

# CUSTOMER DRAWING



**FREE CONNECTOR  
(HELIOS H4 ASSEMBLED)**



**FIXED CONNECTOR  
(HELIOS H4 BULKHEAD - M12)**



**FIXED CONNECTOR  
(HELIOS H4 BULKHEAD - M14)**

### 3. SPECIFICATIONS:

| CONTACT SIZE                | 1.5mm <sup>2</sup> /16AWG                                                                                   | 2.5mm <sup>2</sup> /14AWG | 4mm <sup>2</sup> /12AWG | 6mm <sup>2</sup> /10AWG | 10mm <sup>2</sup> /8AWG |
|-----------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------|-------------------------|-------------------------|
| RATED CURRENT               | 35A (UL)                                                                                                    |                           |                         |                         |                         |
|                             | N/A                                                                                                         | 32A (TUV)                 | 40A (TUV)               | 44A (TUV)               | 65A (TUV)               |
| RATED SYSTEM VOLTAGE        | 600V/1000V DC(UL)<br>1000V DC(TUV)                                                                          |                           |                         |                         |                         |
| CONTACT RESISTANCE          | 0.25mΩ TYP.                                                                                                 |                           |                         |                         |                         |
| DEGREE OF PROTECTION, MATED | IP68(1m, 1h)                                                                                                |                           |                         |                         |                         |
| PIN CONTACT MATERIAL        | COPPER, TIN PLATED                                                                                          |                           |                         |                         |                         |
| INSULATION MATERIAL         | THERMOPLASTIC, UL94 V-0                                                                                     |                           |                         |                         |                         |
| AMBIENT TEMPERATURE RANGE   | -40°C TO +85°C                                                                                              |                           |                         |                         |                         |
| STRIP LENGTH                | 7.0 mm                                                                                                      |                           |                         |                         |                         |
| CABLE JACKET DIAMETER       | 4.5 TO 7.8mm FOR TUV 1000V RATING<br>5.25 TO 7.7mm FOR UL 1000V RATING<br>5.25 TO 7.95mm FOR UL 600V RATING |                           |                         |                         |                         |

2. USE ONLY CRIMP TOOL AMPHENOL H4TC0002 TO CRIMP CONTACTS

1. THIS ASSEMBLY SHALL BE CERTIFIED RoHS COMPLIANT TO THE EUROPEAN UNION DIRECTIVE 2002/95/EC AS AMENDED PER 2005/618/EC.

#### NOTES:

THE USE OF THIS DOCUMENT IS UNLIMITED. HOWEVER, DOCUMENTS REFERENCED HEREON MAY CONTAIN LIMITED RIGHTS DATA.

| PRO/ENGINEER INFORMATION |                     |
|--------------------------|---------------------|
| N/A                      | Pro/e Model Used:   |
| N/A                      | CPV-090508-M-ASSEM  |
|                          | Drawing Name:       |
|                          | PV-1005X-000-SF-CUS |
|                          | NEXT ASSEMBLY       |

