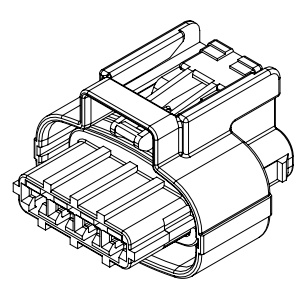
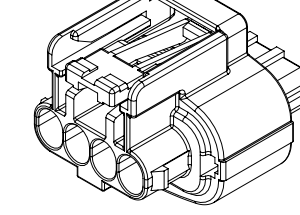


| 16           |     |     |         | 15  |               |                            |                | 14                |          |         |        | 13                |        |            |                   | 12 |  |  |  |
|--------------|-----|-----|---------|-----|---------------|----------------------------|----------------|-------------------|----------|---------|--------|-------------------|--------|------------|-------------------|----|--|--|--|
| PART NUMBERS |     |     |         |     | KEY<br>OPTION | ASSEMBLY PART NUMBER CHART |                |                   |          |         |        |                   |        |            |                   |    |  |  |  |
| APTIV        | REV | N/P | MVL     | REV |               | COMPONENTS                 |                |                   |          |         |        |                   |        |            |                   |    |  |  |  |
|              |     |     |         |     |               | ITEM 1                     |                | ITEM 2            |          |         | ITEM 3 |                   | ITEM 4 |            |                   |    |  |  |  |
|              |     |     |         |     |               | INSULATOR<br>IHOUS(NG)     |                | TPA<br>PA66 GF 35 |          |         |        | RING SEAL         |        | CPA (RED)  |                   |    |  |  |  |
|              |     |     |         |     |               | PA66 GF 35                 | COLOR          | APTIV             | MVL      |         |        | SILICON           |        | PA66 GF 35 |                   |    |  |  |  |
| 13841589     | 01  | AC  | F339700 | A   | A             | 33509826<br>BLACK          | DK GREY        | 33509815          | F129600  |         |        |                   |        |            |                   |    |  |  |  |
| 13856355     | 01  | -   | F619600 | A   | A             |                            | GREY           | 33509815          | F129600  |         |        |                   |        |            |                   |    |  |  |  |
| 33513451     | 01  | -   | F719600 | A   | B             | APTIV<br>33509827          | NATURAL        | 33509816          | F229600  |         |        | APTIV<br>33509795 |        |            | NO                |    |  |  |  |
| 33513452     | 01  | -   | F819600 | A   | C             |                            | TBD            | 33509817          | F329600  |         |        |                   |        |            |                   |    |  |  |  |
| 33513453     | 01  | -   | F919600 | A   | D             |                            | TBD            | 33509818          | F429600  |         |        |                   |        |            |                   |    |  |  |  |
| 33513454     | 02  | -   | F264310 | B   | A             |                            | MVL<br>F529600 | GREY              | 33509815 | F129600 |        |                   |        |            |                   |    |  |  |  |
| 33513455     | 02  | -   | F737310 | B   | B             |                            | NATURAL        | 33509816          | F229600  |         |        | MVL<br>C629600    |        |            |                   |    |  |  |  |
| -            | -   | -   | TBD     | -   | C             | BLACK                      | TBD            | 33509817          | F329600  |         |        | LT BLUE           |        |            | APTIV<br>33503756 |    |  |  |  |
| -            | -   | -   | TBD     | -   | D             |                            | TBD            | 33509818          | F429600  |         |        |                   |        |            |                   |    |  |  |  |
| 35059595     | 01  | AA  | -       | -   | A             | 33509826<br>BLACK          | DK GREY        | 33509815          | F129600  |         |        |                   |        |            | MVL<br>F752210    |    |  |  |  |

| ITEM<br>NO. | DESCRIPTION                        | PLATING<br>OR<br>COLOR | SUPPLIER     |          | APTIV<br>NUMBER | GRIP<br>CODE | WIRE<br>SIZE                          | WIRE INSULATION<br>DIAMETER<br>RANGE | MATERIAL/SPEC NO. |
|-------------|------------------------------------|------------------------|--------------|----------|-----------------|--------------|---------------------------------------|--------------------------------------|-------------------|
|             |                                    |                        | NAME         | NUMBER   |                 |              |                                       |                                      |                   |
|             |                                    |                        |              |          |                 |              |                                       |                                      |                   |
| 5           | 2.8mm SEALED SYSTEM TERMINAL (F)   | TIN                    | MVL          | 54001807 | 10810375        | 18           | 20-18 AWG<br>0.50-1.00mm <sup>2</sup> | 1.40mm-2.13mm                        | COPPER ALLOY / NA |
|             | 2.8mm SEALED SYSTEM TERMINAL (F)   | TIN                    | MVL          | 54001404 | 13627267        | 14           | 16-14 AWG<br>1.50-2.50mm <sup>2</sup> | 2.18mm-3.00mm                        | COPPER ALLOY / NA |
|             | 2.8mm SEALED SYSTEM TERMINAL (F)   | GOLD                   | MVL          | 54001811 | 13948955        | 18AU         | 20-18 AWG<br>0.50-1.00mm <sup>2</sup> | 1.40mm-2.13mm                        | COPPER ALLOY / NA |
|             | 2.8mm SEALED SYSTEM TERMINAL (F)   | GOLD                   | MVL          | 54001410 | 15470590        | 14AU         | 16-14 AWG<br>1.50-2.50mm <sup>2</sup> | 2.18mm-3.00mm                        | COPPER ALLOY / NA |
| 6           | 2.80mm SYSTEM CABLE SEAL<br>ROUND  | GREEN                  | MVL<br>(OSR) | F676000  | 13791654        | X            | 20-18 AWG<br>0.50-1.00mm <sup>2</sup> | 1.40mm-2.13mm                        | SILICONE          |
|             | 2.80mm SYSTEM CABLE SEAL<br>ROUND  | BLUE                   | MVL<br>(OSR) | F576000  | 13948585        |              | 16-14 AWG<br>1.50-2.50mm <sup>2</sup> | 2.18mm-2.80mm                        | SILICONE          |
|             | 2.80mm SYSTEM CABLE SEAL<br>ROUND  | YELLOW                 | MVL          | 60994034 | 10779161        |              | 2.5mm <sup>2</sup>                    | 2.70mm-3.00mm                        | SILICONE          |
| 7           | 2.80MM SYSTEM CAVITY PLUG<br>ROUND | WHITE                  | APTIV        | -        | 15305170        |              | OPTIONAL AS REQUIRED                  |                                      | SILICONE          |

