NOTES CONTINUED:

⑩ 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-YY, S/N 001. A VIBRATORY TOOL MAY BE USED.

REV.	DATE	DCN #	DRAWING TREE #

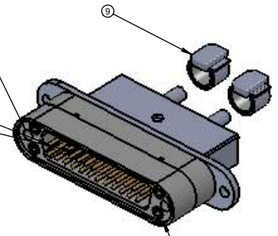
ELECTROLESS NICKEL PLATING OVER PEEK

#4-40 THREADED INSERT (x2)

PIN 1

NOT METALIZED NEXT TO PINS

CONNECTOR J1



36in [914.4mm]

NOT TO SCALE

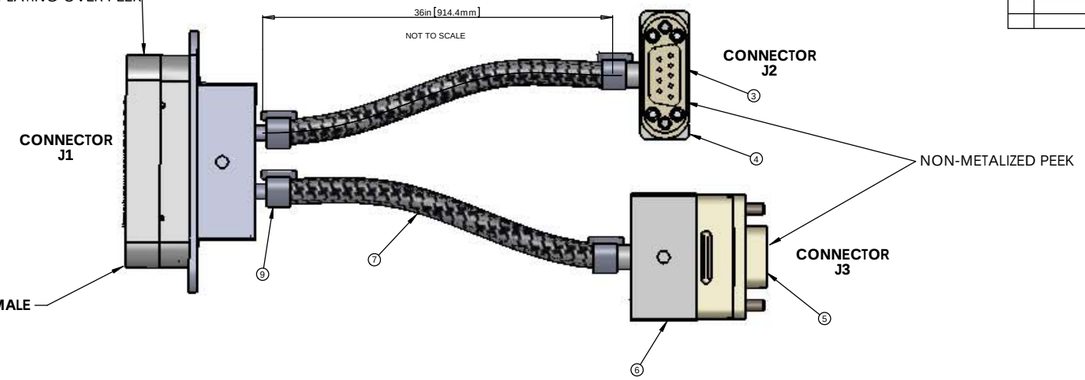
CONNECTOR J2

CONNECTOR J1

NON-METALIZED PEEK

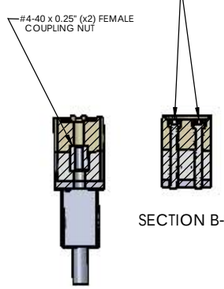
CONNECTOR J3

STANDARD D-SUB 25 PIN MALE MIL-C-24308



#2-56 x 0.625" (x4) MACHINE SCREW

#4-40 x 0.25" (x2) FEMALE COUPLING NUT



SECTION A-A

SECTION B-B

2.665in [67.69mm]

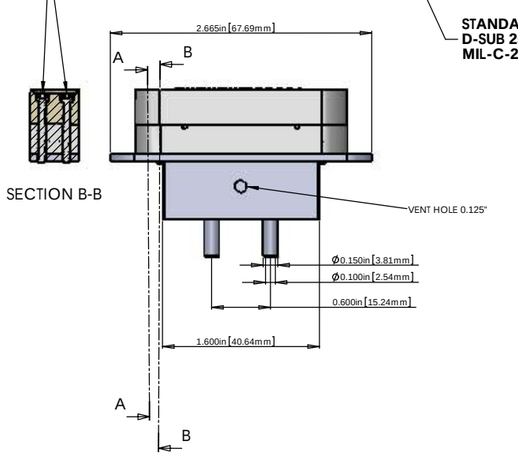
VENT HOLE 0.125"

Ø0.150in [3.81mm]

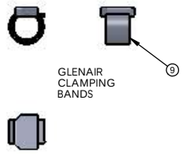
Ø0.100in [2.54mm]

0.600in [15.24mm]

1.600in [40.64mm]



GLENAIR CLAMPING BANDS



V25M CABLE ASSEMBLY CIRCUIT SUMMARY
V-DB25 M/S1,9-36-DB9 F/S5,DB9 F/S5 RA

FROM					TO		
CONNECTOR J1 - 25 PIN SUBMINI_D MALE CONNECTOR (PEEK)					CONNECTOR J2 - 9 PIN SUBMINI_D RIGHT ANGLE FEMALE CONNECTOR (PEEK)		
PIN	WIRE NAME	COLOR	LENGTH	TWISTED PAIR	PIN	WIRE NAME	SIGNAL
1,9,SHELL	SHIELD (BRAID)		36in.		5, SHELL	SHIELD (BRAID)	SHIELD
1,9,SHELL	(CABLE 1) WIRE 1	White	36in.		5, SHELL	(CABLE 1) WIRE 1	SHIELD
2	(CABLE 1) WIRE 2	White	36in.	TP-1	4	(CABLE 1) WIRE 2	POWER -
14	(CABLE 1) WIRE 14	White	36in.	TP-1	9	(CABLE 1) WIRE 14	POWER - RTN
3	(CABLE 1) WIRE 3	White	36in.	TP-2	3	(CABLE 1) WIRE 3	POWER +
15	(CABLE 1) WIRE 15	White	36in.	TP-2	8	(CABLE 1) WIRE 15	POWER + RTN
4	(CABLE 1) WIRE 4	White	36in.	TP-3	2	(CABLE 1) WIRE 4	LOCK +
16	(CABLE 1) WIRE 16	White	36in.	TP-3	7	(CABLE 1) WIRE 16	LOCK -
5	(CABLE 1) WIRE 5	White	36in.	TP-4	1	(CABLE 1) WIRE 5	SIG +
17	(CABLE 1) WIRE 17	White	36in.	TP-4	6	(CABLE 1) WIRE 17	SIG -
					CONNECTOR J3 - 9 PIN SUBMINI_D FEMALE CONNECTOR (PEEK)		
					PIN	WIRE NAME	SIGNAL
1,9,SHELL	SHIELD (BRAID)		36in.		5, SHELL	SHIELD (BRAID)	SHIELD
1,9,SHELL	(CABLE 2) WIRE 9	White	36in.		5, SHELL	(CABLE 2) WIRE 9	SHIELD
10	(CABLE 2) WIRE 10	White	36in.	TP-5	4	(CABLE 2) WIRE 10	POWER -
22	(CABLE 2) WIRE 22	White	36in.	TP-5	9	(CABLE 2) WIRE 22	POWER - RTN
11	(CABLE 2) WIRE 11	White	36in.	TP-6	3	(CABLE 2) WIRE 11	POWER +
23	(CABLE 2) WIRE 23	White	36in.	TP-6	8	(CABLE 2) WIRE 23	POWER + RTN
12	(CABLE 2) WIRE 12	White	36in.	TP-7	2	(CABLE 2) WIRE 12	LOCK+
24	(CABLE 2) WIRE 24	White	36in.	TP-7	7	(CABLE 2) WIRE 24	LOCK -
13	(CABLE 2) WIRE 13	White	36in.	TP-8	1	(CABLE 2) WIRE 13	SIG +
25	(CABLE 2) WIRE 25	White	36in.	TP-8	6	(CABLE 2) WIRE 25	SIG -

#4-40 FEMALE COUPLING NUT (x2)

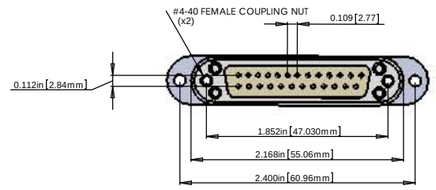
0.109 [2.77]

0.112in [2.84mm]

1.852in [47.030mm]

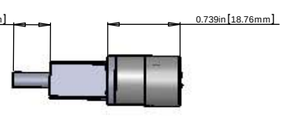
2.168in [55.06mm]

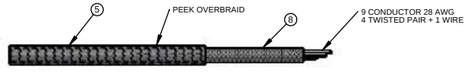
2.400in [60.96mm]



0.375in [9.52mm]

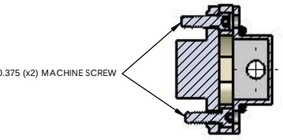
0.739in [18.76mm]





CONNECTOR J2

#4-40 x 0.375 (x2) MACHINE SCREW



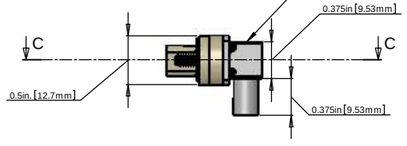
SECTION C-C

VENT HOLE 0.125"

0.375in [9.53mm]

0.5in. [12.7mm]

0.375in [9.53mm]



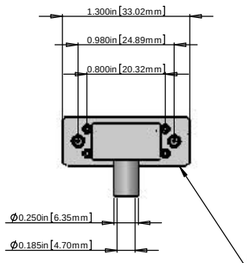
1.300in [33.02mm]

0.980in [24.89mm]

0.800in [20.32mm]

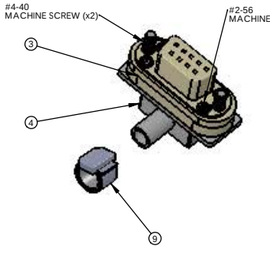
Ø0.250in [6.35mm]

Ø0.185in [4.70mm]



#4-40 MACHINE SCREWS (x2)

#2-56 MACHINE SCREWS (x4)

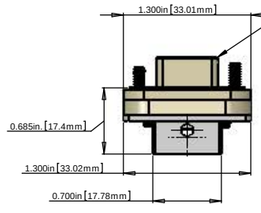


1.300in [33.01mm]

0.685in. [17.4mm]

1.300in [33.02mm]

0.700in [17.78mm]



STANDARD 9-PIN D-SUB FEMALE MIL-C-24308

CONNECTOR J3

#4-40 MACHINE SCREWS (x2)

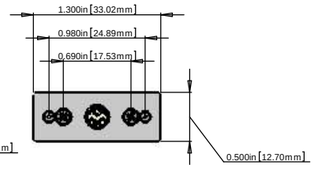
0.375in [9.53mm]

1.300in [33.02mm]

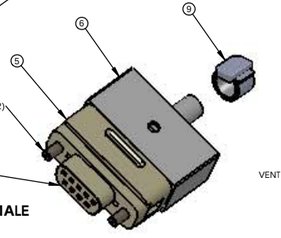
0.980in [24.89mm]

0.690in [17.53mm]

0.500in [12.70mm]



#4-40 MACHINE SCREW (x2)



1.265in [32.13mm]

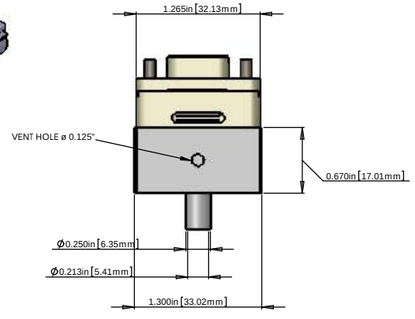
VENT HOLE ø 0.125"

0.670in [17.01mm]

Ø0.250in [6.35mm]

Ø0.213in [5.41mm]

1.300in [33.02mm]



BILL OF MATERIALS				
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
①	CUSTOM DB25 MALE	DB25 MALE CONNECTOR (J1) FOR UHV (METALIZED PEEK)	1	
②	CUSTOM DB25 BACKSHELL	DB25 CONNECTOR BACKSHELL FOR UHV (STAINLESS)	1	
③	CUSTOM DB9 RIGHT ANGLE FEMALE	DB9 RIGHT ANGLE FEMALE CONNECTOR (J2) FOR UHV (PEEK)	1	
④	CUSTOM DB9 BACKSHELL	DB9 CONNECTOR BACKSHELL FOR UHV (STAINLESS)	1	
⑤	CUSTOM DB9 FEMALE	DB9 FEMALE CONNECTOR (J3) FOR UHV (PEEK)	1	
⑥	CUSTOM DB9 BACKSHELL	DB9 CONNECTOR BACKSHELL FOR UHV (STAINLESS)	1	
⑦	C1	9 COND. (4 TW PAIR + 1 WIRE + SHIELD) CABLE WITH ⑧ COPPER BRAID (SHIELD) AND PEEK OVERBRAID	2	36"
⑧	COPPER BRAID	CONTINENTAL CORDAGE PART # 24x3x40BC	2	36"
⑨	GLENAIR 600-052	GLENAIR 600-052 STANDARD BRAID CLAMP	4	

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. MATERIAL:
   a. CONNECTOR SHELL - PEEK OR METALIZED 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

2. CABLE 9 COND. 28 AWG, (40 STRD 44 AWG) WITH 2 LAYERS OF KAPTON TAPE (SUPPLIED BY LIGO)
   4 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 (SUPPLIED BY LIGO)
   OVERALL CABLE O.D. WILL BE APPROX. 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)

STANDARD USE FOR THIS CABLE		
SUBSYSTEM	AIR/VAC	STANDARD USE
SEI	IN-VAC	GS-13,L-4C

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, R.02 MIN.
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: SEI

NEXT ASSY

PART NAME: CUSTOM CABLE SPECIFICATION V25M

DESIGNER	E.ABBOTT	APR/26/2010	SIZE	DWG. NO.	REV.
DRAFTER	E.BROWN	APR/26/2010	E	D1000227-	v4
CHECKER					
APPROVAL			SCALE: 2:1	PROJECTION:	SHEET 1 OF 1

D1000227-v4.SLDDRW FROM REV - DRAWING FROM NEW V14.3 ASSY FROM REV