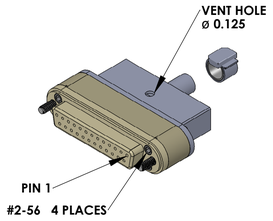
REV.	DATE	DCN #	DRAWING TREE #

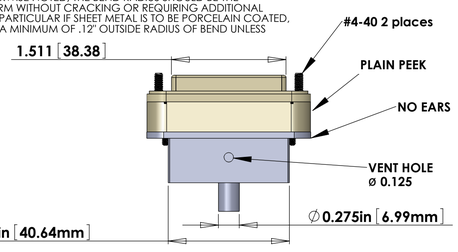
NOTES CONTINUED:

Ⓢ 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.

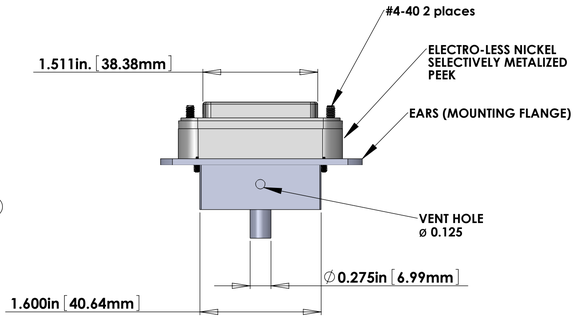
6. APPROXIMATE WEIGHT = X.XXX LB.
7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH, USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364
8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.
9. ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART 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.

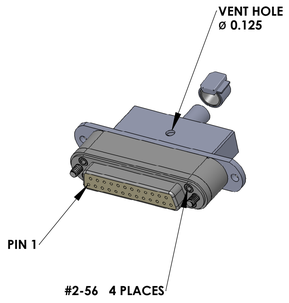
CONNECTOR J1

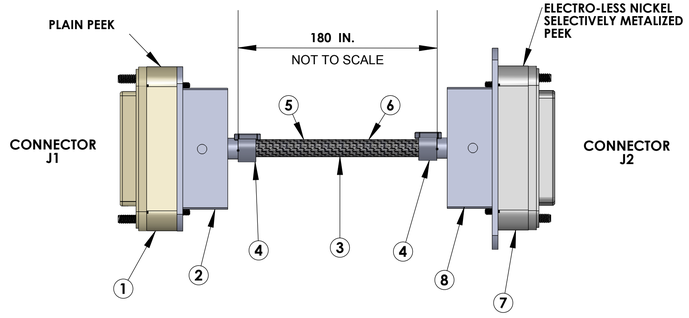


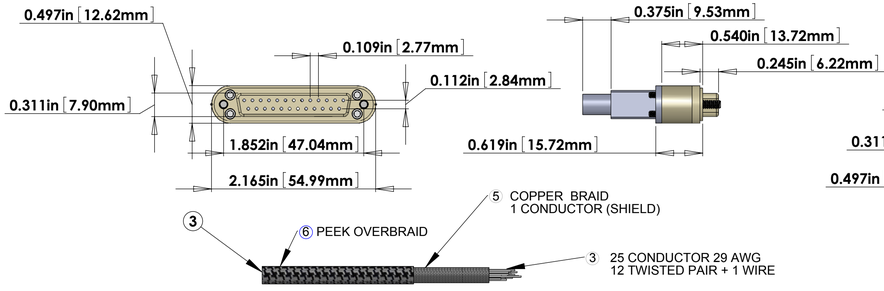


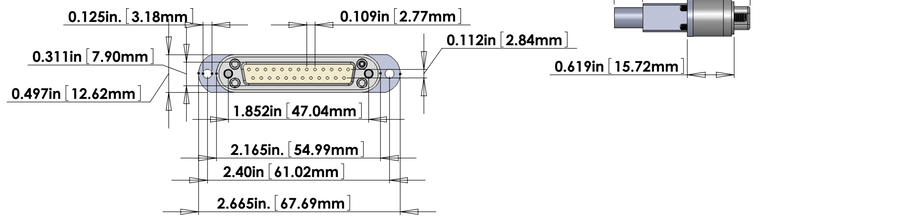
CONNECTOR J2

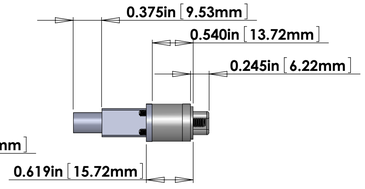












ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
①	CUSTOM DB25 FEMALE	DB25 FEMALE CONNECTOR (J1) FOR UHV (PEEK)	1	
②	CUSTOM BACKSHELL	DB25 CONNECTOR BACKSHELL (NO EARS) FOR UHV (STAINLESS)	1	
③	COONER WIRE #CZ1104 + ⑤ + ⑥	25 COND. (12 TWISTED PAIR + 1 WIRE + SHIELD) 29AWG CABLE WITH ⑤ COPPER BRAID (SHIELD) AND ⑥ PEEK OVERBRAID	1	180in *
④	GLENAIR 600-052	GLENAIR 600-052 STANDARD BRAID CLAMP (BAND - IT)	2	
⑤	CONTINENTAL PART #24x3x40BC	COPPER BRAID - CONTINENTAL CORDAGE PART #24x3x40BC	1	180in *
⑥	#6759	PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT	1	180in *
⑦	CUSTOM DB25 FEMALE	DB25 FEMALE CONNECTOR (J2) FOR UHV (METALIZED PEEK)	1	
⑧	CUSTOM BACKSHELL	DB25 CONNECTOR BACKSHELL (WITH EARS) FOR UHV (STAINLESS)	1	

* NOTE: USE WHATEVER LENGTH IS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH TO ACHIEVE THE CORRECT OVERALL LENGTHS.

V25A-180 CABLE ASSEMBLY CIRCUIT SUMMARY
V-DB25 F/S1-180-DB25 F/S1

CABLE NAME	COND.-WIRE ID	TWISTED PAIR	LENGTH *	FROM	TO
V25A-180	25 COND. CABLE	(12 TOTAL)	180 in.	Conn. J1	Conn. J2
	W1	SHIELD	180 in	PIN 1, SHELL	PIN 1, SHELL
	W2	**TP-1**	**180 in**	**PIN 2**	**PIN 2**
	W14		**180 in**	**PIN 14**	**PIN 14**
	W3	TP-2	180 in	PIN 3	PIN 3
	W15		180 in	PIN 15	PIN 15
	W4	**TP-3**	**180 in**	**PIN 4**	**PIN 4**
	W16		**180 in**	**PIN 16**	**PIN 16**
	W5	TP-4	180 in	PIN 5	PIN 5
	W17		180 in	PIN 17	PIN 17
	W6	**TP-5**	**180 in**	**PIN 6**	**PIN 6**
	W18		**180 in**	**PIN 18**	**PIN 18**
	W7	TP-6	180 in	PIN 7	PIN 7
	W19		180 in	PIN 19	PIN 19
	W8	**TP-7**	**180 in**	**PIN 8**	**PIN 8**
	W20		**180 in**	**PIN 20**	**PIN 20**
	W9	TP-8	180 in	PIN 9	PIN 9
	W21		180 in	PIN 21	PIN 21
	W10	**TP-9**	**180 in**	**PIN 10**	**PIN 10**
	W22		**180 in**	**PIN 22**	**PIN 22**
	W11	TP-10	180 in	PIN 11	PIN 11
	W23		180 in	PIN 23	PIN 23
	W12	**TP-11**	**180 in**	**PIN 12**	**PIN 12**
	W24		**180 in**	**PIN 24**	**PIN 24**
	W13	TP-12	180 in	PIN 13	PIN 13
	W25		180 in	PIN 25	PIN 25

*** The length shown in this list is the length of the cable between the two connectors. Add additional length as necessary for the internal wiring of the connectors and strip length.**

ISC TRANSMON QPD CABLE
VACUUM FLANGE TO SEISMIC TABLE
V-DB25 F/S1-180-DB25 F/S1
STANDARD USE FOR THIS CABLE

SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	FLANGE TO TOP CABLE QPD FOR TRANSMON
		HAM2 flange D6-F10 to CB7, IO QPDs; HAM3 flange D1-3C2 to CB4, IO QPDs

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. **MATERIAL:**
   a. J1 CONNECTOR SHELL - PEEK VICTREX 450GL30
   b. J2 CONNECTOR SHELL - SELECTIVELY METALIZED OVER PEEK VICTREX 450GL30.
   c. BACKSHELLS - STAINLESS STEEL WITH VENT HOLE.
   d. CONTACTS - BERYLLIUM COPPER ALLOY C17300
   0.000050 MIN. GOLD OVER NICKEL
   e. HARDWARE: CORROSION RESISTANCE STEEL, PASSIVATED
   f. PEEK BRAID - PEEK VICTREX GRADE TDS-450CA30 CARBON LOADED - SUPPLIED BY LIGO
2. **CABLE 25 COND. 29 AWG, (51 STRD 46 AWG) WITH PFA INSULATION COONER WIRE #CZ1104**
   12 TWISTED PAIRS (4 TO 5 TWISTS PER INCH) + 1 WIRE
   OVERALL 40AWG COPPER BRAID 50% COVERAGE - SUPPLIED BY LIGO
   OVERALL PEEK BRAID MIN. 50% COVERAGE
   OVERALL CABLE O.D. WILL BE 0.240 IN.
3. **CONNECTORS WILL BE SUPPLIED WITH HARDWARE (LENGTH OF SCREWS AS SHOWN ARE APPROXIMATE SCREWS SHOULD BE THE PROPER LENGTH FOR PROPER MATING)**

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)			
DIMENSIONS ARE IN TOLERANCES: .XX ± .XXX ± ANGULAR ± °	1. INTERPRET DRAWING PER ASME Y14.5-1994. 2. REMOVE ALL SHARP EDGES, .005-.015. FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATLEY 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.		
MATERIAL: Material <not specified>		FINISH: µinch	
LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY			
SYSTEM	SUB-SYSTEM: ISC	NEXT ASSY	

PART NAME	CUSTOM CABLE SPECIFICATION V25A-180				
DESIGNER	R. ABBOTT	AUG/23/2011	SIZE: D	DWG. NO.: D1101657	REV.: v1
DRAFTER	E. BROWN	AUG/23/2011			
CHECKER					
APPROVAL			SCALE: 1:1	PROJECTION:	SHEET 1 OF 1

D1101657_v1 cable V25A-180, PART PDM REV: , DRAWING PDM REV: