REV.	DATE	DCN #	DRAWING TREE #

NOTES CONTINUED:

5. 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.

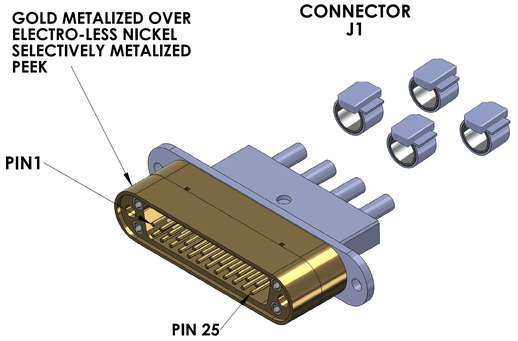
11. ALL MATERIAL IS TO BE VIRGIN MATERIAL (i.e. NO WELD REPAIRS, PLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-E0900364.

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.



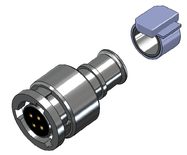
V25AC-36 CABLE ASSEMBLY CIRCUIT SUMMARY
V-DB25 M/S1-36-4_MM4PIN F/X

FROM

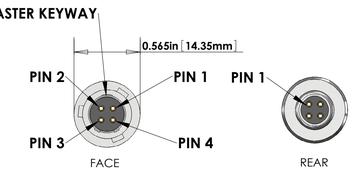
CONNECTOR J1 - 25 PIN SUBMINI_D CONNECTOR (PEEK)

PIN	WIRE NAME	LENGTH *	TWISTED PAIR
1, SHELL	SHIELD		
13	(CABLE 1) WIRE 13	36"	TP-1
25	(CABLE 1) WIRE 25	36"	TP-1
12	(CABLE 1) WIRE 12	36"	TP-2
24	(CABLE 1) WIRE 24	36"	TP-2
11	(CABLE 2) WIRE 11	36"	TP-3
23	(CABLE 2) WIRE 23	36"	TP-3
10	(CABLE 2) WIRE 10	36"	TP-4
22	(CABLE 2) WIRE 22	36"	TP-4
9	(CABLE 3) WIRE 9	36"	TP-5
21	(CABLE 3) WIRE 21	36"	TP-5
8	(CABLE 3) WIRE 8	36"	TP-6
20	(CABLE 3) WIRE 20	36"	TP-6
7	(CABLE 4) WIRE 7	36"	TP-7
19	(CABLE 4) WIRE 19	36"	TP-7
6	(CABLE 4) WIRE 6	36"	TP-8
18	(CABLE 4) WIRE 18	36"	TP-8
PIN 14,2,15,3,16,4,17,5 N/C (NOT CONNECTED)			

SEE REFERENCE DCC# LIGO-D1100670

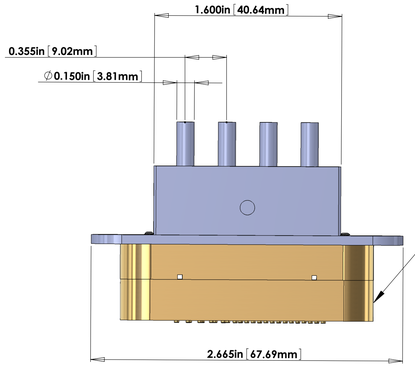


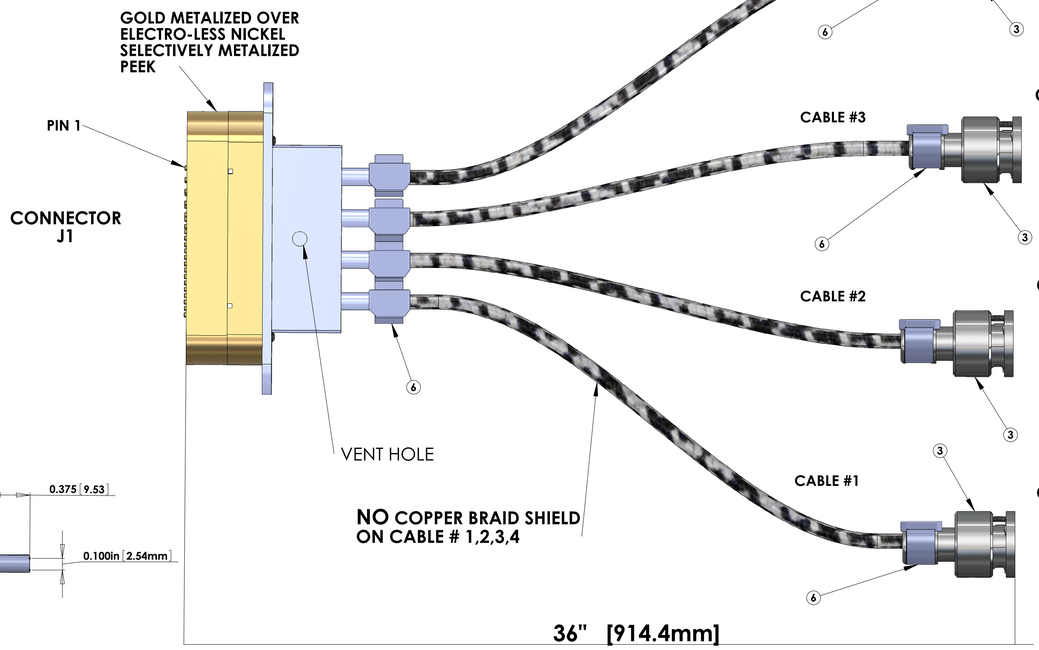
CONNECTOR J2, J3, J4, J5



4 PIN MIGHTY MOUSE
SOCKET CONNECTOR
GLENAIR # 803-001-06M6-4SN-598A

(MATES WITH GLENAIR # 803-003-07M6-4PN-598A)





CONNECTOR J5

CONNECTOR J4

CONNECTOR J3

CONNECTOR J2

V25AC-36 CABLE #4 ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J5 - 4 PIN SOCKET MIGHTY MOUSE CONNECTOR

PIN	WIRE NAME	SIGNAL
SHELL	(SHIELD) NOT CONNECTED	
1	(CABLE 4) WIRE 7	PICOMOTOR PAIR M4 HORIZONTAL SIGNAL
2	(CABLE 4) WIRE 19	PICOMOTOR PAIR M4 HORIZONTAL RETURN
3	(CABLE 4) WIRE 6	PICOMOTOR PAIR M4 VERTICAL SIGNAL
4	(CABLE 4) WIRE 18	PICOMOTOR PAIR M4 VERTICAL RETURN

V25AC-36 CABLE #3 ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J4 - 4 PIN SOCKET MIGHTY MOUSE CONNECTOR

PIN	WIRE NAME	SIGNAL
SHELL	(SHIELD) NOT CONNECTED	
1	(CABLE 3) WIRE 9	PICOMOTOR PAIR M3 HORIZONTAL SIGNAL
2	(CABLE 3) WIRE 21	PICOMOTOR PAIR M3 HORIZONTAL RETURN
3	(CABLE 3) WIRE 8	PICOMOTOR PAIR M3 VERTICAL SIGNAL
4	(CABLE 3) WIRE 20	PICOMOTOR PAIR M3 VERTICAL RETURN