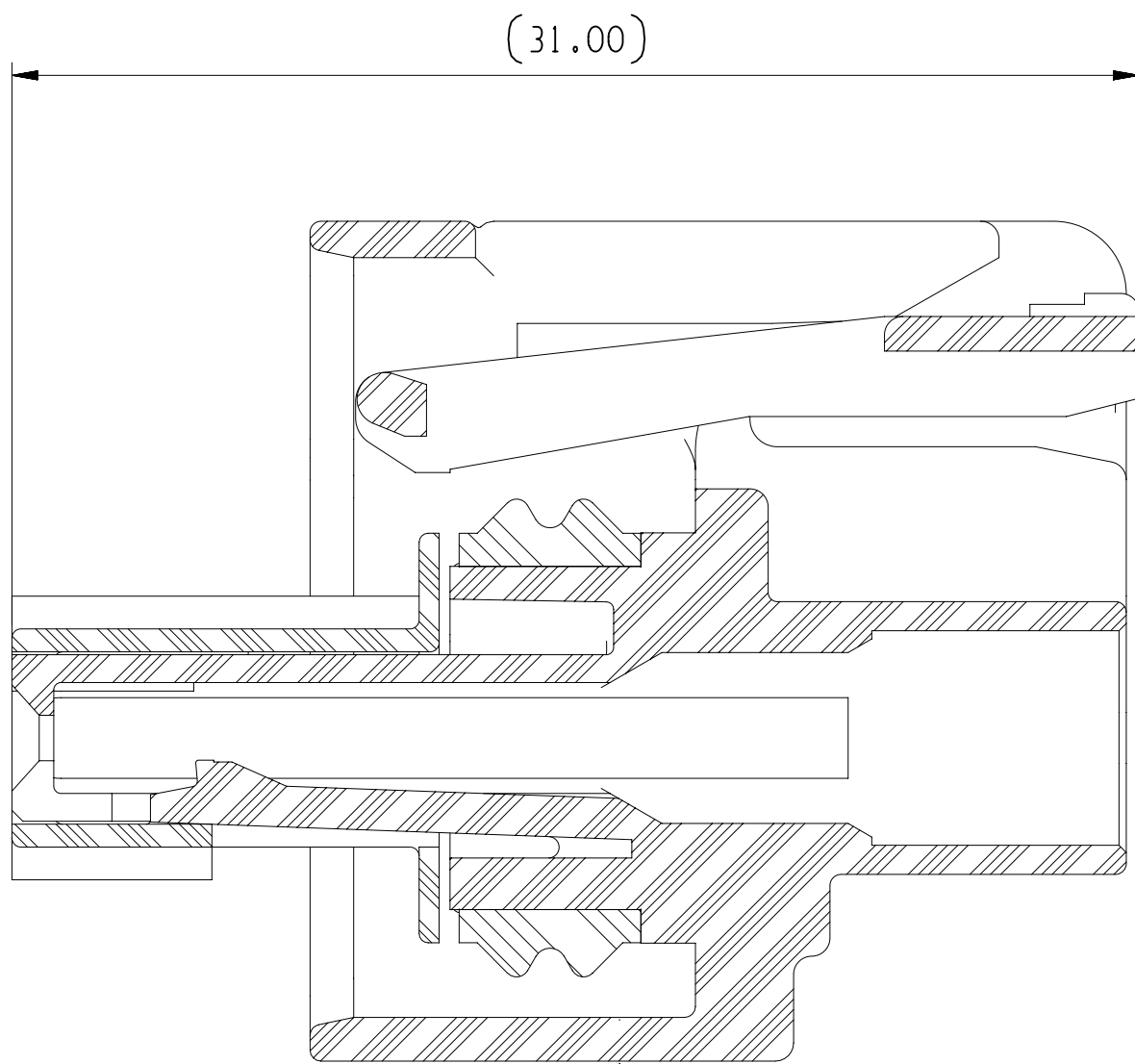
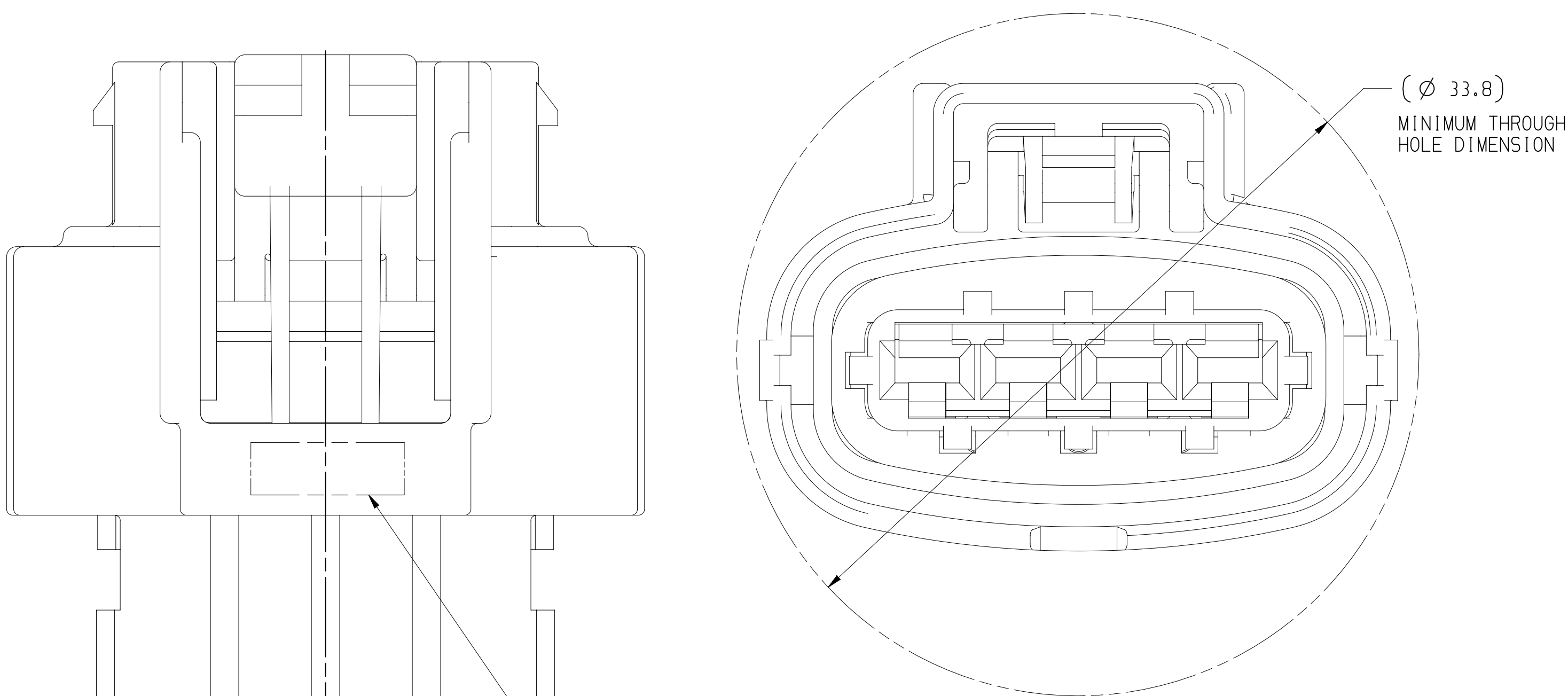


