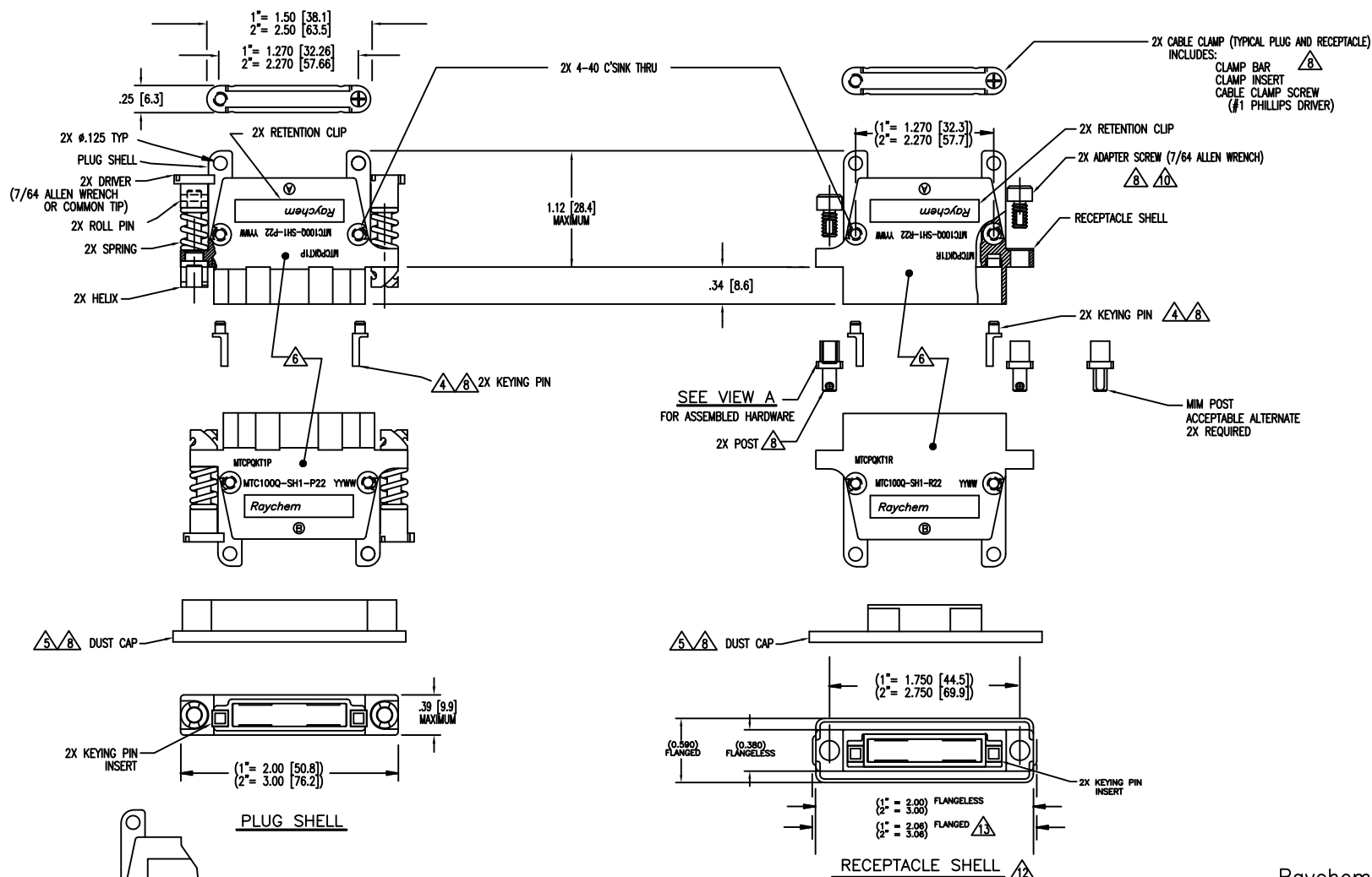


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| REVISIONS |                          |             |          |
|-----------|--------------------------|-------------|----------|
| LTR       | DESCRIPTION              | DATE        | APPROVED |
| H         | REVISED PER DCR# C061468 | Jan/11/07   | M.HIGGY  |
| J         | PER ECO-09-004669        | Feb/24/09   | M.HIGGY  |
| K         | PER ECO-11-008915        | Apr/28/2011 | M.HIGGY  |



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CUSTOMER DRAWING

.063 [1.6]  
PANEL THICKNESS  
SEE TABLE IV

THE EDGE OF SHELL  
THE TIP OF POST

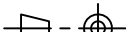
THE POST CAN BE .01 [0.3] MAX.  
ABOVE THE SHELL EDGE  
OR .02 [0.6] MAX. BELOW THE SURFACE.

VIEW A   
ASSEMBLED HARDWARE

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES.  
METRIC DIMENSIONS ARE  
IN BRACKETS.

|             |   |        |
|-------------|---|--------|
| DECIMALS    |   |        |
| .XXX ± .005 | { | .13 mm |
| .XX ± .02   |   | .5 mm  |
| ANGLES      |   |        |
| .X ±        |   |        |
| WEIGHT:     |   | △      |

|                        |  |                                                                                       |  |         |  |                                                                                                       |  |                     |  |     |  |
|------------------------|--|---------------------------------------------------------------------------------------|--|---------|--|-------------------------------------------------------------------------------------------------------|--|---------------------|--|-----|--|
| DRAWN                  |  | T.SEATON                                                                              |  | 96JUN28 |  |  TE Connectivity |  |                     |  |     |  |
| CHECKED                |  |                                                                                       |  |         |  |                                                                                                       |  |                     |  |     |  |
| APPROVED               |  | P.DUTTON                                                                              |  | 96JUL03 |  | TITLE<br><br>SHELL, PLUG AND RECEPTACLE<br>MTC100Q SERIES                                             |  |                     |  |     |  |
| APPROVED               |  |                                                                                       |  |         |  |                                                                                                       |  |                     |  |     |  |
| CAD NAME               |  |                                                                                       |  |         |  |                                                                                                       |  |                     |  |     |  |
| MTC100Q-SHX-X2X-XXX    |  |                                                                                       |  |         |  |                                                                                                       |  |                     |  |     |  |
| THIRD ANGLE PROJECTION |  |  |  | SIZE    |  | CAGE CODE:                                                                                            |  | DWG. NO.            |  | REV |  |
|                        |  |                                                                                       |  | C       |  | 06090                                                                                                 |  | MTC100Q-SHX-X2X-XXX |  | K   |  |
| SCALE: NONE            |  |                                                                                       |  |         |  | SHEET 1 OF 3                                                                                          |  |                     |  |     |  |

WORK NO. MTC1000-CHV-V2Y-VVV SHEET 1

4

3

2

1

## NOTES:

1. SHELL PART NUMBER VARIABLES: (NOT ALL POSSIBLE CONFIGURATIONS SHOWN ON THIS DRAWING ARE AVAILABLE AS STANDARD PRODUCTS. PLEASE CHECK WITH RAYCHEM TO CONFIRM AVAILABILITY.)

MTC100Q-SHX-X2X-XXX

MODIFICATIONS (see table I ) (THIS SPACE BLANK IF NO MODIFICATION IS APPLICABLE)

2= WITH CABLE CLAMP AND EARS ON SHELL

3= W/O CABLE CLAMP AND EARS ON SHELL

2= ELECTROLESS NICKEL (BLACK MARKING)

P= PLUG

F= FLANGED

R= FLANGELESS RECEPTACLE

1= 1 INCH

2= 2 INCH

S= SHELL / GROUNDING BUSBAR

## 2. MATERIAL:

|                    |                                                  |
|--------------------|--------------------------------------------------|
| A) SHELL           | ALUMINUM ALLOY PER ASTM B85                      |
| B) RETENTION CLIP  | COPPER ALLOY 172 PER ASTM B194                   |
| C) CAP SCREW       | STAINLESS STEEL PER SAE-AMS-QQ-S-763, 300 SERIES |
| D) POST *          | STAINLESS STEEL , PER AISI 17-4 PH               |
| E) ROLL PIN        | STAINLESS STEEL PER SAE-AMS 5673, 400 SERIES     |
| F) KEYING PIN      | HIGH GRADE POLYARYLENE THERMOPLASTIC, MOLDED     |
| G) KEY PINS INSERT | HIGH GRADE POLYARYLENE THERMOPLASTIC, MOLDED     |
| H) CLAMP BAR       | STAINLESS STEEL PER SAE-AMS-QQ-S-763, 300 SERIES |
| J) CLAMP INSERT    | SILICONE ELASTOMER PER MIL-DTL-25988B            |
| K) DRIVER *        | STAINLESS STEEL , PER AISI 17-4 PH               |
| L) SPRING          | STAINLESS STEEL PER AMS 5673, 17-7 PH            |
| L) HELIX *         | STAINLESS STEEL , PER AISI 17-4 PH               |

\* ACCEPTABLE ALTERNATE, STAINLESS STEEL,  
PER MPIF STD 35, MIM-17-4 PH

## 3. FINISH:

APPLIES TO NICKEL  
PLATED CONNECTORS

|                   |                                                              |
|-------------------|--------------------------------------------------------------|
| A) SHELL          | NICKEL PLATED PER SAE-AMS-C-26074<br>CLASS 3, GRADE B        |
| B) RETENTION CLIP | NICKEL PLATED PER SAE-AMS-C-26074<br>CLASS 2, .00002 MINIMUM |
| C) POST CAP SCREW | PASSIVATED PER SAE-AMS-QQ-P-35                               |
| D) POST           | NICKEL TEFLON PLATED<br>PER TECHMETALS 117C                  |
| E) HELIX          | NICKEL TEFLON PLATED<br>PER TECHMETALS 117C                  |
| F) ROLL PIN       | PASSIVATED PER SAE-AMS-QQ-P-35                               |
| G) DRIVER         | PASSIVATED PER SAE-AMS-QQ-P-35                               |

4. KEYING PIN IS SUPPLIED UNINSTALLED, USER TO PRESS INTO PROPER KEYING POSITION. SEE TABLE 5 FOR STANDARD KEYING PIN POSITIONS. FOR ADDITIONAL KEYING OPTIONS REFER TO D-659-0080.

5. STANDARD (RED) DUST CAP ARE SUPPLIED WITH EACH PLUG AND RECEPTACLE. SEE TABLE VI FOR MORE INFORMATION.

6. APPROPRIATE PART NUMBERS AND DATE CODES ARE STAMPED APPROXIMATELY AS SHOWN ON "B" SIDE. ALL "A" SIDE MARKINGS ARE OPTIONAL.

7. THESE PARTS MEET THE REQUIREMENTS OF TE SPECIFICATION C-6114.

8. THESE ITEMS ARE SUPPLIED UNASSEMBLED.

9. SEE TABLE II SHEET 3, WEIGHTS ARE WITHOUT DUST CAP.

10. RECEPTACLE POST SCREWS (CAP SCREWS) ARE TO BE TORQUED TO 15±1 INCH-LBS (1.0±0.07 N-M)

11. PLUG AND RECEPTACLE SHELLS ARE DESIGNED TO ACCEPT EITHER PIN OR SOCKET INSERTS. OR MIXED IN THE TWO INCHES STYLE.

12. THIS RECEPTACLE IS RECOMMENDED FOR REAR PANEL MOUNTING APPLICATION. REMOVING AS MANY PANEL WASHERS AS REQUIRED TO ACCOMMODATE THE THICKNESS OF THE PANEL BEING USED. SEE SHEET 3, TABLE 4, FIGURE 1. USE ONLY SCREWS SUPPLIED WITH CONNECTOR. POST TO BE FLUSH WITHIN TOLERANCE AS SHOWN SEE VIEW 'A' PAGE # 1.

13. WHEN MOUNTING FLANGELESS CONNECTORS ADJACENT TO ONE ANOTHER AND USING THE .400 MINIMUM CENTERLINE LOCATION, THERE WILL BE NO WEB BETWEEN PANEL CUT-OUTS. SEE SHEET 3, TABLE 3, FOR DETAILS.

14. THE HARDWARE FOR THIS CONNECTOR IS DESIGNED TO BE USED ON 0.063 INCH PANEL THICKNESS. OTHERWISE 2 THIN WASHERS (PANEL WASHERS) ARE REQUIRED FOR EACH POST. USE PART D-659-0042.

TABLE I (MODIFICATIONS)

| MODIFICATION<br>DASH NUMBER | DESCRIPTION                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------------------|
| -022                        | SAME AS STANDARD ASSEMBLY, EXCEPT CONTACTS AND SEALING PLUGS ARE INCLUDED.                             |
| -023                        | SAME AS STANDARD ASSEMBLY, EXCEPT CONTACTS SEALING PLUGS AND INSERTION / EXTRACTION TOOL ARE INCLUDED. |
|                             |                                                                                                        |
|                             |                                                                                                        |
|                             |                                                                                                        |

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|                               |              |
|-------------------------------|--------------|
| DWG. NO.                      | REV          |
| MTC100Q-SHX-X2X-XXX           | K            |
| CAD FILE: MTC100Q-SHX-X2X-XXX | SHEET 2 OF 3 |

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4

3

2

1

DWG NO. MTC100Q-SHX-X2X-XXX SHEET 2

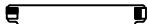
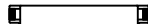
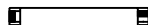
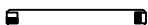
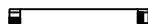
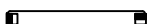
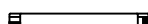
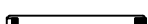
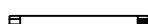
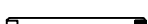
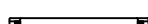
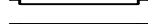
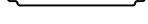
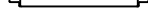
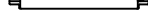
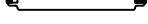
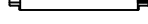
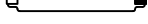
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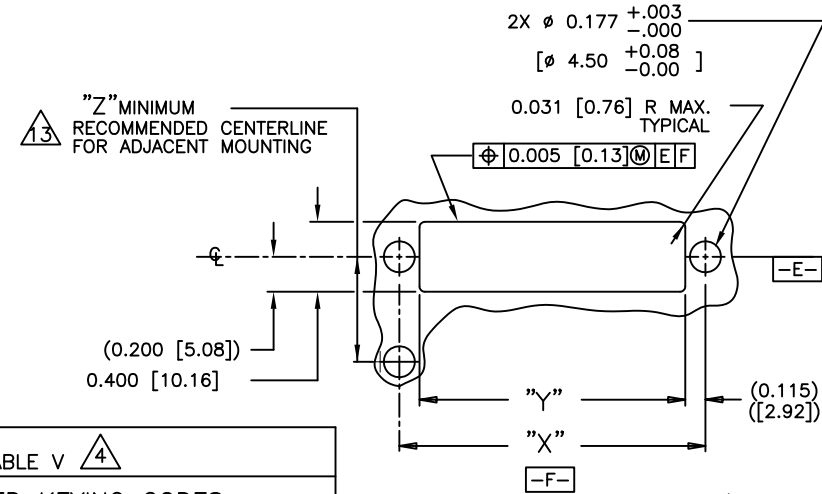
THE FOLLOWING TABLE CONSISTS OF WEIGHTS FOR THESE SPECIFIC PART NUMBERS.

| TABLE II <span style="float: right;">9</span> |                         |
|-----------------------------------------------|-------------------------|
| PART NUMBER                                   | WEIGHT<br>MAXIMUM GRAMS |
| MTC100Q-SH1-F22                               | 29.9                    |
| MTC100Q-SH1-P22                               | 29.5                    |
| MTC100Q-SH1-R22                               | 26.2                    |
| MTC100Q-SH2-F22                               | 40.5                    |
| MTC100Q-SH2-P22                               | 39.7                    |
| MTC100Q-SH2-R22                               | 36.4                    |
| MTC100Q-SH1-F23                               | 19.0                    |
| MTC100Q-SH1-P23                               | 21.9                    |
| MTC100Q-SH1-R23                               | 18.6                    |
| MTC100Q-SH2-F23                               | 28.9                    |
| MTC100Q-SH2-P23                               | 28.1                    |
| MTC100Q-SH2-R23                               | 24.7                    |

| TABLE VI <span style="float: right;">5</span> |             |                 |            |                   |                    |
|-----------------------------------------------|-------------|-----------------|------------|-------------------|--------------------|
| RECOMMENDED DUST CAP                          |             |                 |            |                   |                    |
| ITEM                                          | PART NUMBER | USED WITH SHELL |            | DUCT CAP MATERIAL |                    |
|                                               |             | SIZE            | TYPE       | POLYETHYLENE RED  | ELECTROSTATIC PINK |
| 1                                             | D-659-0060  | 1"              | PLUG       | X                 |                    |
| 2                                             | D-659-0062  | 2"              | PLUG       | X                 |                    |
| 3                                             | CHA-1603    | 1"              | RECEPTACLE | X                 |                    |
| 4                                             | CHA-1604    | 2"              | RECEPTACLE | X                 |                    |
| 5                                             | CHA-0098    | 1"              | PLUG       |                   | X                  |
| 6                                             | CHA-0100    | 2"              | PLUG       |                   | X                  |
| 7                                             | CHA-0311    | 1"              | RECEPTACLE |                   | X                  |
| 8                                             | CHA-0312    | 2"              | RECEPTACLE |                   | X                  |

| TABLE IV <span style="float: right;">12</span> |                                           |
|------------------------------------------------|-------------------------------------------|
| PANEL THICKNESS                                | NUMBER OF PANEL WASHERS FOR EACH FASTENER |
| 0                                              | 2                                         |
| 0.031/0.036<br>[0.8]/[0.9]                     | 1                                         |
| 0.062/0.067<br>[1.5]/[1.7]                     | 0                                         |

| TABLE V <span style="float: right;">4</span>                                         |       |                                                                                       |
|--------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|
| SUGGESTED KEYING CODES                                                               |       |                                                                                       |
|    | -A A- |    |
|    | -A B- |    |
|    | -A C- |    |
|    | -A D- |    |
|    | -B A- |    |
|    | -B B- |    |
|    | -B C- |    |
|    | -B D- |    |
|   | -C A- |   |
|  | -C B- |  |
|  | -C C- |  |
|  | -C D- |  |
|  | -D A- |  |
|  | -D B- |  |
|  | -D C- |  |
|  | -D D- |  |
| RECEPTACLE FACE                                                                      |       | PLUG FACE                                                                             |
| WHEN USING STANDARD RECTANGULAR KEYING PINS                                          |       |                                                                                       |



RECOMMENDED PANEL CUT-OUT 12  
FIGURE 1

| TABLE III <span style="float: right;">13</span> |            |              |              |               |
|-------------------------------------------------|------------|--------------|--------------|---------------|
| CONNECTOR SIZE                                  | TYPE:      | "X"          | "Y"          | "Z" (MIN)     |
| 1 INCH                                          | FLANGELESS | 1.750 [44.5] | 1.520 [38.6] | 0.400 [10.16] |
|                                                 | FLANGED    | 1.750 [44.5] | 1.520 [38.6] | 0.600 [15.24] |
| 2 INCH                                          | FLANGELESS | 2.750 [69.9] | 2.520 [64.0] | 0.400 [10.16] |
|                                                 | FLANGED    | 2.750 [69.9] | 2.520 [64.0] | 0.600 [15.24] |

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| DWG. NO.<br>MTC100Q-SHX-X2X-XXX | REV<br>K     |
| CAD FILE: MTC100Q-SHX-X2X-XXX   | SHEET 3 OF 3 |