V25AC-36 CABLE #2 ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J3 - 4 PIN SOCKET MIGHTY MOUSE CONNECTOR

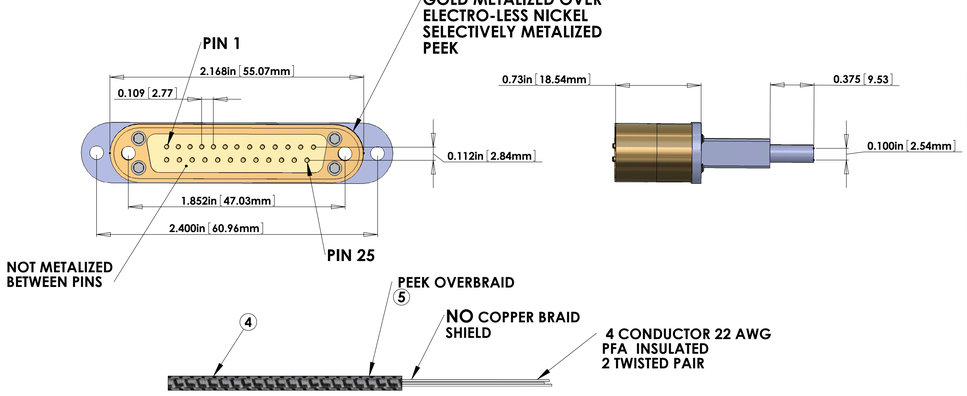
PIN	WIRE NAME	SIGNAL
SHELL	(SHIELD) NOT CONNECTED	
1	(CABLE 2) WIRE 11	PICOMOTOR PAIR M2 HORIZONTAL SIGNAL
2	(CABLE 2) WIRE 23	PICOMOTOR PAIR M2 HORIZONTAL RETURN
3	(CABLE 2) WIRE 10	PICOMOTOR PAIR M2 VERTICAL SIGNAL
4	(CABLE 2) WIRE 22	PICOMOTOR PAIR M2 VERTICAL RETURN

V25AC-36 CABLE #1 ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J2 - 4 PIN SOCKET MIGHTY MOUSE CONNECTOR

PIN	WIRE NAME	SIGNAL
SHELL	(SHIELD) NOT CONNECTED	
1	(CABLE 1) WIRE 13	PICOMOTOR PAIR M1 HORIZONTAL SIGNAL
2	(CABLE 1) WIRE 25	PICOMOTOR PAIR M1 HORIZONTAL RETURN
3	(CABLE 1) WIRE 12	PICOMOTOR PAIR M1 VERTICAL SIGNAL
4	(CABLE 1) WIRE 24	PICOMOTOR PAIR M1 VERTICAL RETURN



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	GLENAIR # 803-001-06M6-4SN-598A	MIGHTY MOUSE SOCKET CONNECTOR (J2,J3,J4,J5)	4	
④	COONER WIRE # CZ2205 22GA PFA INSULATED BIOMEDICAL WIRE	4 COND. CABLE 22GA PFA INSULATED (WITH PEEK OVERBRAID) ⑤ NO SHIELD. - PARTS SUPPLIED BY LIGO	4	36 in.*
⑤	PART # 6759	PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT - SUPPLIED BY LIGO	4	
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)	8	

* NOTE: THE OVERALL LENGTH IS MEASURED FROM PIN TIP (25 PIN) TO PIN TIP (4 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.

V25AC - V-DB25 M/S1-36-4_MM4PIN F/S

STANDARD USE FOR THIS CABLE

SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	PICOMOTORS TABLE TO MOTORS

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. MATERIAL: a. CONNECTOR SHELL - PEEK VICTREX GRADE TDS-450G.
   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 VICTREX GRADE TDS-450CA30 CARBON LOADED

2. CABLE 4 COND. 22 AWG, WITH PFA INSULATION COONER WIRE #CZ2205
   OVERALL PEEK BRAID MIN. 50% COVERAGE
   OVERALL CABLE O.D. WILL BE APPROX. 0.200 IN.

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

FINISH µinch

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM | SUB-SYSTEM ISC

NEXT ASSY

PART NAME **CUSTOM CABLE SPECIFICATION V25AC-36**

DESIGNER	R.ABBOTT	OCT/12/2011	SIZE	DWG. NO.	REV.
DRAFTER	E.BROWN	OCT/05/2011	E	D1000238	v4
CHECKER					
APPROVAL			SCALE: 2:1	PROJECTION:	SHEET 1 OF 1

D1000238_v4 cable V25AC - PART FOR REV: - DRAWING FOR REV: