

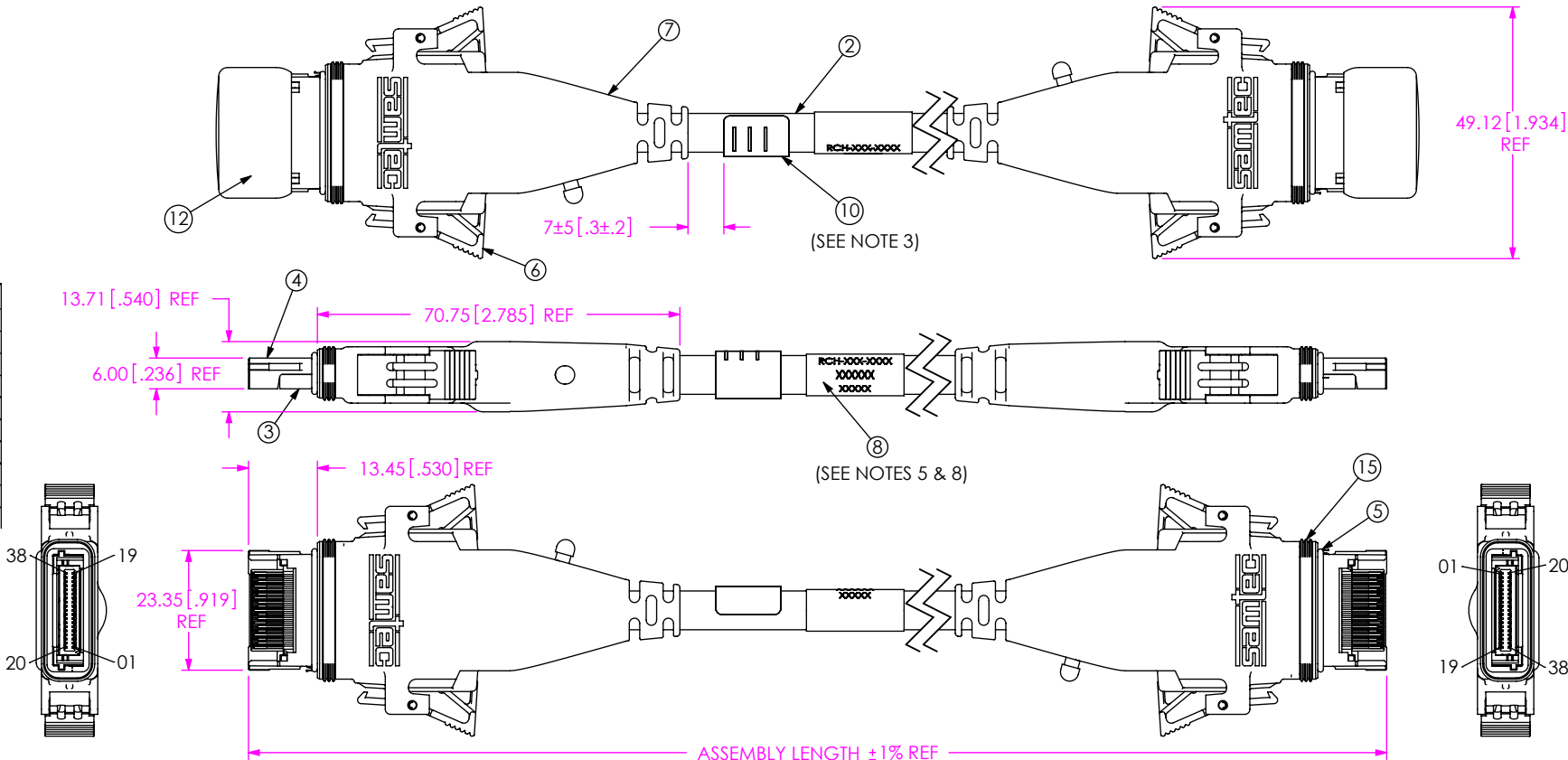
1. REPRESENTS A CRITICAL DIMENSION.
2. ALL ASSEMBLIES TO BE 100% ELECTRICALLY TESTED FOR SHORTS AND OPENS.
3. ALL ASSEMBLIES TO BE HI-POT TESTED AT 300V.  
AFTER FINAL ELECTRICAL TEST, LABEL EACH ASSEMBLY WITH 1 LABEL-ET.
4. ENSURE VCOV-EPLSP-XXX-ORG IS APPLIED AND PACKAGE IN CLEAR POLY-BAGS.
5. FOR FINISHED GOOD, HDRL-11 IS TO BE CENTERED ON CABLE AS SHOWN OR 1 FOR EVERY METER OF CABLE FOR ASSEMBLIES OVER 1 METER.  
HDRL-11 IS TO CONTAIN: PART NUMBER, SHOP ORDER & DATE CODE.
6. THIS ASSEMBLY USES 32 AWG 100 OHM TWINAX.
7. MEASURE O-RING IN THE CENTER OF THE PART.
8. FOR SUB-RCH, ONLY ONE HDRL-11 LABEL IS REQUIRED, TO BE PLACED CENTERED ON THE CABLE.

No. OF POSITIONS  
-019 = 19 POSITION (SEE TABLE 3) PIN 1 TO 1

ASSEMBLY LENGTH  
(IN MILLIMETERS)  
-0500 TO -9999  
(-1000, -2000, AND -3000,  
ARE STOCKED LENGTHS)  
(SEE NOTE 6)

DO NOT  
SCALE FROM  
THIS PRINT

FIG 1  
RCH-019-XXXX SHOWN  
(SOME COMPONENTS NOT SHOWN IN ALL VIEWS FOR CLARITY)



| LENGTH    | "A" |
|-----------|-----|
| 500-1999  | 1   |
| 2000-2999 | 2   |
| 3000-3999 | 3   |
| 4000-4999 | 4   |
| 5000-5999 | 5   |
| 6000-6999 | 6   |
| 7000-7999 | 7   |
| 8000-8999 | 8   |
| 9000-9999 | 9   |

| ITEM NO. | PART NUMBER              | DESCRIPTION                    | QUANTITY   | MATERIAL                         |
|----------|--------------------------|--------------------------------|------------|----------------------------------|
| 1        | SUB-EPHSI-019-D-EM       | SUB ASSEMBLY                   | 2          | SEE TITLE BLOCK                  |
| 2        | SUB-HSIO-32100-01-XXXX   | BUNDLED 9 TWIN AX AND 5 POWER  | 1          | SEE TITLE BLOCK                  |
| 3        | EPHSI-019-02             | BOTTOM HOUSING EPHSI CONNECTOR | 2          | ZINC ALLOY                       |
| 4        | EPHSI-019-01             | TOP HOUSING EPHSI CONNECTOR    | 2          | ZINC ALLOY                       |
| 5        | OR-129-01                | EM GASKET FOR RCH              | 2          | SILVER/ALUMINUM                  |
| 6        | LTC-28                   | PESS PLASTIC LATCH             | 4          | PA66 RG001, BLACK                |
| 7        | MD-NYL-ZY-70G13-BK       | OVERMOLD                       | 0.047 lbs  | NYLON, ZYTEL, 70G13, BLACK       |
| 8        | HDRL-11                  | LABEL                          | "A"        | SELF LAMINATING VINYL            |
| 9        | CUT-0.250                | COPPER FOIL TAPE               | 4          | COPPER FOIL, CONDUCTIVE ADHESIVE |
| 10       | LABEL-ET                 | PRINTED LABEL                  | 1          | VINYL                            |
| 11       | RVT-02.3-09.5-002        | EPLSP RIVET                    | 4          | ALUM. SEMI-TUBULAR PLAIN FINISH  |
| 12       | VCOV-EPLSP-019-ORG       | PROTECTIVE COVER               | 2          | VINYL                            |
| 13       | VCOV-EPLSP-019-ORG-PR    | PROTECTIVE COVER               | 2          | VINYL                            |
| 14       | SUB-SRP-065-015-01-00.48 | SOLDER PREFORM                 | 4          | SAC 305                          |
| 15       | OR-121-01                | O-RING                         | 2          | NBR+SILICONE OIL                 |
| 16       | EPHSI-SR-01              | EPHSI STRAIN RELIEF            | 2          | RUBBER                           |
| 17       | MD-NYL-MA-OM646-BK       | PREMOLD                        | 0.0022 lbs | NYLON, LOW PRESSURE, BLACK       |
| 18       | OCS-137285-01-PP         | KAPTON TAPE                    | 2          | KAPTON                           |
| 19       | EPLSP-GR-19              | GROUND-RING                    | 2          | 316L STAINLESS STEEL             |

F:\DWG\MISC\MKTG\RCH-XXX-XXXX-MKT.LD.DRW

UNLESS OTHERWISE SPECIFIED,  
DIMENSIONS ARE IN MILLIMETERS.

TOLERANCES ARE:

DECIMALS ANGLES  
X.X: ±0.3 2°  
X.XX: ±0.13  
X.XXX: ±0.051

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MATERIAL: DO NOT SCALE DRAWING SHEET SCALE: 2:1  
INSULATOR: HIGH TEMP NYLON  
TERMINALS: CU ALLOY  
MAX FLASH ALLOWED: .05[.002]  
MAX GATE VESTIGE: .10[.004]  
CABLE MATERIAL: JACKET: PVC  
INSULATOR: DIELECTRIC  
CONDUCTORS: COPPER  
BRAID: TINNED COPPER  
FOIL: ALUMINUM/POLYESTER

THIS PRODUCT MANUFACTURED WITH LEAD-FREE PROCESSING

**samtec**

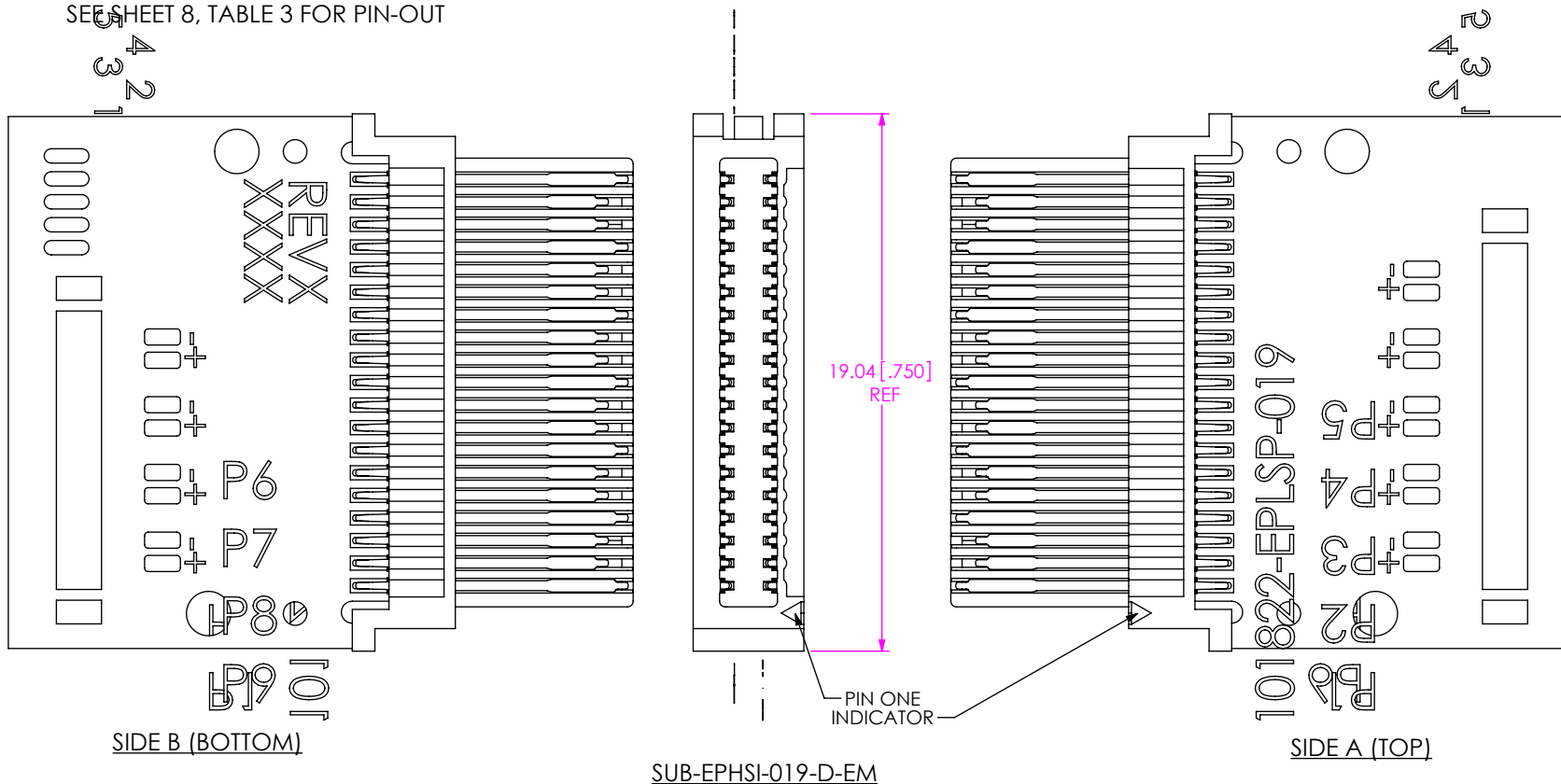
520 PARK EAST BLVD, NEW ALBANY, IN 47150  
PHONE: 812-944-6733 FAX: 812-948-5047  
e-Mail: info@SAMTEC.com code: 55322

DESCRIPTION:  
SEALED EPLSP CABLE ASSEMBLY  
DWG. NO.  
RCH-XXX-XXXX  
BY: D. SCHMELZ 07/15/2010 SHEET 1 OF 8

| TABLE 2 -19 CABLE PAIR LOCATION |     |        |     |        |     |        |     |           |      |              |
|---------------------------------|-----|--------|-----|--------|-----|--------|-----|-----------|------|--------------|
| PAIR 1                          |     | PAIR 2 |     | PAIR 3 |     | PAIR 4 |     | PAIR 5    |      | (PCB PAIR)   |
| P4+                             | P4- | P5+    | P5- | P6+    | P6- | P7+    | P7- | P8+       | P8-  | (CABLE PAIR) |
| POS                             | NEG | POS    | NEG | POS    | NEG | POS    | NEG | POS       | NEG  |              |
| POS                             | NEG | POS    | NEG | POS    | NEG | POS    | NEG | GREEN     | BLUE | ORANGE       |
| P2+                             | P2- | P3+    | P3- | P1+    | P1- | P9+    | P9- | 1         | 2    | 3            |
| PAIR 6                          |     | PAIR 7 |     | PAIR 8 |     | PAIR 9 |     | DISCRETES |      |              |
|                                 |     |        |     |        |     |        |     | 4         | 5    |              |

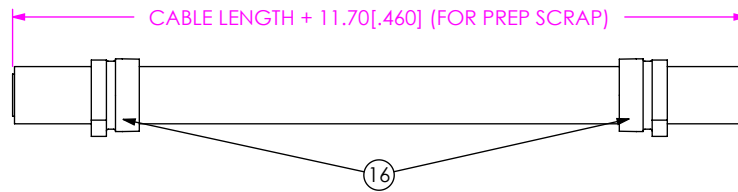
(END 1 TWINAX PRINTING MUST FACE UP, END 2 TWINAX PRINTING MUST FACE DOWN)

SEE SHEET 8, TABLE 3 FOR PIN-OUT

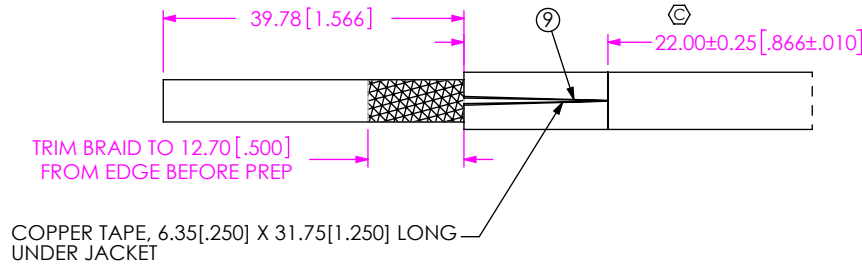


SUB-EPHSI-019-D-EM

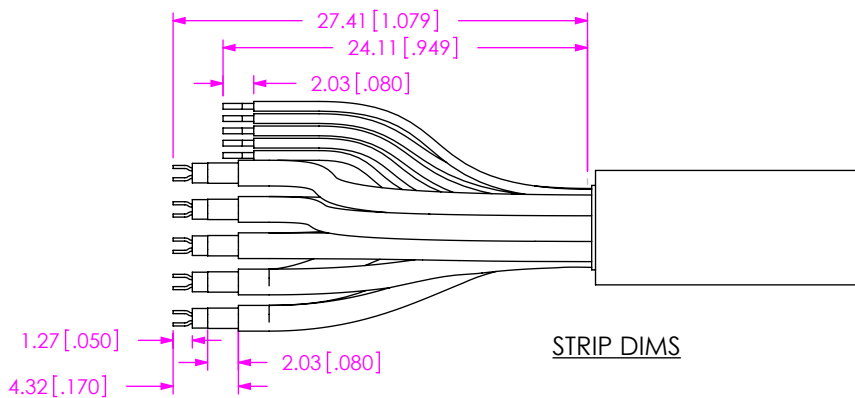
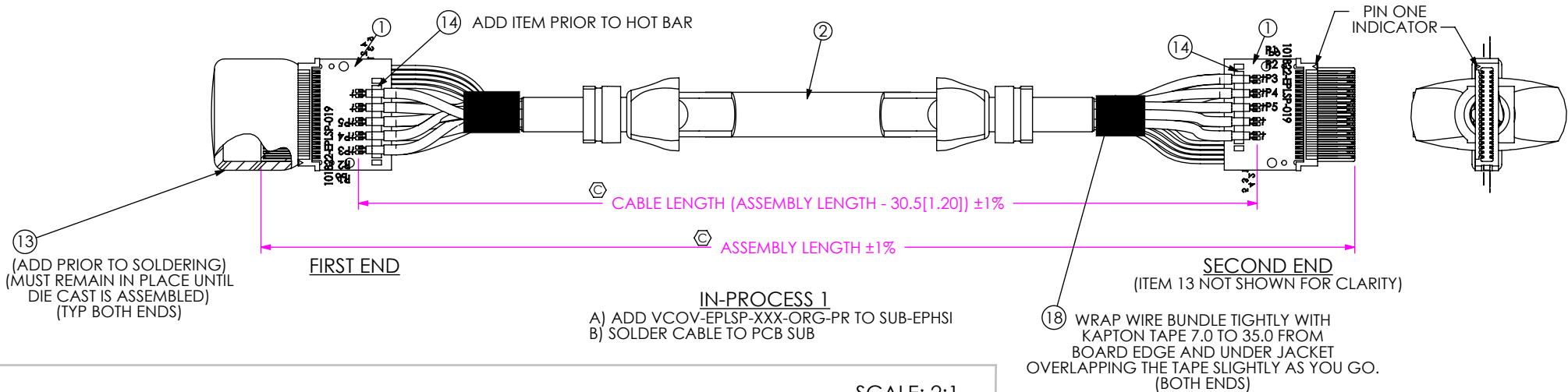
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|   | <p>DO NOT SCALE DRAWING</p>  | <p>DESCRIPTION:<br/>                 SEALED EPLSP CABLE ASSEMBLY</p> |
| <p>SHEET SCALE: 2:1</p>   | <p>DWG. NO.<br/>                 RCH-XXX-XXXX</p>  |  |
| <p>BY: D. SCHMELZ 07/15/2010 SHEET 2 OF 8</p>   |  |  |



**CUT CABLE TO LENGTH**  
 SLIDE EPHSI-SR-01 ONTO CABLE BEFORE STRIPPING INSULATION



**WRAP BRAID WITH COPPER TAPE BEFORE FOLDING BACK**  
 (TYP BOTH ENDS)



SCALE: 2:1

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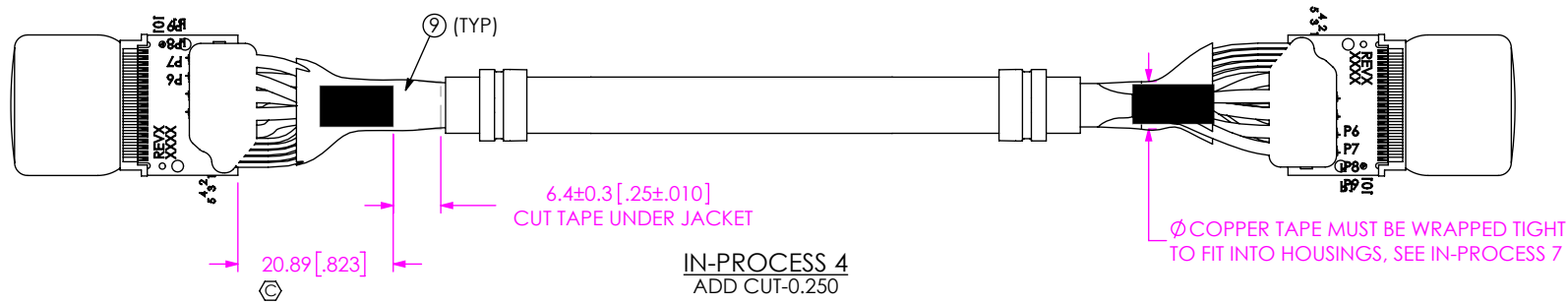
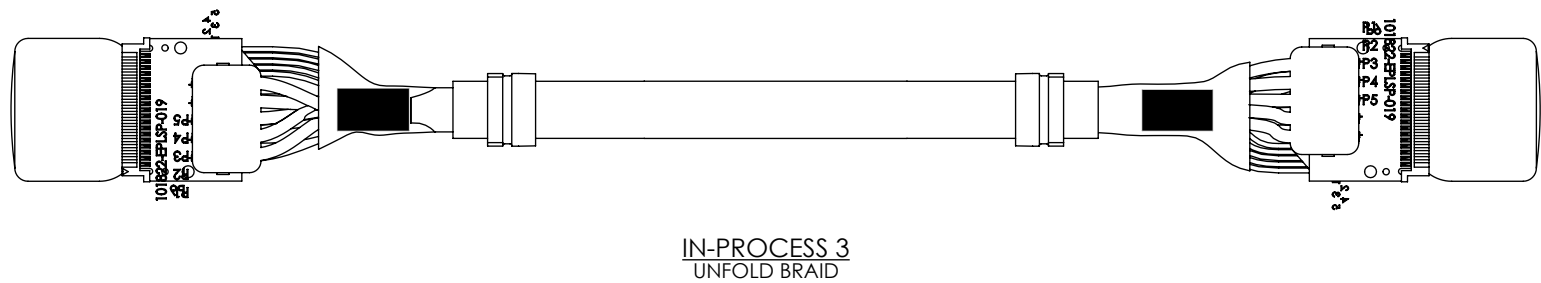
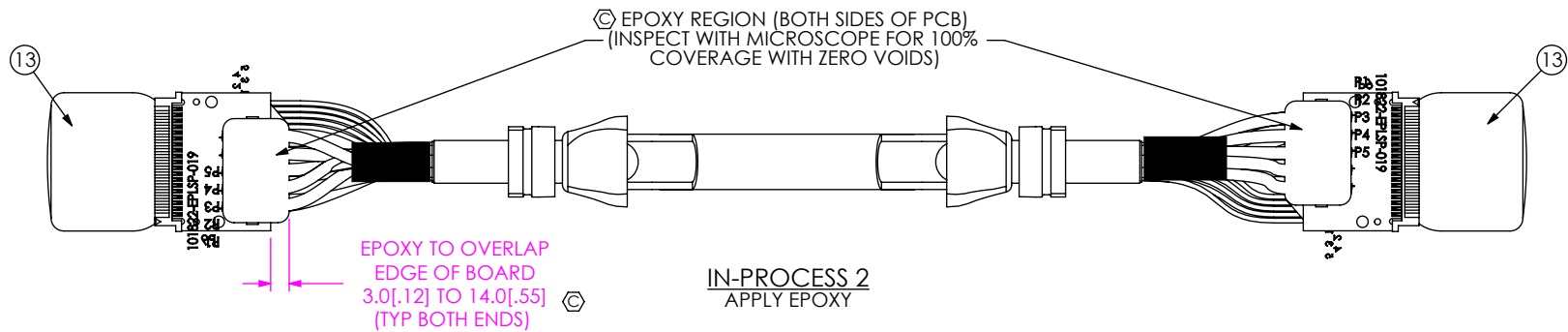
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DESCRIPTION:  
 SEALED EPLSP CABLE ASSEMBLY

