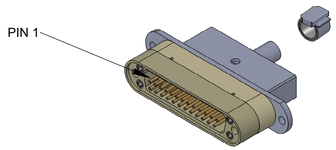
| REV. | DATE | DCN # | DRAWING TREE # |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

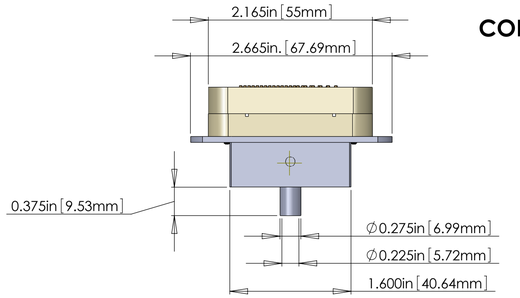
**NOTES CONTINUED:**

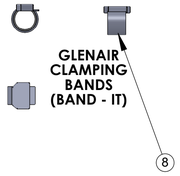
Ⓢ SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER AND REVISION ON NOTED SURFACE FOLLOWED ON THE NEXT LINE BY A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: DXXXXXXX-VY, S/N 001. A VIBRATORY TOOL MAY BE USED.

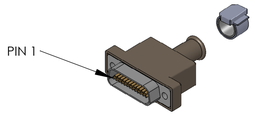
6. APPROXIMATE WEIGHT = X.XXX LB.
7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH, USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED.
8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.
9. ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELI-COIL PRODUCT CATALOG, HC2000, REV 4
10. ALL HELI-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL, AFTER DELIVERY OF FINISHED PARTS, USE NITRONIC 60 THREADED INSERTS.



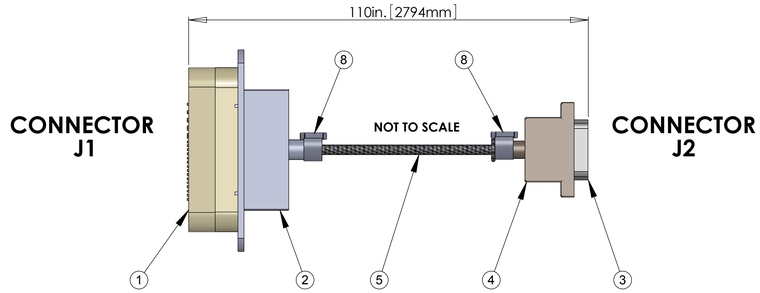

**CONNECTOR J1**

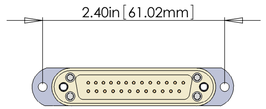


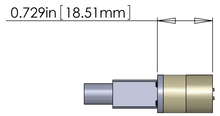



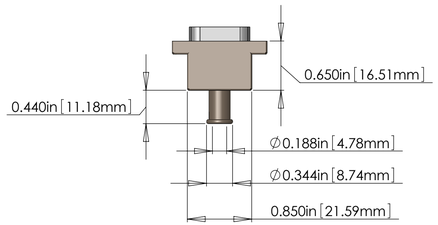



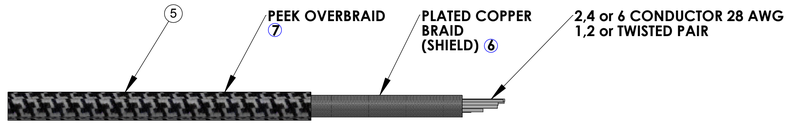

**CONNECTOR J2**

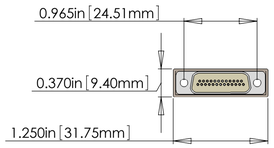


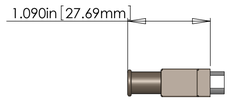




| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. | LENGTH |
|---|---|---|---|---|
| ① | TICOR PART # TS0086-1 | DB25 MALE CONNECTOR (J1) FOR UHV (PEEK) | 1 | |
| ② | | DB25 CONNECTOR BACKSHELL FOR UHV (STAINLESS) | | |
| ③ | TICOR PART # TS-0143-1 | MicroD25 FEMALE CONNECTOR (J2) FOR UHV | 1 | |
| ④ | BACKSHELL (included in PART # TS-0143-1) | MicroD25 CONNECTOR BACKSHELL FOR UHV | 1 | |
| ⑤ | C1 | 25 COND. (12 TW PAIR + 1 WIRE + SHIELD) CABLE WITH COPPER BRAID (SHIELD)⑥ AND PEEK OVERBRAID⑦ | 1 | 110in * |
| ⑥ | CONTINENTAL PART #24x4x40BC | COPPER BRAID - CONTINENTAL CORDAGE PART #24x4x40BC | | |
| ⑦ | PART #6759 | PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT | | |
| ⑧ | GLENAIR 600-052 | GLENAIR 600-052 STANDARD BRAID CLAMP (BAND - IT) | 2 | |

* NOTE: THE OVERALL LENGTH IS MEASURED FROM PIN TIP (25 PIN D-SUB) TO PIN TIP (25 PIN µD) OF THE CABLE.
Use whatever length is necessary for the internal wiring of the connectors and strip length to achieve the correct overall length.

