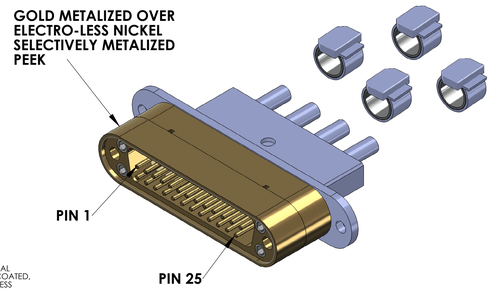
REV.	DATE	DCN #	DRAWING TREE #

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. REFER TO LIGO-E0900364
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.
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 GOUGES.
13. PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E1000083 AFTER FABRICATION. THE INDICATED HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING TO APPROXIMATELY 2.5-3X 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.



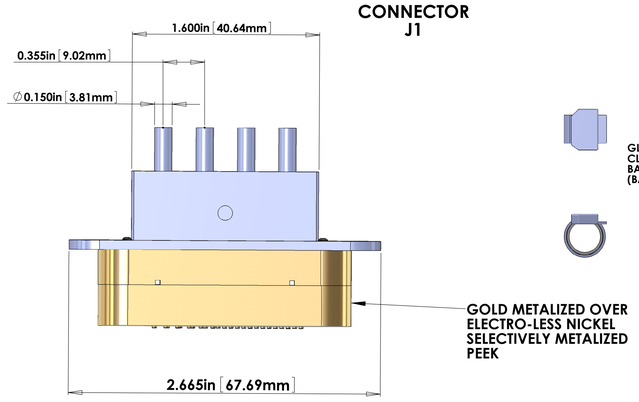
V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY
V-DB25 M/S1-10,5,10,5-4_u9D F/S

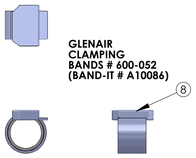
FROM

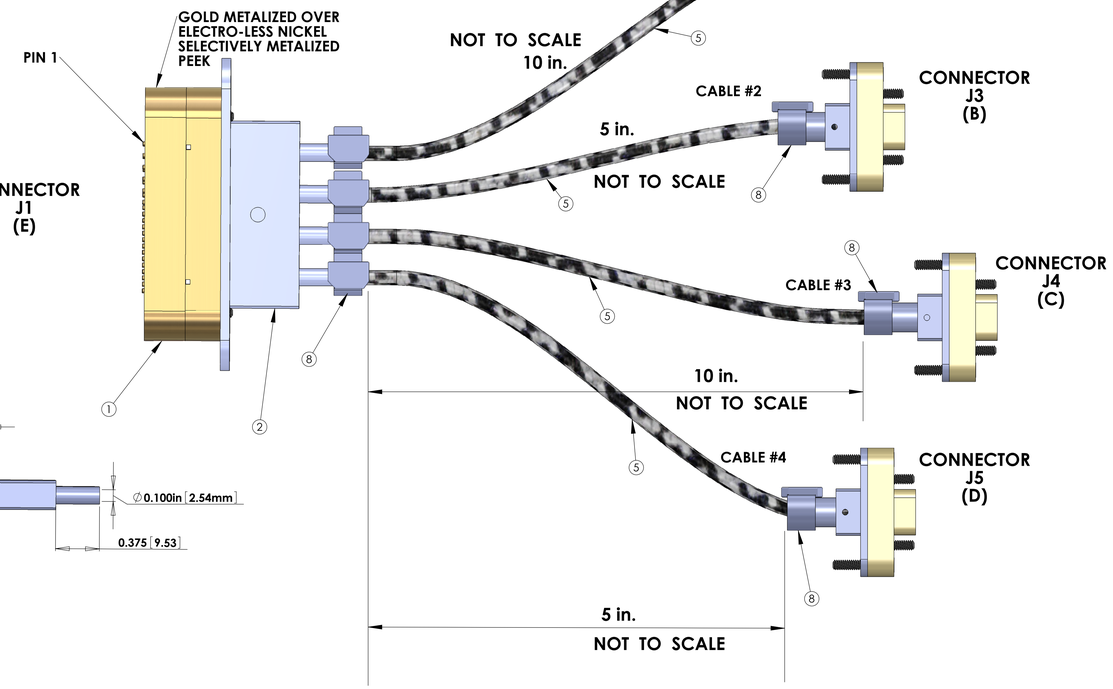
CONNECTOR J1 - 25 PIN MALE SUBMINI_D CONNECTOR (METALIZED PEEK)

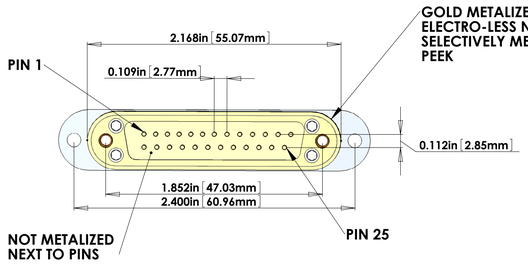
PIN	WIRE NAME	LENGTH	TWISTED PAIR
1, SHELL	(SHIELD)		
1, SHELL	(SHIELD)	CABLE 1 (A) 10in. *	(SHIELD)
14	**(CABLE 1) WIRE 14**		**TP-1**
2	**(CABLE 1) WIRE 2**		
15	(CABLE 1) WIRE 15		TP-2
3	(CABLE 1) WIRE 3		
16	**(CABLE 1) WIRE 16**		**TP-3**
4	**(CABLE 1) WIRE 4**		
1, SHELL	(SHIELD)	CABLE 2 (B) 5in. *	(SHIELD)
17	(CABLE 2) WIRE 17		TP-4
5	(CABLE 2) WIRE 5		
18	**(CABLE 2) WIRE 18**		**TP-5**
6	**(CABLE 2) WIRE 6**		
19	(CABLE 2) WIRE 19		TP-6
7	(CABLE 2) WIRE 7		
1, SHELL	(SHIELD)	CABLE 3 (C) 10in. *	(SHIELD)
20	**(CABLE 3) WIRE 20**		**TP-7**
8	**(CABLE 3) WIRE 8**		
21	(CABLE 3) WIRE 21		TP-8
9	(CABLE 3) WIRE 9		
22	**(CABLE 3) WIRE 22**		**TP-9**
10	**(CABLE 3) WIRE 10**		
1, SHELL	(SHIELD)	CABLE 4 (D) 5in. *	(SHIELD)
23	(CABLE 4) WIRE 23		TP-10
11	(CABLE 4) WIRE 11		
24	**(CABLE 4) WIRE 24**		**TP-11**
12	**(CABLE 4) WIRE 12**		
25	(CABLE 4) WIRE 25		TP-12
13	(CABLE 4) WIRE 13		

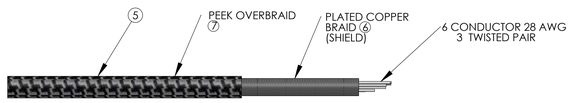
CONNECTOR J1











V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J2 - 9 PIN FEMALE MICRO_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	SHIELD	SHIELD
1	(CABLE 1) WIRE 14	PHOTO DIODE CATHODE - (PD-K)
6	(CABLE 1) WIRE 2	PHOTO DIODE ANODE + PD-A)
2	(CABLE 1) WIRE 15	LED ANODE + (LED-A)
7	(CABLE 1) WIRE 3	LED CATHODE - (LED-K)
4	(CABLE 1) WIRE 16	FN
9	(CABLE 1) WIRE 4	ST

V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J3 - 9 PIN FEMALE MICRO_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	SHIELD	SHIELD
1	(CABLE 2) WIRE 17	PHOTO DIODE CATHODE - (PD-K)
6	(CABLE 2) WIRE 5	PHOTO DIODE ANODE + (PD-A)
2	(CABLE 2) WIRE 18	LED ANODE + (LED-A)
7	(CABLE 2) WIRE 6	LED CATHODE - (LED-K)
4	(CABLE 2) WIRE 19	FN
9	(CABLE 2) WIRE 7	ST

V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J4 - 9 PIN FEMALE MICRO_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	SHIELD	SHIELD
1	(CABLE 3) WIRE 20	PHOTO DIODE CATHODE - (PD-K)
6	(CABLE 3) WIRE 8	PHOTO DIODE ANODE + (PD-A)
2	(CABLE 3) WIRE 21	LED ANODE + (LED-A)
7	(CABLE 3) WIRE 9	LED CATHODE - (LED-K)
4	(CABLE 3) WIRE 22	FN
9	(CABLE 3) WIRE 10	ST

V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY

TO

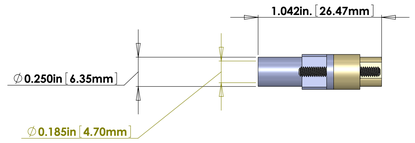
CONNECTOR J5 - 9 PIN FEMALE MICRO_D CONNECTOR (PEEK)

