

NOTES CONTINUED:  
 3. 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: DXXXXXX-VY, S/N 001. VIBRATORY TOOL MAY BE USED. A  
 6. APPROXIMATE WEIGHT = X.XXXX LB.  
 7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364  
 8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.  
 9. ALL HELICOIL HOLES TO BE PREPARED ACCORDING TO ENHART HELICOIL PRODUCT CATALOG, HC2000, REV 4

10. ALL HELICOIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL AFTER DELIVERY OF FINISHED PARTS. USE NITRONIC 60 THREADED INSERTS.  
 11. ALL MATERIAL IS TO BE VIRGIN MATERIAL (I.E. NO WELD REPAIRS, PLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-E0900364.  
 12. SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER. FREE FROM SCRATCHES OR GROOVES.  
 13. PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E1000083 AFTER FABRICATION. THE INDICATED HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING TO APPROXIMATELY 25-30% HOLE DIAMETER CENTERED ON BOTH SIDES OF THE HOLE.  
 14. DIMENSIONS APPLY BEFORE PORCELAIN COATING UNLESS SPECIFIED.  
 15. BEND RADIUS: UNLESS OTHERWISE NOTED, THE BEND RADIUS SHOULD BE THE MINIMUM REQUIRED TO FORM WITHOUT CRACKING OR REQUIRING ADDITIONAL WORK WHEN FORMING. IN PARTICULAR IF SHEET METAL IS TO BE PORCELAIN COATED, THE BEND RADIUS SHALL BE A MINIMUM OF .12" OUTSIDE RADIUS OF BEND UNLESS OTHERWISE NOTED.

NOTES 13 and 14 DO NOT APPLY TO THIS PART

**V25AB-36 CABLE ASSEMBLY CIRCUIT SUMMARY**  
**V-DB25HD M/S1-36-MM7PINHD F/X**

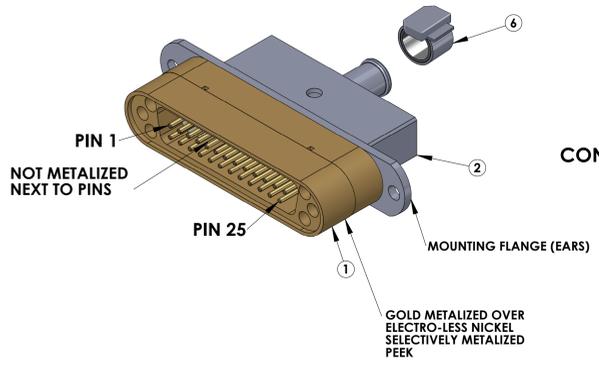
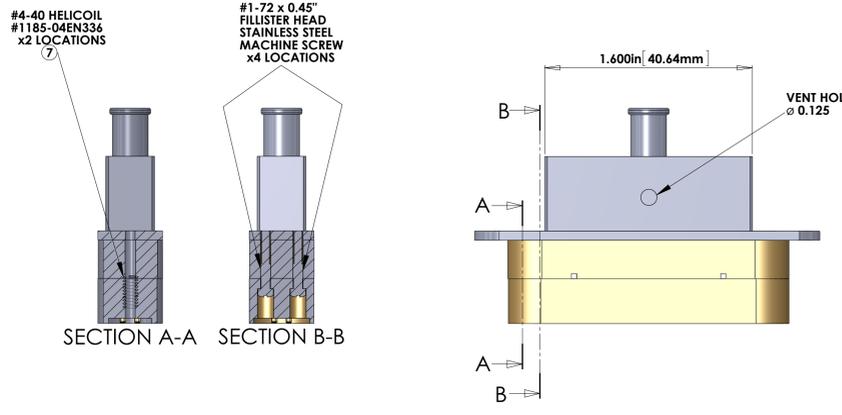
FROM

CONNECTOR J1 - 25 PIN SUBMINI-D CONNECTOR (GOLD METALIZED PEEK)