SCALE 1:1

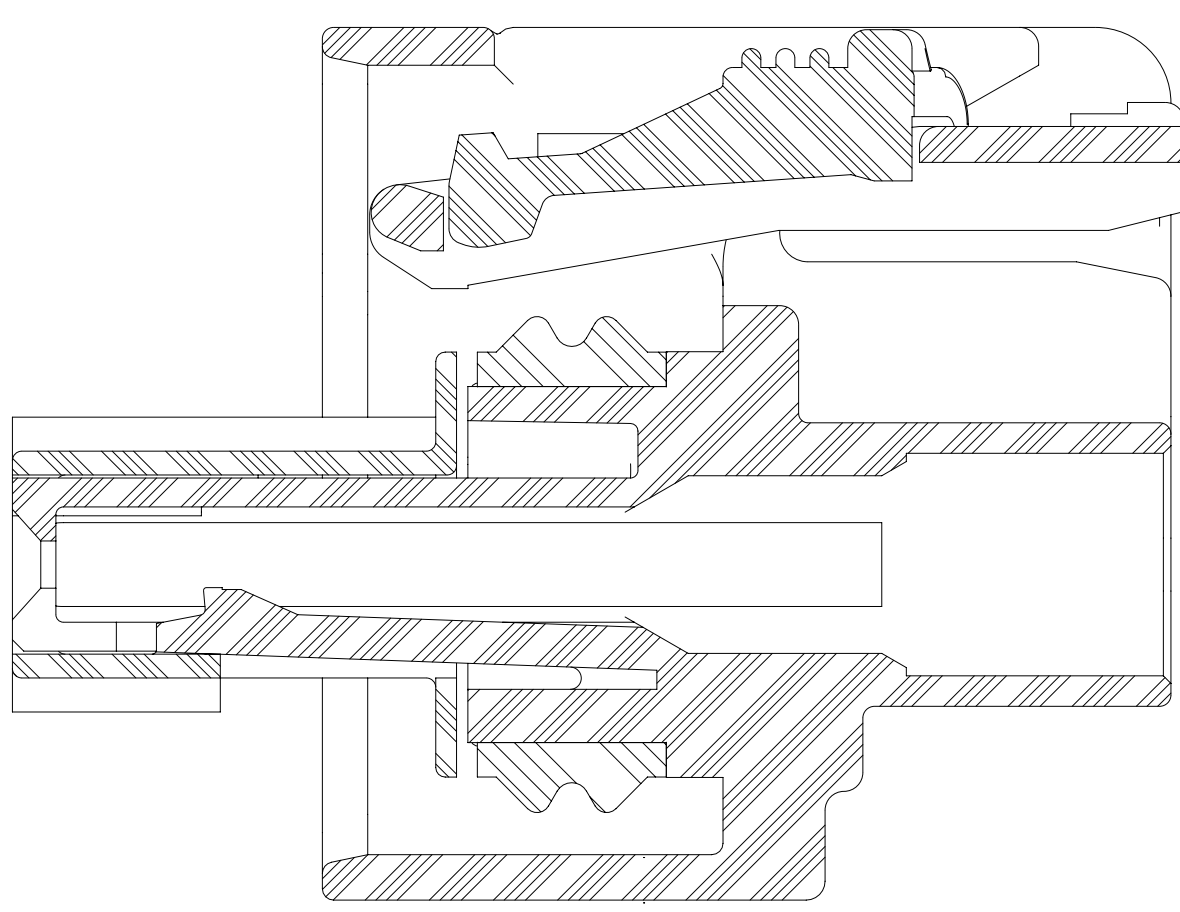
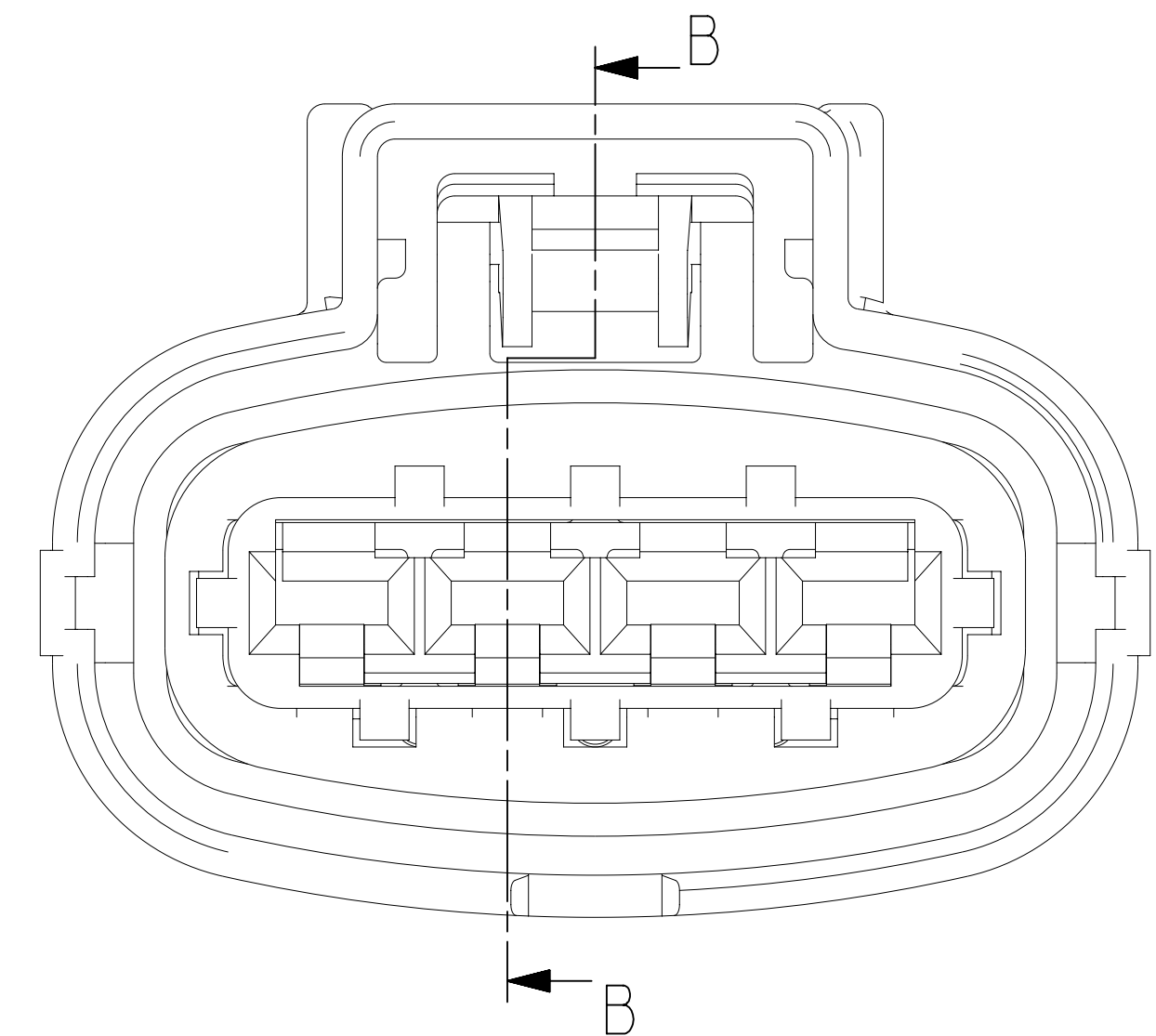