| UNLESS OTHERWISE SPECIFIED                                                                                                                           | SPECIFICATIONS | POS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | QTY       | PART NUMBER  | DESCRIPTION | NOTE |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------|-------------|------|-----------|------|------|-----------|--------------|------|----------------------|------------|---|-------|---------|---|--------------------|--|--------------------------------|--|--|--|----------------|--|--|--|--|--|----------------------------|--|--|--|--|
| LINEAR DIMENSIONS ARE IN:<br><b>MILLIMETERS</b><br>TOLERANCES:<br>ANGLES = ±2°                                                                       | MATERIAL SPEC. | PARTS LIST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |              |             |      |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |
|                                                                                                                                                      | N/A            | <b>AMPHENOL CORPORATION</b><br><small>40-60 DELAWARE AVENUE<br/>SIDNEY, N.Y. 13838</small>                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |              |             |      |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |
| DIM. & TOL. PER ASME Y14.5M-1994;<br>DRM PER MIL-DTL-31000;<br>OTHER AMPHENOL STANDARDS: 9-9318<br>LEGENDS:<br>△ = FLAG NOTE CALL OUT REFERENCE ONLY | PROCESS SPEC.  | <b>HELIOS H4 1000V/600V<br/>CONNECTOR ASSEMBLY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |              |             |      |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |
|                                                                                                                                                      | N/A            | <table border="1"> <tr> <td>APPROVALS</td> <td>DATE</td> <td>SIZE</td> <td>CAGE CODE</td> <td>DOCUMENT NO.</td> <td>REV.</td> </tr> <tr> <td>PREPARED BY: LEON LI</td> <td>2012-05-23</td> <td>C</td> <td>77820</td> <td>H4C-( )</td> <td>E</td> </tr> <tr> <td>ENGINEER IN CHARGE</td> <td></td> <td colspan="4">SCALE: 1.0 REF: - SHEET 1 OF 4</td> </tr> <tr> <td>DESIGN MANAGER</td> <td></td> <td colspan="4"></td> </tr> <tr> <td>DESIGN ACTIVITY GROUP: R&amp;D</td> <td></td> <td colspan="4"></td> </tr> </table> |           |              |             |      | APPROVALS | DATE | SIZE | CAGE CODE | DOCUMENT NO. | REV. | PREPARED BY: LEON LI | 2012-05-23 | C | 77820 | H4C-( ) | E | ENGINEER IN CHARGE |  | SCALE: 1.0 REF: - SHEET 1 OF 4 |  |  |  | DESIGN MANAGER |  |  |  |  |  | DESIGN ACTIVITY GROUP: R&D |  |  |  |  |
| APPROVALS                                                                                                                                            | DATE           | SIZE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | CAGE CODE | DOCUMENT NO. | REV.        |      |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |
| PREPARED BY: LEON LI                                                                                                                                 | 2012-05-23     | C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 77820     | H4C-( )      | E           |      |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |
| ENGINEER IN CHARGE                                                                                                                                   |                | SCALE: 1.0 REF: - SHEET 1 OF 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |              |             |      |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |
| DESIGN MANAGER                                                                                                                                       |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |              |             |      |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |
| DESIGN ACTIVITY GROUP: R&D                                                                                                                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |              |             |      |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |
|                                                                                                                                                      |                | THIRD ANGLE PROJECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |              |             |      |           |      |      |           |              |      |                      |            |   |       |         |   |                    |  |                                |  |  |  |                |  |  |  |  |  |                            |  |  |  |  |

## ORDER P/N: H4CFC2DMS

- (BLANK): COLD FORGING CONTACT
- S: STAMPING FORM CONTACT
- I: INDIVIDUAL PACKING WITH PE BAG (800PCS PER BOX)
- C: BULK PACK 100PCS WITH PE BAG (1000PCS PER BOX)
- M: BULK PACK 500PCS PER PE BAG (1000PCS PER BOX)
- D: TUV & UL APPROVAL
- 2: FOR 2.5mm<sup>2</sup>/14AWG CABLE (FOR C&F,  
AND ALSO FOR 1.5 & 2.5mm<sup>2</sup>/16 & 14AWG S&F)
- 4: FOR 4.0mm<sup>2</sup>/12AWG CABLE (FOR C&F,  
AND ALSO FOR 4.0 & 6.0mm<sup>2</sup>/12 & 10AWG S&F)
- 6: FOR 6.0mm<sup>2</sup>/10AWG CABLE (FOR C&F ONLY)
- 8: FOR 10.0mm<sup>2</sup>/8AWG CABLE (FOR C&F ONLY)
- C: CABLE GLAND (FREE CONN)
- M: BULKHEAD M12
- N: BULKHEAD M14
- F: FEMALE
- M: MALE

| REVISIONS |                             |            |
|-----------|-----------------------------|------------|
| LTR       | DESCRIPTION                 | DATE       |
| A         | INITIAL RELEASE             | 2011-04-18 |
| B         | MODIFY THE TOLERANCE        | 2011-12-05 |
| C         | ADD THE INTERFACE DIMENSION | 2011-12-14 |
| D         | UPGRADE TO 1000V UL RATING  | 2012-03-20 |
| E         | UPDATE TUV MARK             | 2012-05-23 |

DOCUMENT NO. H4C-( ) SHEET 1 OF 4 REV. E

DOCUMENT NO. H4C-( ) SHEET 1 OF 4 REV. E

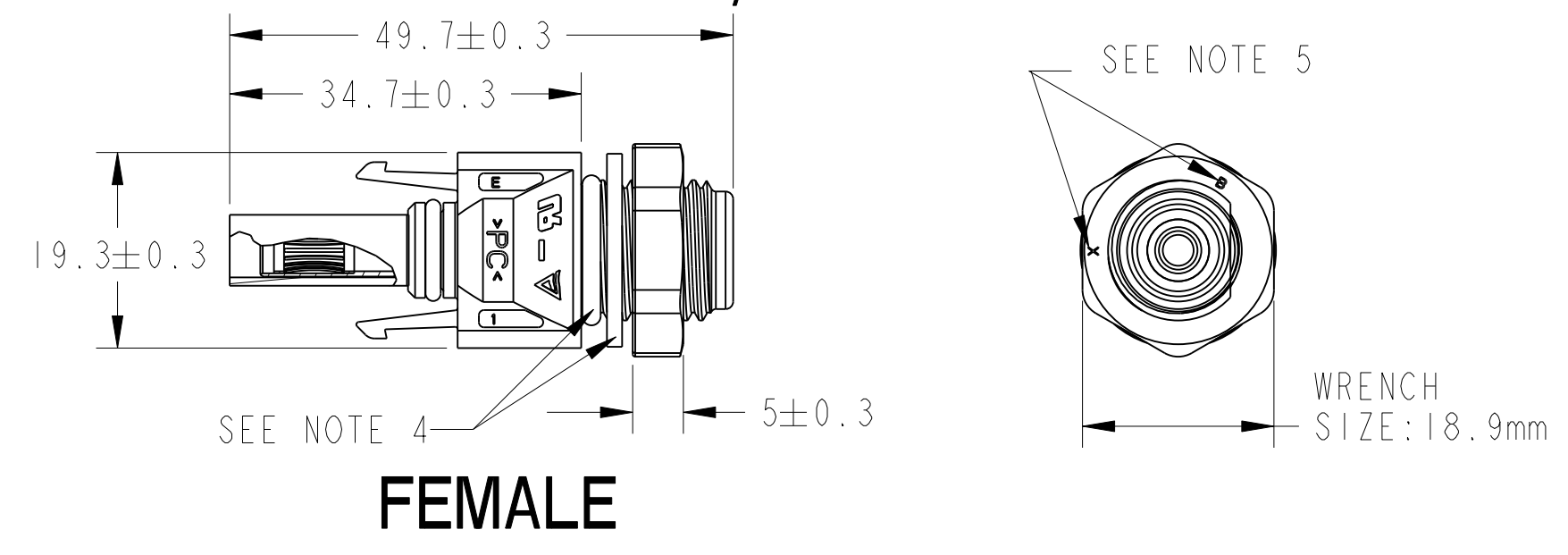
### FREE CONNECTOR (HELIOS H4 ASSEMBLED)



### FIXED CONNECTOR (HELIOS H4 BULKHEAD - M12)



### FIXED CONNECTOR (HELIOS H4 BULKHEAD - M14)



5. THE MARK OF LETTERS JUST THE VERSION OF THE PLASTIC PARTS FOR AMPHENOL'S MANUFACTURE PROCEDURE, WHEN THE CUSTOMER INSPECT THE PRODUCT, THEY CAN IGNORE THESE NUMBERS.
4. FLAT GASKET AND NUT SHOULD NOT BE ASSEMBLED TO THE BODY . SOCKET AND PIN SHOWN INSTALLED FOR REFERENCE ONLY.

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|                  |                           |                                |                  |
|------------------|---------------------------|--------------------------------|------------------|
| SIZE<br><b>C</b> | CAGE CODE<br><b>77820</b> | DOCUMENT NO.<br><b>H4C-( )</b> | REV.<br><b>E</b> |
| SCALE: 1.0       | REF: -                    | SHEET 2 OF 4                   |                  |

DOCUMENT NO. H4C-( ) REV. SHEET 2 OF 4 E

DOCUMENT NO. H4C-( ) REV. SHEET 2 OF 4 E

# STAMPING & FORM CONTACT



**SOCKET (FEMALE)**



|                          | A (mm) |
|--------------------------|--------|
| 1.5 & 2.5mm <sup>2</sup> | 4.8    |
| 4.0 & 6.0mm <sup>2</sup> | 5.8    |