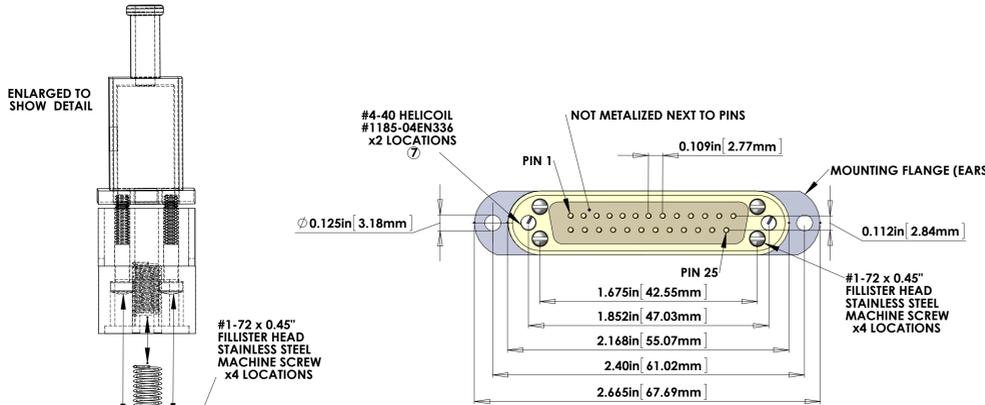
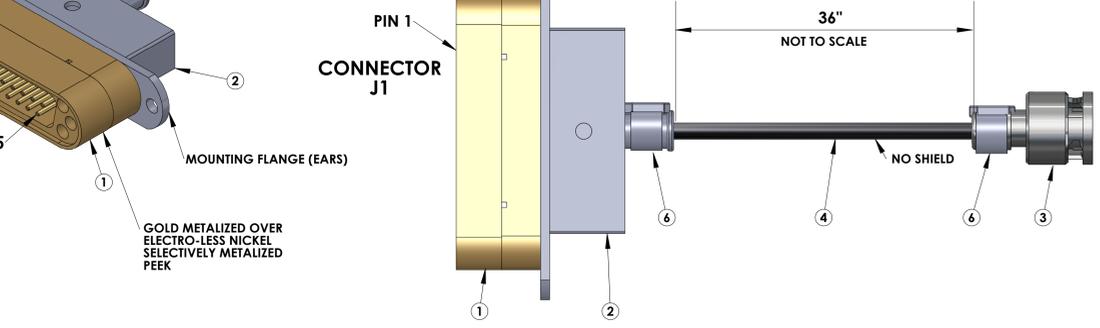
PIN	WIRE NAME	LENGTH *	TWISTED PAIR
1	(SHIELD) NOT CONNECTED		
13	WIRE 13	36"	TP-1
25	WIRE 25	36"	
12	WIRE 12	36"	
24	WIRE 24	36"	TP-2
11	WIRE 11	36"	
23	WIRE 23	36"	TP-3

PIN 2,14,3,15,4,16,5,17,6,18,7,19,8,20,9,21,10,22 AND SHIELD N/C (NOT CONNECTED)

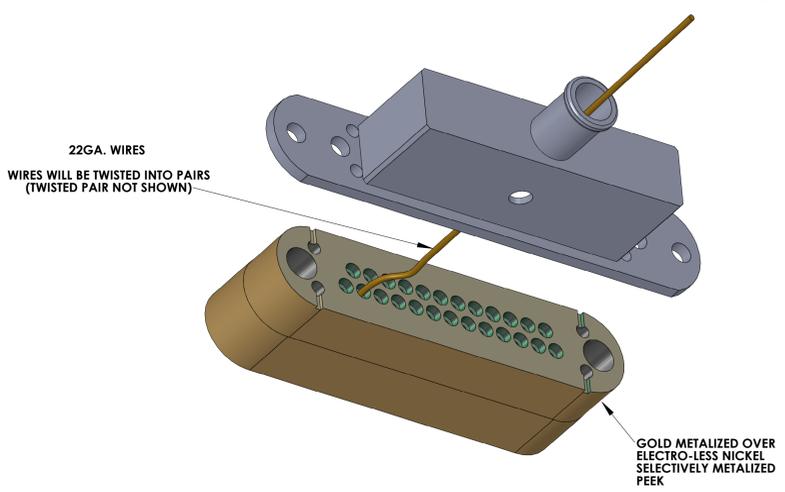
**CONNECTOR J1**



**CONNECTOR J1**

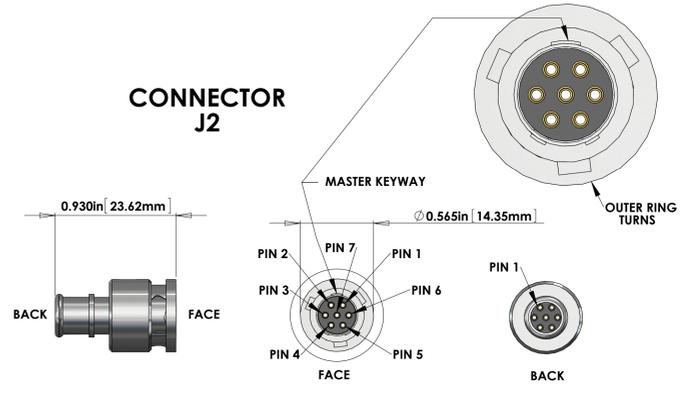


**INTERNAL WIRING (ONLY ONE WIRE SHOWN FOR CLARITY)**



REV.	DATE	DCN #	DRAWING TREE #

**CONNECTOR J2**



7 PIN MIGHTY MOUSE SOCKET CONNECTOR  
 GLENAIR # 803-001-06M6-7SN-598A  
 (MATES WITH GLENAIR # 803-003-07M6-7PN-598A)

**V25AB-36 CABLE ASSEMBLY CIRCUIT SUMMARY**

TO

CONNECTOR J2 - 7 PIN SOCKET MIGHTY MOUSE CONNECTOR

Pin	WIRE NAME	TWISTED PAIR	SIGNAL
SHELL	NOT CONNECTED		
1	WIRE 13	TP-1	+ COIL
2	WIRE 25		- COIL
3	WIRE 12	TP-2	+ CLOSED SENSOR
4	WIRE 24		- CLOSED SENSOR
5	WIRE 11	TP-3	+ OPEN SENSOR
6	WIRE 23		- OPEN SENSOR
7	N/C		N/C