**NOTES: ( UNLESS OTHERWISE SPECIFIED )**

1. MATERIAL:
   a. CONNECTOR SHELL - PEEK - VICTREX 450GL30.
   b. BACKSHELL - STAINLESS STEEL WITH VENT HOLE.
   c. CONTACTS - BERYLLIUM COPPER ALLOY C17300
      0.000050 MIN. GOLD OVER NICKEL
   d. HARDWARE: CORROSION RESISTANCE STEEL, PASSIVATED
   e. PEEK BRAID - PEEK CARBON LOADED

CABLE 25 COND. 29 AWG (51/46), WITH PFA INSULATION COONER WIRE #CZ1104
12 TWISTED PAIRS ( 4 TO 5 TWISTS PER INCH ) + 1 WIRE
OVERALL 40AWG SILVER PLATED COPPER BRAID 90% COVERAGE
OVERALL PEEK BRAID MIN. 50% COVERAGE
OVERALL CABLE O.D. WILL BE 0.240 IN.

## V25G-110 CABLE ASSEMBLY CIRCUIT SUMMARY
## V-DB25 M/S1-110-µD25 F/S1

| CABLE NAME | COND.-WIRE ID | TWISTED PAIR | LENGTH * | FROM | TO |
|---|---|---|---|---|---|
| V25G-110 | 25 COND. CABLE | (12 TOTAL) | 110 in. | Conn. J1 | Conn. J2 |
| C1 | SHIELD (COPPER BRAID) | | 110 in. | PIN 1, SHIELD & SHELL | PIN 1, SHIELD & SHELL |
| | W1 | SINGLE WIRE | 110 in. | PIN 1, SHIELD & SHELL | PIN 1, SHIELD & SHELL |
| | **W2** | **TP-1** | **110 in.** | **PIN 2** | **PIN 2** |
| | **W14** | | **110 in.** | **PIN 14** | **PIN 14** |
| | W3 | TP-2 | 110 in. | PIN 3 | PIN 3 |
| | W15 | | 110 in. | PIN 15 | PIN 15 |
| | **W4** | **TP-3** | **110 in.** | **PIN 4** | **PIN 4** |
| | **W16** | | **110 in.** | **PIN 16** | **PIN 16** |
| | W5 | TP-4 | 110 in. | PIN 5 | PIN 5 |
| | W17 | | 110 in. | PIN 17 | PIN 17 |
| | **W6** | **TP-5** | **110 in.** | **PIN 6** | **PIN 6** |
| | **W18** | | **110 in.** | **PIN 18** | **PIN 18** |
| | W7 | TP-6 | 110 in. | PIN 7 | PIN 7 |
| | W19 | | 110 in. | PIN 19 | PIN 19 |
| | **W8** | **TP-7** | **110 in.** | **PIN 8** | **PIN 8** |
| | **W20** | | **110 in.** | **PIN 20** | **PIN 20** |
| | W9 | TP-8 | 110 in. | PIN 9 | PIN 9 |
| | W21 | | 110 in. | PIN 21 | PIN 21 |
| | **W10** | **TP-9** | **110 in.** | **PIN 10** | **PIN 10** |
| | **W22** | | **110 in.** | **PIN 22** | **PIN 22** |
| | W11 | TP-10 | 110 in. | PIN 11 | PIN 11 |
| | W23 | | 110 in. | PIN 23 | PIN 23 |
| | **W12** | **TP-11** | **110 in.** | **PIN 12** | **PIN 12** |
| | **W24** | | **110 in.** | **PIN 24** | **PIN 24** |
| | W13 | TP-12 | 110 in. | PIN 13 | PIN 13 |
| | W25 | | 110 in. | PIN 25 | PIN 25 |

*** The length shown in this list is the overall length of the cable from connector end to connector end. Change length as necessary to compensate for the internal wiring of the connectors and strip length.**

| V-DB25 M/S1-110-µD25 F/S1 | | |
|---|---|---|
| STANDARD USE FOR THIS CABLE | | |
| SUBSYSTEM | AIR/VAC | STANDARD USE |
| | | |
| SUS | IN-VAC | QUAD SUSPENSION UIM |
| | | |

| NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DIMENSIONS ARE IN<br>TOLERANCES:<br>.XX ±<br>.XXX ±<br>ANGULAR ± ° | 1. INTERPRET DRAWING PER ASME Y14.5-1994.<br>2. REMOVE ALL SHARP EDGES, R.02 MIN.<br>3. DO NOT SCALE FROM DRAWING.<br>4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE. | | LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY | | PART NAME | CUSTOM CABLE SPECIFICATION V25G-110 V-DB25 M/S1-110-µD25 F/S1 | | |
| | MATERIAL | FINISH µinch | SYSTEM | SUB-SYSTEM SUS | DESIGNER J.HEEFNER AUG/17/2011 | SIZE D | DWG. NO. LIGO-D1002522- | REV. v2 |
| | | | NEXT ASSY | | DRAFTER E. BROWN AUG/17/2011 | | | |
| | | | | | CHECKER | | | |
| | | | | | APPROVAL | SCALE: 1:1 | PROJECTION: | SHEET 1 OF 1 |

D1002522_v2 cable V25G-110, PART PDM REV: , DRAWING PDM REV: