOLD  
.000100" PURE TIN, MATTE  
.000100" PURE TIN, MATTE
- \* E = .000100" PURE TIN, MATTE, OVERALL  
S = .000010" GOLD OVERALL  
M = .000030" GOLD
- .000010" GOLD OVERALL
- \*\* OVERALL TIN ONLY AVAILABLE ON MATERIAL CODES E, R AND G

MOUNTING STYLE

- H = .125" DIA. CLEARANCE HOLES (PAGE 1)  
N = NO MOUNTING EARS (PAGE 2)  
S = .125" DIA. SIDE MOUNTING (PAGE 2)  
I = #4-40 THREADED INSERT (PAGE 2)  
F = FLOATING BOBBIN (PAGE 2)



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|                                                                                                                                                                                                                                                                 |  |                                       |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------|------------|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN INCHES[MM]<br>TOLERANCES:<br>ANGULAR: ± 30°<br>.XX±.02 [508]<br>.XXX±.005 [127]<br>XXXX±.0005 [0.127]<br>SURFACE FINISH: 63 Ra<br>REMOVE ALL BURRS AND SHARP EDGES .010 MAX                                    |  | DATE<br>2/3/2007                      | NAME<br>MV |
| THE INFORMATION HEREIN CONTAINS<br>PROPRIETARY INFORMATION OF<br>SULLINS ELECTRONICS AND IS NOT<br>TO BE REPRODUCED, USED OR<br>DISCLOSED TO OTHERS FOR ANY<br>PURPOSE EXCEPT AS SPECIFICALLY<br>AUTHORIZED IN WRITING BY AN<br>OFFICER OF SULLINS ELECTRONICS. |  | DESCRIPTION<br>EDGECARD, .156 CC, RAB |            |
| PART NUMBER<br>M DSA                                                                                                                                                                                                                                            |  | REV<br>C                              |            |
| SIZE<br>C                                                                                                                                                                                                                                                       |  | DWG. NO.<br>C10890                    |            |
| SCALE: 2:1                                                                                                                                                                                                                                                      |  | SHEET 3 OF 3                          |            |