**BILL OF MATERIALS**

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
1	TICOR #TS0149-25CG20BS1-225F (TICOR #TS0125-3) OR EQUIVALENT **	CUSTOM DB25 MALE CONNECTOR (J1) FOR UHV (GOLD METALIZED PEEK)	1	
2	GLENAIR # 803-001-06M6-7SN-598A	DB25 CONNECTOR BACKSHELL (WITH EARS) FOR UHV (STAINLESS STEEL) WITH Ø0.225" I.D. PORT	1	
3	GLENAIR # 803-001-06M6-7SN-598A	7 PIN MIGHTY MOUSE SOCKET CONNECTOR (J2)	1	
4	COONER WIRE # CZ2205 22GA PFA INSULATED BIOMEDICAL WIRE	6 COND. ( 3 TWISTED PAIR ) CABLE WITH (5) PEEK OVERBRAID, AND NO SHIELD	1	36in.*
5	PART #6759	PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT	1	
6	GLENAIR # 600-052 or BAND-IT # A10086	GLENAIR # 600-052 STANDARD BRAID CLAMP or BAND-IT PART # A10086 (0.240" WIDE) ("BAG OF 100" # A10089)	2	
7	HELICOIL #1185-04EN336	#4-40 Nitronic 60® HELICOIL 0.336" LENGTH	2	

\* NOTE: THE OVERALL LENGTH IS MEASURED FROM BRAID CLAMP (25 PIN D) TO BRAID CLAMP (7 PIN MIGHTY MOUSE) OF THE CABLE. USE WHATEVER LENGTH IS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH TO ACHIEVE THE CORRECT OVERALL LENGTH.  
 \*\* NOTE: SEE THE "TICOR CONNECTOR PART NUMBER BUILDER" DCC#D1000219 FOR DETAILS ON THIS PART NUMBER.

**NOTES: ( UNLESS OTHERWISE SPECIFIED )**

- A. MATERIAL:
  - a. J1 - CONNECTOR SHELL - GOLD OVER ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK VICTREX 450GL30.
  - b. BACKSHELL - STAINLESS STEEL WITH VENT HOLE.
  - c. CONTACTS - BERYLLIUM COPPER ALLOY C17300, 0.00050 MIN. GOLD OVER NICKEL.
  - d. HARDWARE: STAINLESS STEEL, PASSIVATED.
  - e. PEEK BRAID - PEEK VICTREX GRADE TDS-450CA30 CARBON LOADED.
- B. CABLE 6 COND. 22 AWG, ( 150 STRD 44 AWG ) WITH PFA INSULATION. 3 TWISTED PAIRS ( 4 TO 5 TWISTS PER INCH ). OVERALL PEEK BRAID MIN. 50% COVERAGE. OVERALL CABLE O.D. WILL BE APPROX. 0.240 IN.
- C. CONNECTORS WILL BE SUPPLIED WITH HARDWARE.

**TEST LIST**

FROM	TO
J1	J2
PIN	PIN
N/C	J2 - SHELL
J1 - SHELL	NOT CONNECTED
J1 - 13	J2 - 1
J1 - 25	J2 - 2
J1 - 12	J2 - 3
J1 - 24	J2 - 4
J1 - 11	J2 - 5
J1 - 23	J2 - 6
NOT CONNECTED	J2 - 7

**ISC TRANSMON BEAM DIVERTER CABLE**  
**SUSPENDED TRANSMON TABLE TO BEAM DIVERTER**

V25AB-36 - V-DB25HD M/S1-36-MM7PINHD F/X

STANDARD USE FOR THIS CABLE

SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	TRANSMON BEAM DIVERTER

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

1. INTERPRET DRAWING PER ASME Y14.5-1994  
 2. REMOVE ALL SHARP EDGES, .005-.015, FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELY R.02 FOR SHEET METAL PARTS.  
 3. DO NOT SCALE FROM DRAWING.  
 4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

DIMENSIONS ARE IN: .XX ± .XXX ±

TOLERANCES: .XX ± .XXX ±

ANGULAR ± °

MATERIAL: FINISH: µinch

SYSTEM: SUB-SYSTEM: ISC

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PART NAME: CUSTOM CABLE SPECIFICATION V25AB-36

DESIGNER: R. ABBOTT JUL/02/2012 SIZE DWG. NO. E D1000237

DRAFTER: E. BROWN JUL/02/2012

CHECKER: APPROVAL:

SCALE: 2:1 PROJECTION: SHEET 1 OF 1

REV. v6