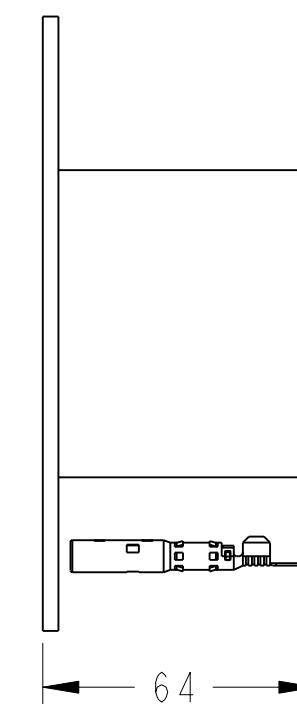
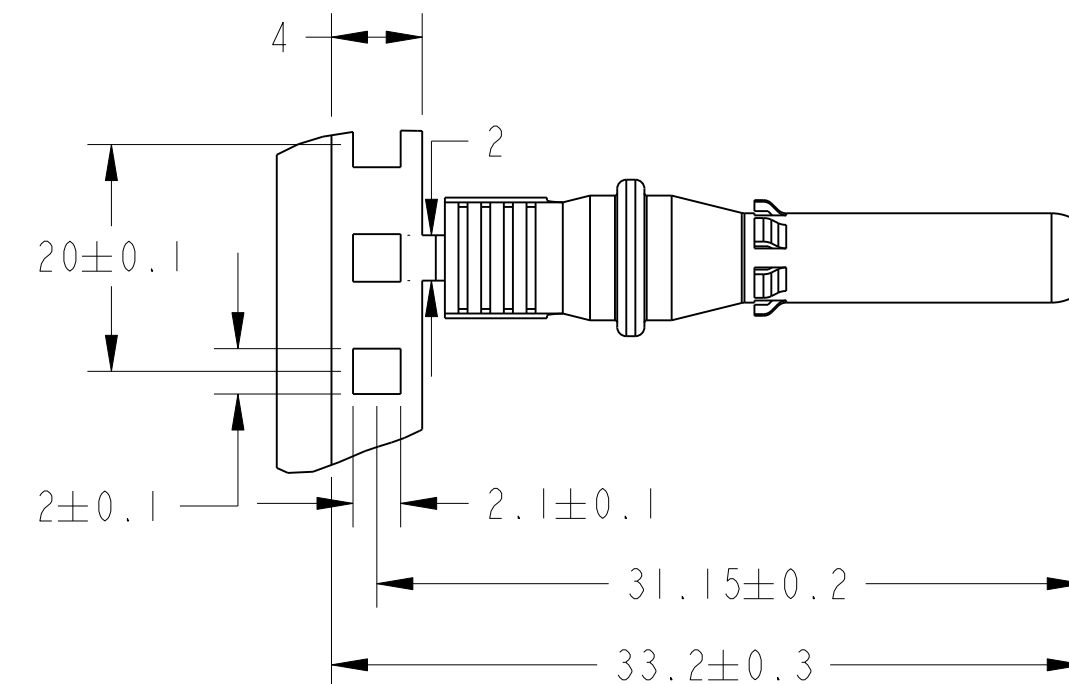
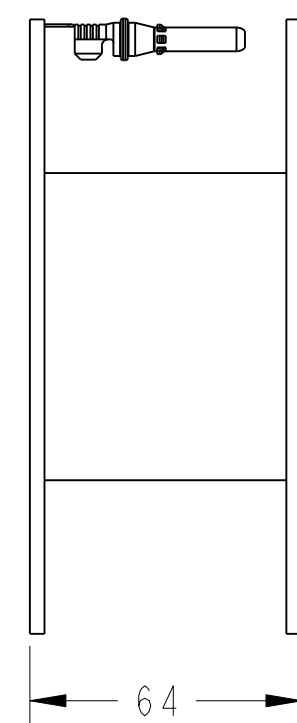
**PIN (MALE)**



## ORDER P/N FOR CONTACTS REEL & PACKING INFO

### H4FF4R

- R: 2000PCS PER REEL
- 2: CABLE SIZE: 1.5 & 2.5mm<sup>2</sup>/16 & 14AWG
- 4: CABLE SIZE: 4.0 & 6.0mm<sup>2</sup>/12 & 10AWG
- F: FOR FEMALE
- M: FOR MALE
- F: STAMPING FORM CONTACTS



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|            |                 |                      |        |
|------------|-----------------|----------------------|--------|
| SIZE C     | CAGE CODE 77820 | DOCUMENT NO. H4C-( ) | REV. E |
| SCALE: 1.0 | REF: -          | SHEET 3 OF 4         |        |