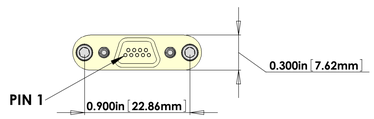
PIN	WIRE NAME	SIGNAL
SHELL	SHIELD	SHIELD
1	(CABLE 4) WIRE 23	PHOTO DIODE CATHODE - (PD-K)
6	(CABLE 4) WIRE 11	PHOTO DIODE ANODE + (PD-A)
2	(CABLE 4) WIRE 24	LED ANODE + (LED-A)
7	(CABLE 4) WIRE 12	LED CATHODE - (LED-K)
4	(CABLE 4) WIRE 25	FN
9	(CABLE 4) WIRE 13	ST

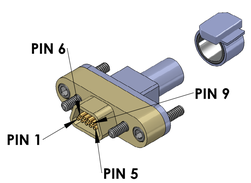
BILL OF MATERIALS

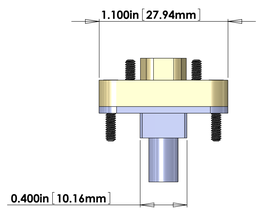
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
①	TICOR #TS0125-3	DB25 MALE CONNECTOR (J1) FOR UHV (PEEK)	1	
②		DB25 CONNECTOR BACKSHELL FOR UHV (STAINLESS)		
③	TICOR #TS0094 WITH FLYING LEADS	DB9 (DE9) FEMALE CONNECTOR (J2,J3,J4,J5) FOR UHV (PEEK)	4	
④		DB9 CONNECTOR BACKSHELL FOR UHV (STAINLESS)		
⑤	CABLE INCLUDING COONER WIRE # CZ1105 + ⑥ + ⑦	6 COND. (3 TWISTED PAIR) CABLE (AND COPPER BRAID (SHIELD)⑥. AND PEEK OVERBRAID)⑦.	4	CABLE 1 10in.* CABLE 2 5in.* CABLE 3 10in.* CABLE 4 5in.*
⑥	CONTINENTAL PART #24x3x40BC	COPPER BRAID - CONTINENTAL CORDAGE PART #24x3x40BC	4	
⑦	PART #6759	PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT	4	
⑧	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)	8	

* NOTE: THE OVERALL LENGTH IS MEASURED FROM BAND CLAMP ("CABLE SIDE" EDGE) (25 PIN) TO BAND CLAMP ("CABLE SIDE" EDGE) (9 PIN) OF THE CABLE. Use whatever length is necessary for the internal wiring of the connectors and strip length to achieve the correct overall length.









ISC TIP TILT CABLE
SEISMIC TABLE TO TIP TILT OSEMS
V-DB25 M/S1-10,5,10,5-4_u9D F/S

STANDARD USE FOR THIS CABLE

SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	TT TIP TILT OSEMS

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. MATERIAL: a. CONNECTOR SHELL - PEEK VICTREX GRADE TDS-450G.
2. b. BACKSHELL - STAINLESS STEEL WITH 4 PORTS AND VENT HOLE.
   c. CONTACTS - BERYLLIUM COPPER ALLOY C17300
   0.000050 MIN. GOLD OVER NICKEL
   d. HARDWARE: CORROSION RESISTANCE STEEL, PASSIVATED
   e. PEEK BRAID - PEEK VICTREX GRADE TDS-450CA30 CARBON LOADED
3. CABLE 6 COND. 28 AWG. (65 STRD 46 AWG) WITH WITH PFA INSULATION
   3 TWISTED PAIRS (4 TO 5 TWISTS PER INCH)
   OVERALL 40AWG COPPER BRAID 90% COVERAGE
   OVERALL PEEK BRAID MIN. 50% COVERAGE
   OVERALL CABLE O.D. WILL BE APPROX. 0.240 IN.

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)		LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	PART NAME	CUSTOM CABLE SPECIFICATION V25N-10-5-10-5	
DIMENSIONS ARE IN	1. INTERPRET DRAWING PER ASME Y14.5-1994. 2. REMOVE ALL SHARP EDGES, .005-.015. FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELEY 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.	SYSTEM / SUB-SYSTEM	DESIGNER	OCT/04/2011	SIZE: E
TOLERANCES: .XX ± .XXX ±			DRAFTER: E. BROWN	OCT/04/2011	DWG. NO.: D1000228
ANGULAR ± °	MATERIAL: Material <not specified> FINISH: µinch	NEXT ASSY	CHECKER		REV.: v5
			APPROVAL		SCALE: 2:1 PROJECTION: SHEET 1 OF 1

D1000228_v5 cable V25N-10_5-10_5 PART FDM REV_ (DRAWING FDM REV)