DWG. NO.  
**RCH-XXX-XXXX**

SHEET SCALE: 1:1

BY: D. SCHMELZ 07/15/2010 SHEET 3 OF 8



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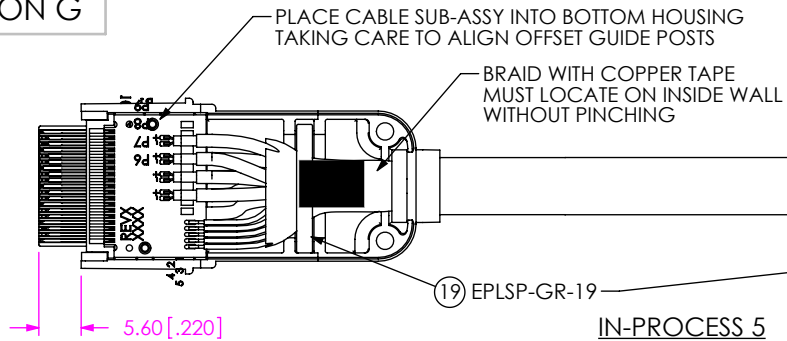
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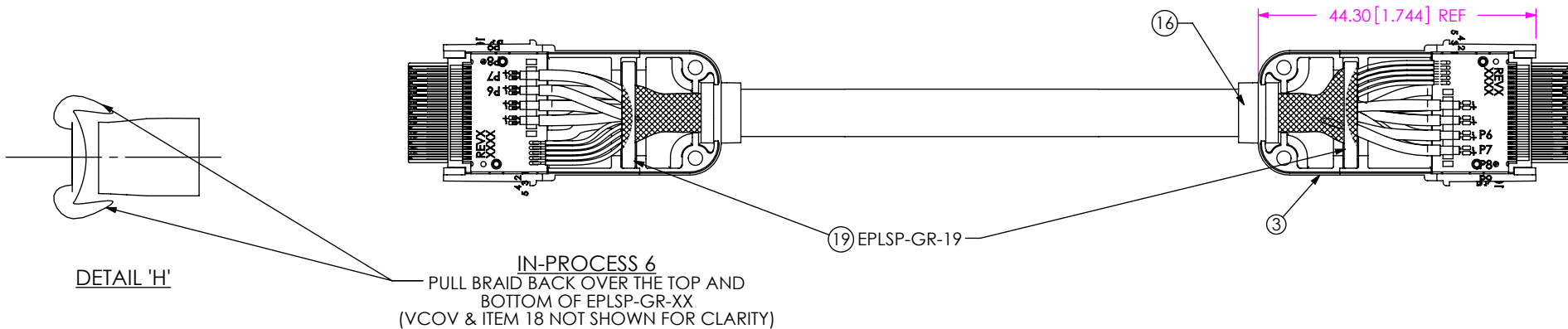
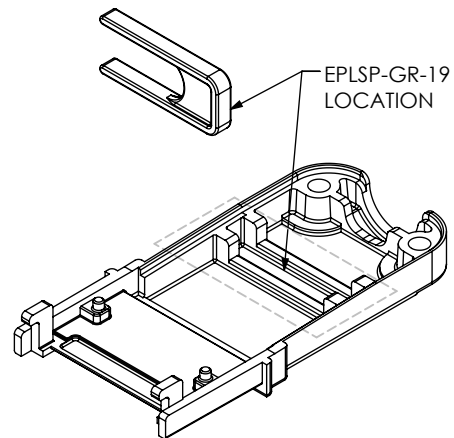
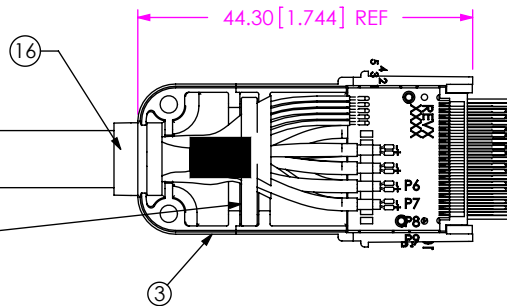
SHEET SCALE: 1:1

DWG. NO.  
 RCH-XXX-XXXX

BY: D. SCHMELZ 07/15/2010 SHEET 4 OF 8

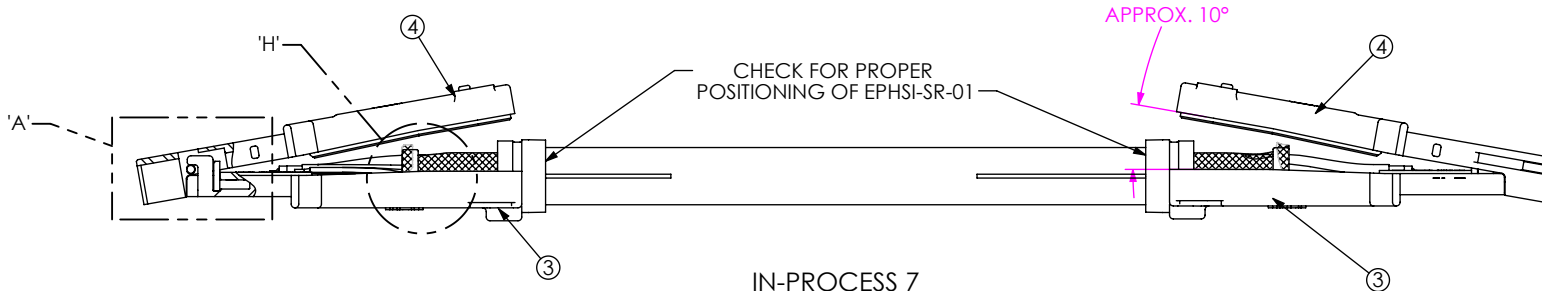


**IN-PROCESS 5**  
 ADD EPHSI-019-02  
 LOCATE STRAIN RELIEF IN HOUSING  
 AND ADD EPLSP-GR-19  
 (REMOVE ITEM 13 FOR HOUSING ASSEMBLY)



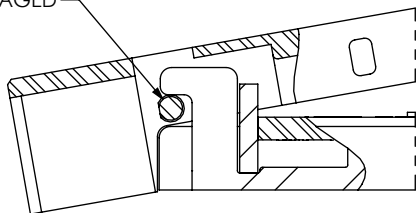
DETAIL 'H'

**IN-PROCESS 6**  
 PULL BRAID BACK OVER THE TOP AND  
 BOTTOM OF EPLSP-GR-XX  
 (VCOV & ITEM 18 NOT SHOWN FOR CLARITY)



**IN-PROCESS 7**  
 ADD EPHSI-019-01  
 (REMOVE ITEM 13 FOR HOUSING ASSEMBLY)

WHILE POSITIONING THE TOP COVER (EPHSI-019-01)  
 INSURE THAT LATCH AND PIN  
 ARE ENGAGED



DETAIL 'A'  
 SCALE 3 : 1

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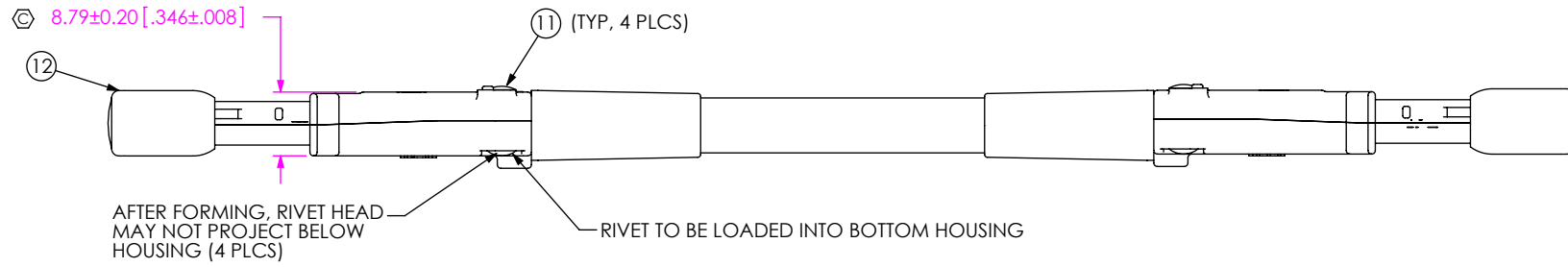


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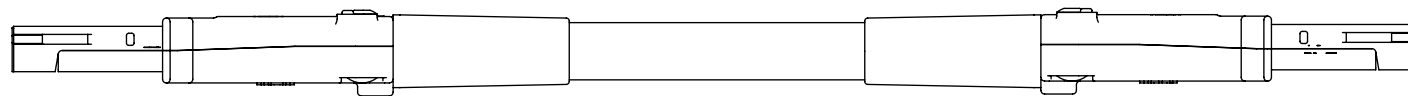
DESCRIPTION:  
 SEALED EPLSP CABLE ASSEMBLY

DWG. NO.  
 RCH-XXX-XXXX

BY: D. SCHMELZ 07/15/2010 SHEET 5 OF 8

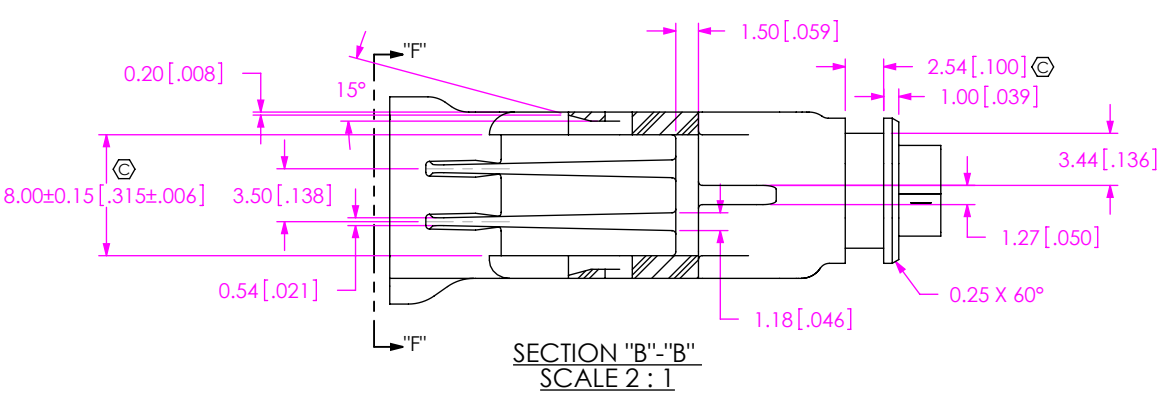
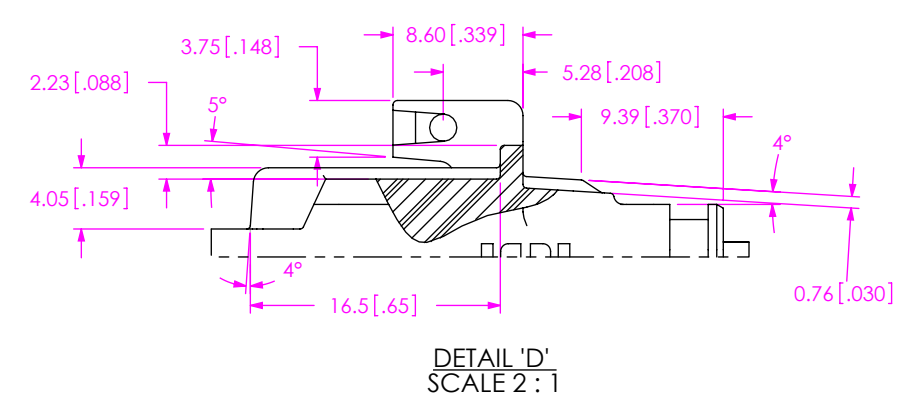
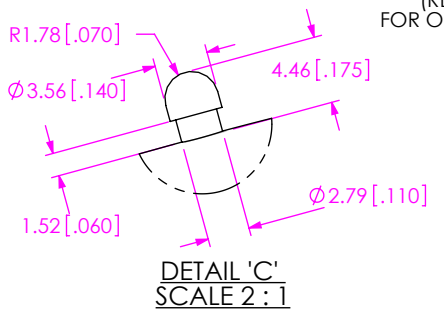
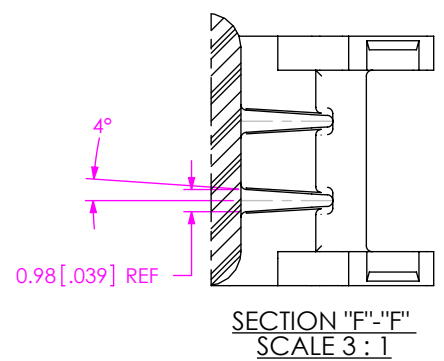
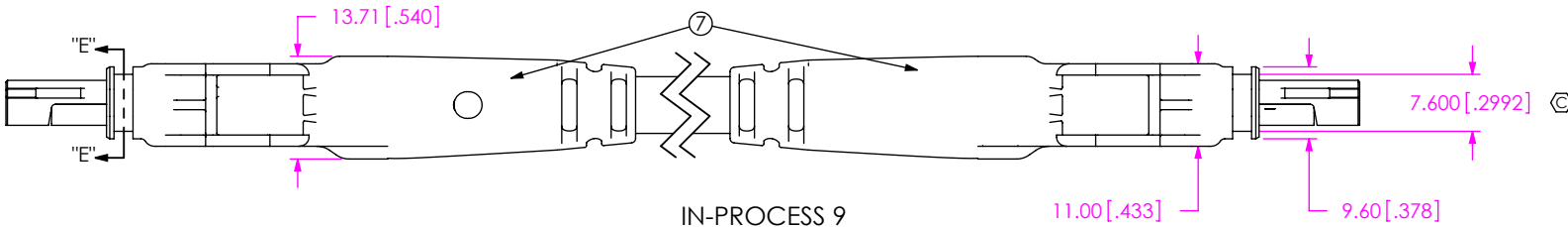
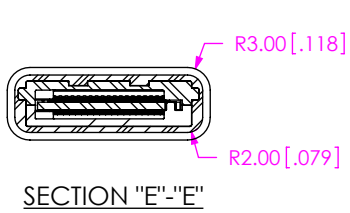
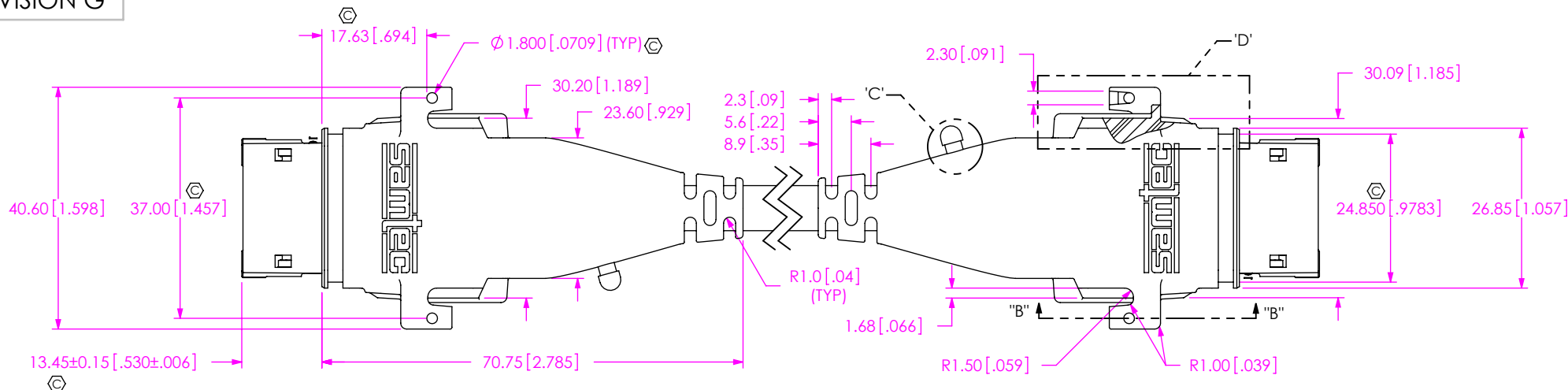


IN-PROCESS 8  
 A) ADD RVT-02.3-09.5-002  
 B) ADD ITEM 12, VCOV-EPLSP-ORG



IN-PROCESS 9  
 FORM RIVET

|   |   |   |
|---|---|---|
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|   | <p>DESCRIPTION:<br/>                 SEALED EPLSP CABLE ASSEMBLY</p>  | <p>DWG. NO.<br/>                 RCH-XXX-XXXX</p>   |
|   | <p>BY: D. SCHMELZ 07/15/2010</p>  | <p>SHEET 6 OF 8</p>   |



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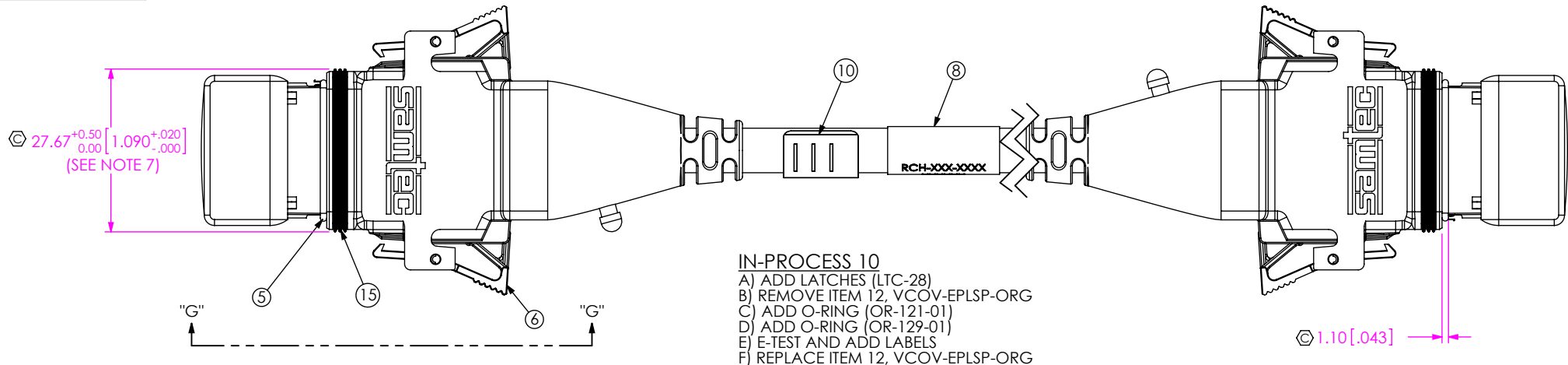
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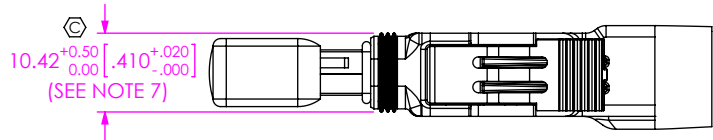
DWG. NO.  
RCH-XXX-XXXX

SHEET SCALE: 1:1

BY: D. SCHMELZ 07/15/2010 SHEET 7 OF 8



- IN-PROCESS 10  
 A) ADD LATCHES (LTC-28)  
 B) REMOVE ITEM 12, VCOV-EPLSP-ORG  
 C) ADD O-RING (OR-121-01)  
 D) ADD O-RING (OR-129-01)  
 E) E-TEST AND ADD LABELS  
 F) REPLACE ITEM 12, VCOV-EPLSP-ORG



SECTION "G"-"G"

TABLE 3 (PIN OUT)

| END 1 | SIGNAL | END 2 |      | END 1 | SIGNAL | END 2 |      |
|-------|--------|-------|------|-------|--------|-------|------|
| 1     | GND    | 1     |      | 20    | GND    | 20    |      |
| 2     | SIGNAL | 2     | PAIR | 21    | SIGNAL | 21    | PAIR |
| 3     | SIGNAL | 3     |      | 22    | SIGNAL | 22    |      |
| 4     | GND    | 4     |      | 23    | GND    | 23    |      |
| 5     | SIGNAL | 5     | PAIR | 24    | SIGNAL | 24    | PAIR |
| 6     | SIGNAL | 6     | PAIR | 25    | SIGNAL | 25    | PAIR |
| 7     | GND    | 7     |      | 26    | GND    | 26    |      |
| 8     | SIGNAL | 8     | PAIR | 27    | SIGNAL | 27    | PAIR |
| 9     | SIGNAL | 9     |      | 28    | SIGNAL | 28    |      |
| 10    | GND    | 10    |      | 29    | GND    | 29    |      |
| 11    | SIGNAL | 11    | PAIR | 30    | SIGNAL | 30    | PAIR |
| 12    | SIGNAL | 12    | PAIR | 31    | SIGNAL | 31    | PAIR |
| 13    | GND    | 13    |      | 32    | GND    | 32    |      |
| 14    | SIGNAL | 14    | PAIR | 33    | SIGNAL | 33    | P    |
| 15    | SIGNAL | 15    |      | 34    | SIGNAL | 34    | P    |
| 16    | GND    | 16    |      | 35    | GND    | 35    |      |
| 17    | SIGNAL | 17    | P    | 36    | SIGNAL | 36    | P    |
| 18    | SIGNAL | 18    | P    | 37    | N/C    | 37    |      |
| 19    | GND    | 19    |      | 38    | GND    | 38    |      |

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DO NOT SCALE DRAWING

DESCRIPTION:  
 SEALED EPLSP CABLE ASSEMBLY

DWG. NO.  
**RCH-XXX-XXXX**

SHEET SCALE: 1:1

BY: D. SCHMELZ 07/15/2010 SHEET 8 OF 8