SCALE 1:1

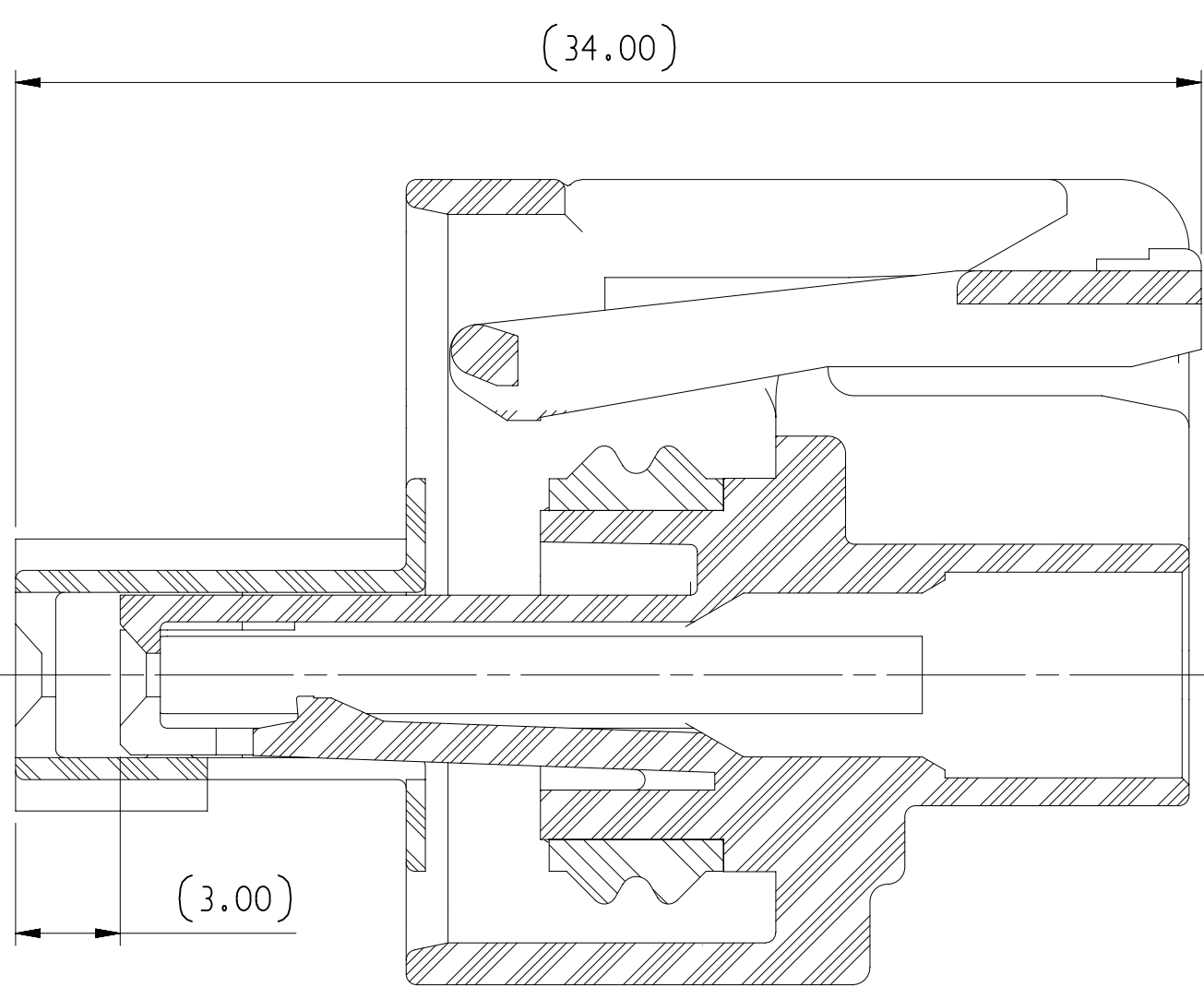
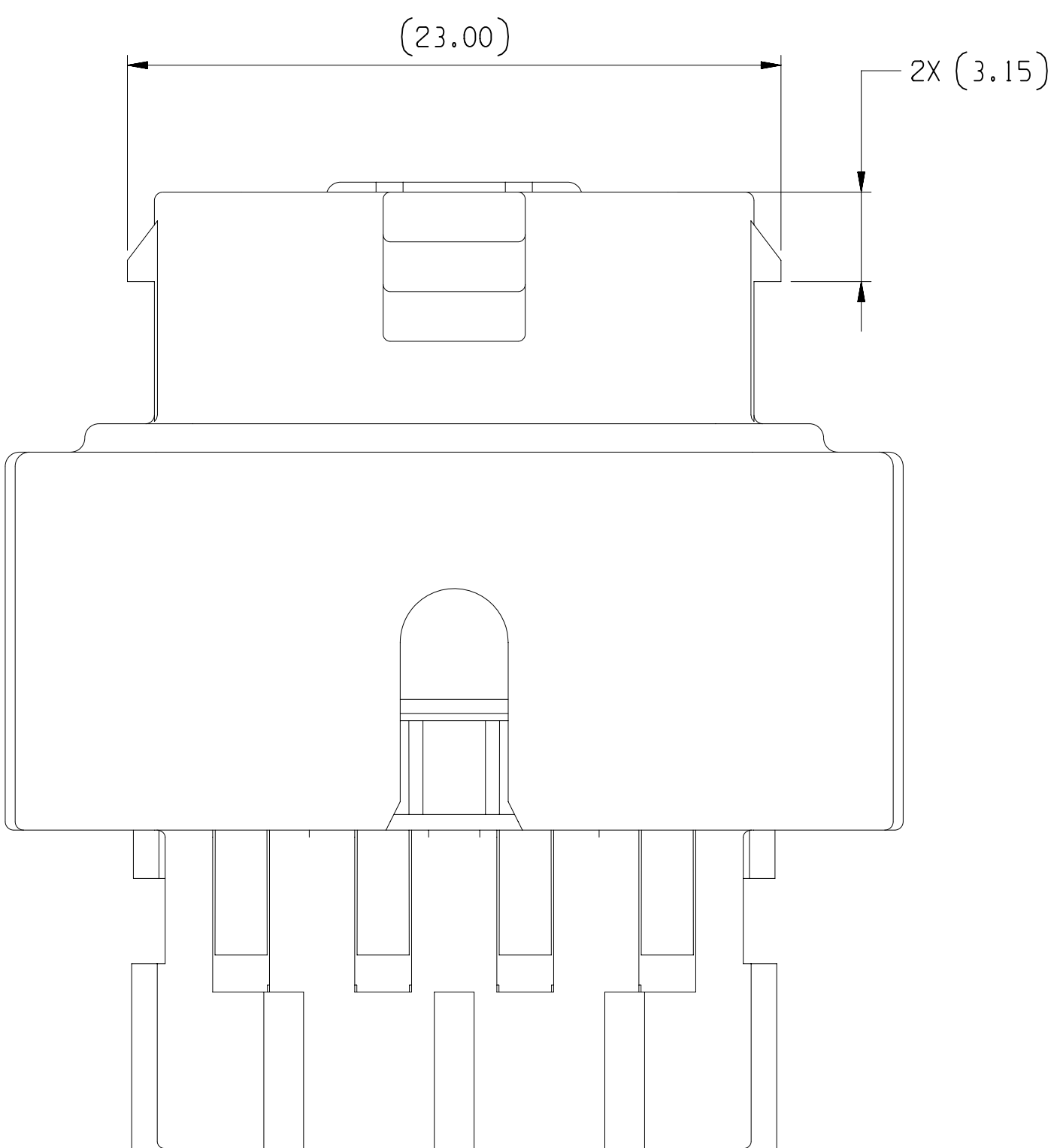
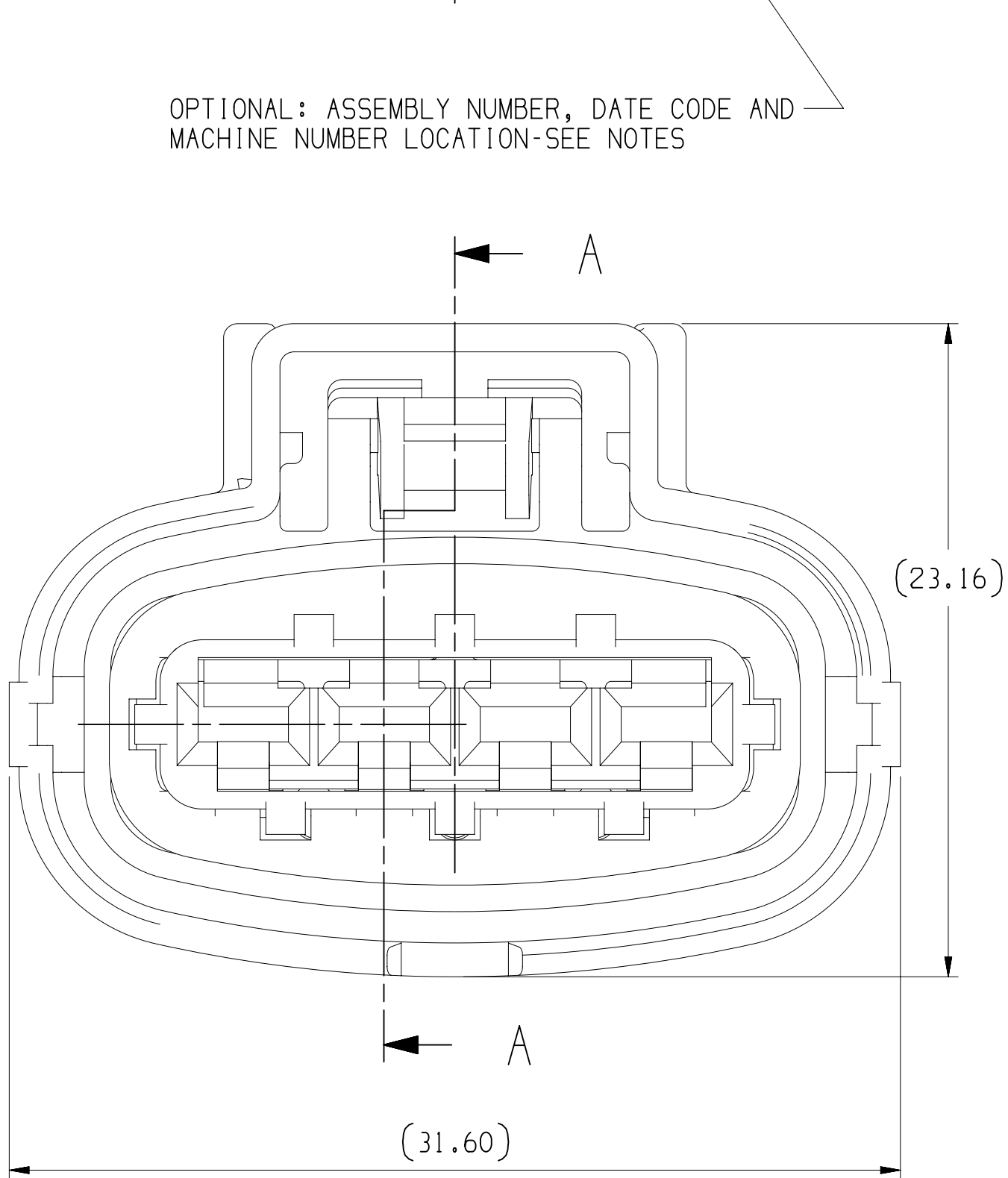
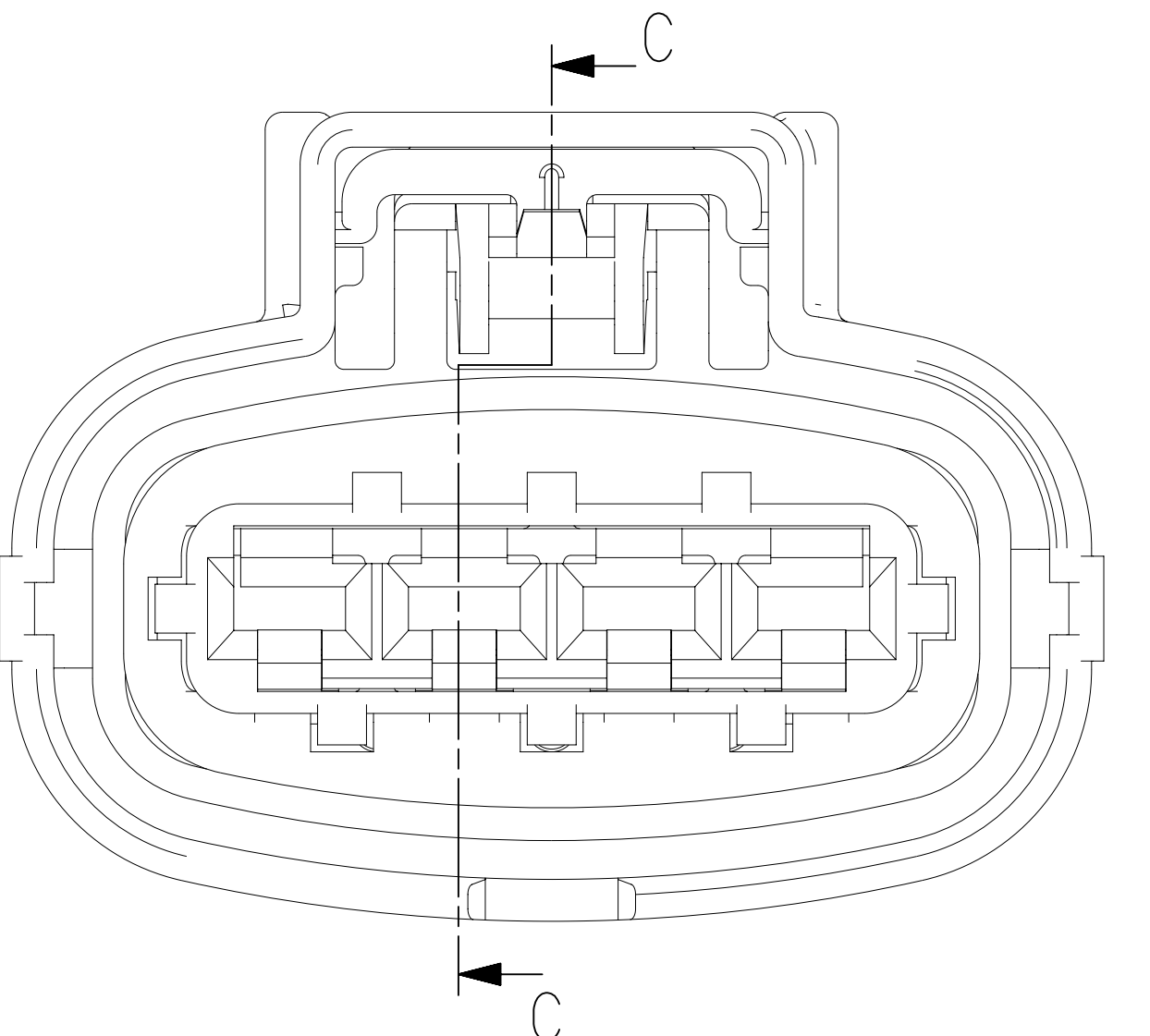
| DWG STATUS |     |     |     |     | REVISION HISTORY |                                                                            |  | AUTH |        | DR  |     | APV |  |
|------------|-----|-----|-----|-----|------------------|----------------------------------------------------------------------------|--|------|--------|-----|-----|-----|--|
| DATE       | STG | REV | N/P | CHG | ZONE             |                                                                            |  |      |        |     |     |     |  |
| 15MR17     | R   | 02  | -   | -   |                  | FILE TRANSLATED FROM MVL SYSTEM AND REDRAWN IN NX WITH MISSED DPN 13841589 |  |      | 435858 | SM  | SM  | VHG |  |
| 12AP17     | R   | 03  | -   | -   |                  | ADDED PART NUMBER 35059595                                                 |  |      | 566661 | MLR | JAA | VRG |  |
| 05DE24     | R   | 04  | -   | -   |                  | 13841589 & 35059595 - CORRECTED ITEM 1 (INSULATOR 33509826 WAS 33509526)   |  |      |        |     |     |     |  |



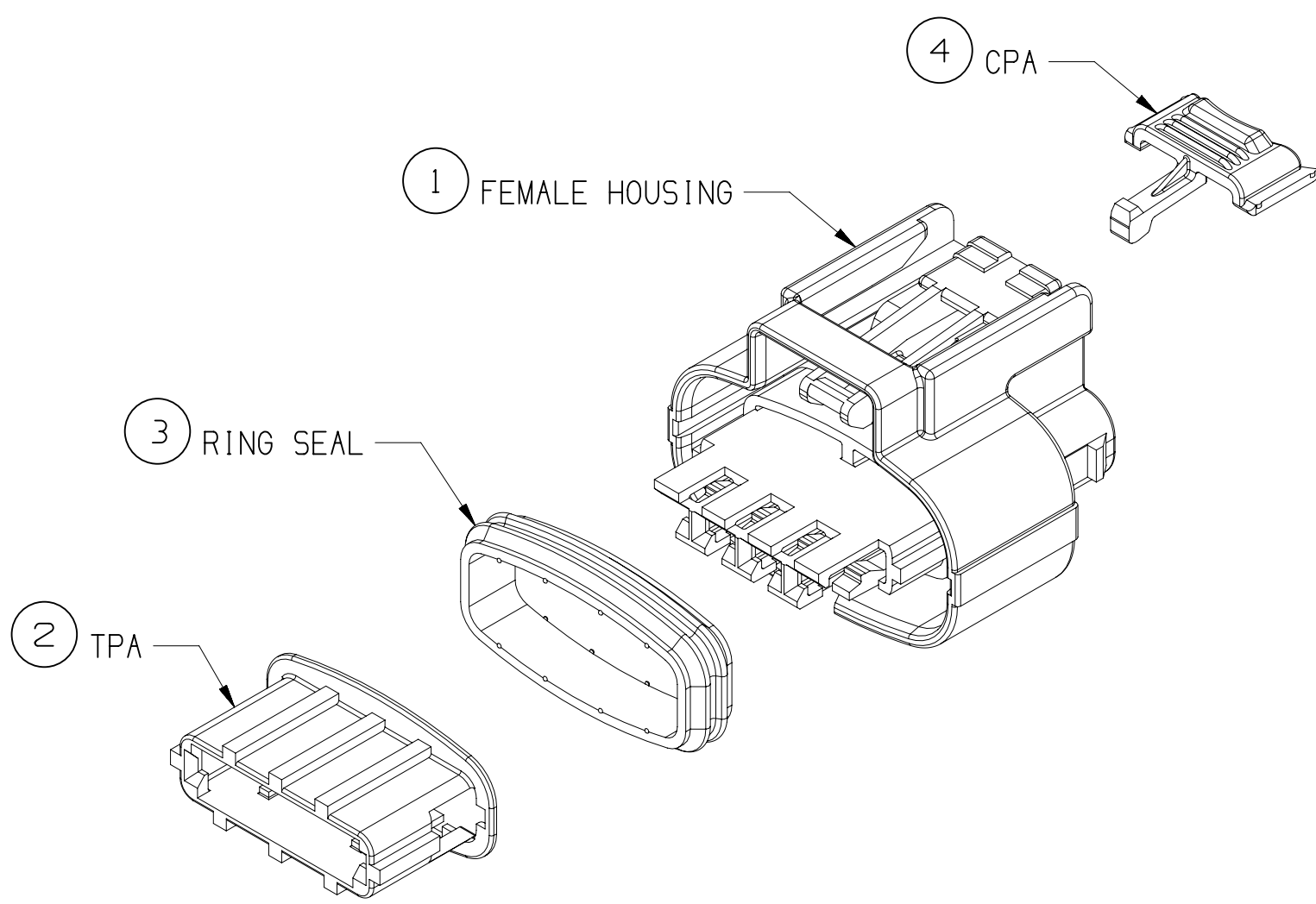
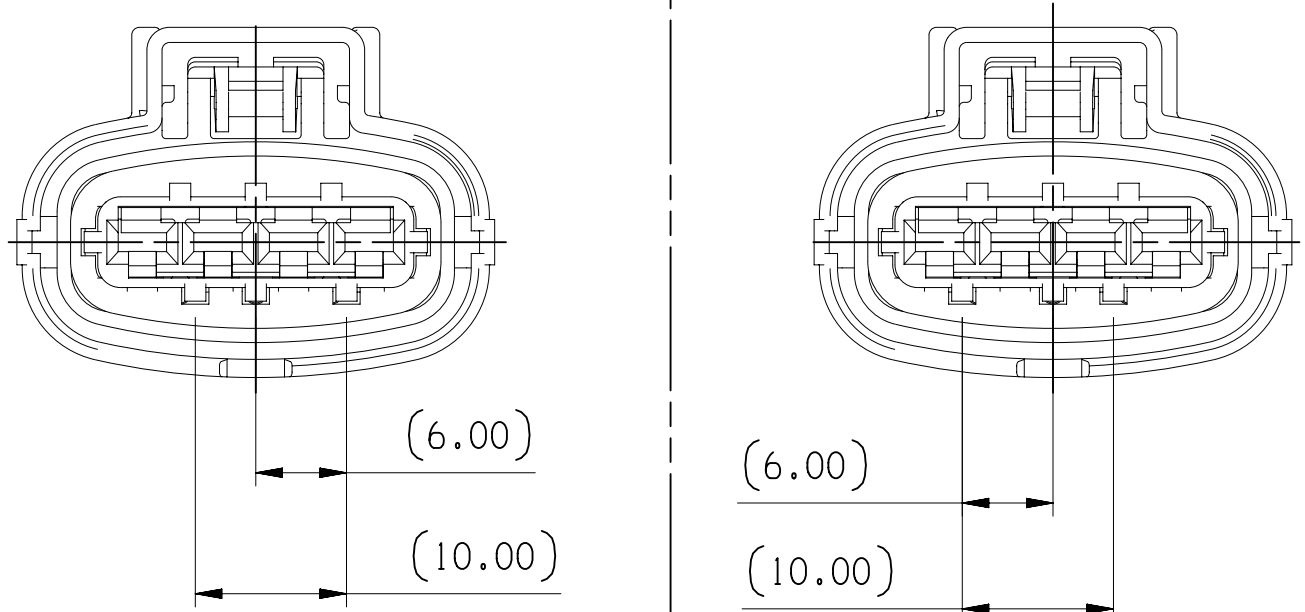
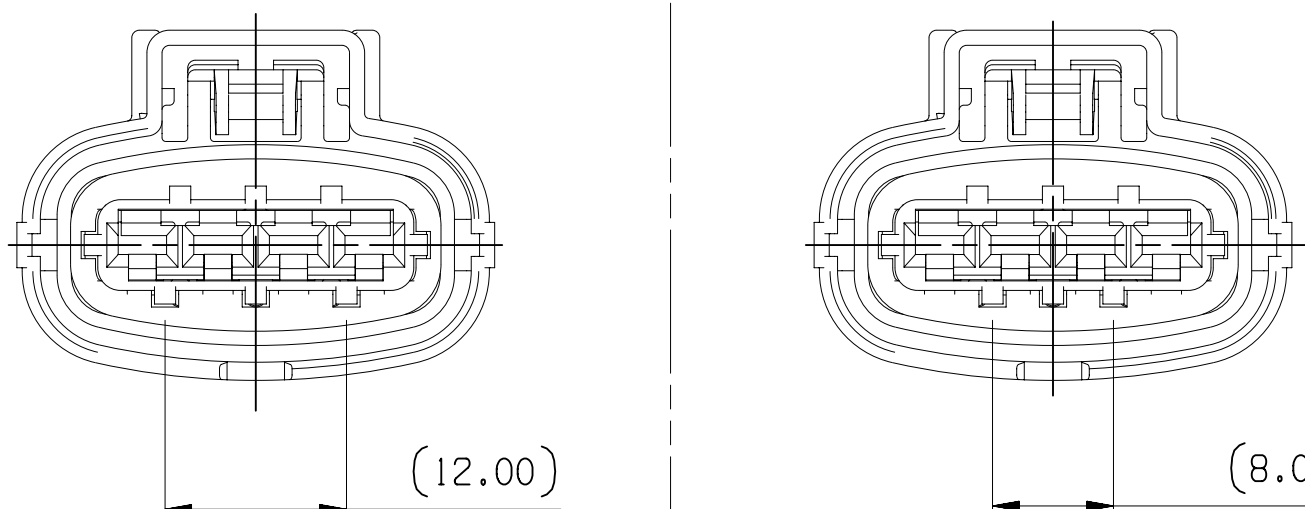
SECTION B-B  
TPA SHOWN IN FINAL LOCK POSITION



SECTION C-C  
SHOWN WITH OPTIONAL CPA



SECTION A-A  
TPA SHOWN IN PRE-LOCK POSITION



SCALE 2:1

- NOTES:
- VALIDATED TO SAE/USCAR-2 REV 5
  - VALIDATED TO THE FOLLOWING TEMP, VIBRATION, AND SEALING CLASSES:
    - SAE/USCAR-2 V3 T3 (125° C) WITH GOLD TERMINALS
    - SAE/USCAR-2 SEALING S3 T3 (125° C) (15016750 9K EQUIVALENT)
  - CONNECTOR MAY BE USED WITH THE FOLLOWING TERMINALS:
    - APTIV APTX 2.8 TERMINALS LISTED IN THE APPLICABLE COMPONENTS CHART ON THIS DRAWING WITH WIRE SIZES DEFINED IN NOTE 4
    - SEE APTIV DRAWING C15004-CUST FOR SPECIFIC TERMINAL DETAILS AND CRIMPING REQUIREMENTS
    - PLATING OF TERMINALS AND MATING DEVICE BLADES MUST BE COMPATIBLE SEE NOTE 5
    - EXCESSIVELY THICK TIN PLATING ON DEVICE BLADES IS NOT RECOMMENDED
  - CONNECTOR SYSTEM VALIDATED TO USCAR-2 REQUIREMENTS WITH THE FOLLOWING RANGE OF WIRE SIZES AND TYPES IN CONJUNCTION WITH APPROPRIATE COMPONENTS FOUND IN THE "APPLICABLE COMPONENTS" CHART:
    - AWG - WIRE SIZES: 20AWG - 14AWG
    - INSULATION DIAMETER: 1.70mm MIN - 2.77mm MAX
    - WIRE TYPE: MIL-123-A, MS-8288 OR EQUIVALENT (STRUCTURE AND PROPERTIES ACCORDING TO SAE J1128)
    - METRIC - WIRE SIZE: 0.50mm<sup>2</sup> - 2.50mm<sup>2</sup>
    - INSULATION DIAMETER: 1.40mm MIN - 3.00mm MAX
    - WIRE TYPE: FLR2X-A OR EQUIVALENT (STRUCTURE AND PROPERTIES ACCORDING TO ISO 6722)

CONTACT APTIV ENGINEERING REGARDING USE OF OTHER WIRE SIZES AND/OR TYPES

WIRE AND INSULATION TYPE MUST BE APPROPRIATE FOR TEMPERATURE CLASS & APPLICATION ENVIRONMENT

- CONNECTOR IS MATE COMPATIBLE WITH DEVICES CONFORMING WITH THE FOLLOWING INTERFACE SPECIFICATIONS:
  - BOSCH DWG 1928500000 VARIANT A
  - GM DWG 13115604

FOR CONSTRUCTION OF NEW DEVICES, SEE SHEET 2 FOR INTERFACE DETAILS.

NOTE: EXCESSIVELY THICK TIN PLATING ON DEVICE BLADES IS NOT RECOMMENDED, SEE EWCAP-001 (280-1001) BLADE SPECIFICATION FOR PREFERRED PLATING

DEVICE SUPPLIERS RESPONSIBLE FOR VALIDATING PERFORMANCE OF DEVICE TO SAE/USCAR-2 REV 5

- ANNUAL QUALITY REQUIREMENTS:
  - IT IS PERMISSIBLE TO PERFORM CONTINUOUS CONFORMANCE PER APTIV SPECIFICATION #A001 INSTEAD OF ANNUAL LAYOUT AND ANNUAL PV REQUIREMENTS OF ISO TS16949 AND SAE/USCAR-2 REV 5, FOR TERMINAL TO CONNECTOR AND TPA TO CONNECTOR ONLY.

- SOURCE ID, MOLD & CAVITY ID SIGNIFIES TOOL OWNERSHIP, FOR REFERENCE

- (K) INDICATES IN-PROCESS INSPECTION FOR MANUFACTURING DIMENSIONS OR SPECIFICATIONS.

|                                                                                                        |      |                                      |       |                             |       |
|--------------------------------------------------------------------------------------------------------|------|--------------------------------------|-------|-----------------------------|-------|
|                                                                                                        |      | N/A                                  |       | PROCESS SENSITIVE DIMENSION |       |
| DIMENSIONS ENCLOSED IN ( ) INDICATE<br>REFERENCE DIMENSIONS AND NO TOLERANCE<br>LIMITS ARE ESTABLISHED |      |                                      |       |                             |       |
| DIMENSIONAL RANGE (MM)                                                                                 |      |                                      |       | CHART E                     |       |
| FROM                                                                                                   | TO   | > 0                                  | > 30  | > 100                       | > 150 |
|                                                                                                        | > 20 | > 70                                 | > 100 | > 200                       | > 250 |
|                                                                                                        |      | TOLERANCE UNLESS OTHERWISE SPECIFIED |       | > 300                       | > 400 |
|                                                                                                        |      | ±0.15                                | ±0.2  | ±0.3                        | ±0.4  |
|                                                                                                        |      | ±0.5                                 | ±0.6  | ±0.8                        | ±1    |
|                                                                                                        |      | ANSI A9.19-1997                      |       |                             |       |