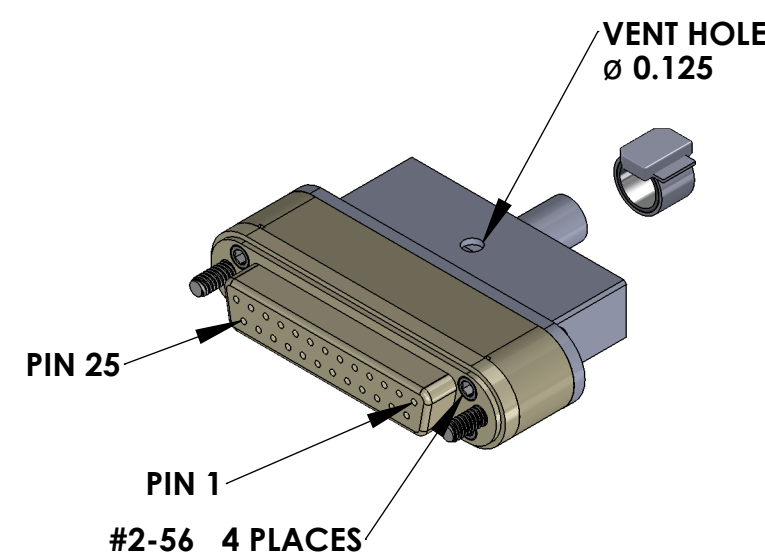


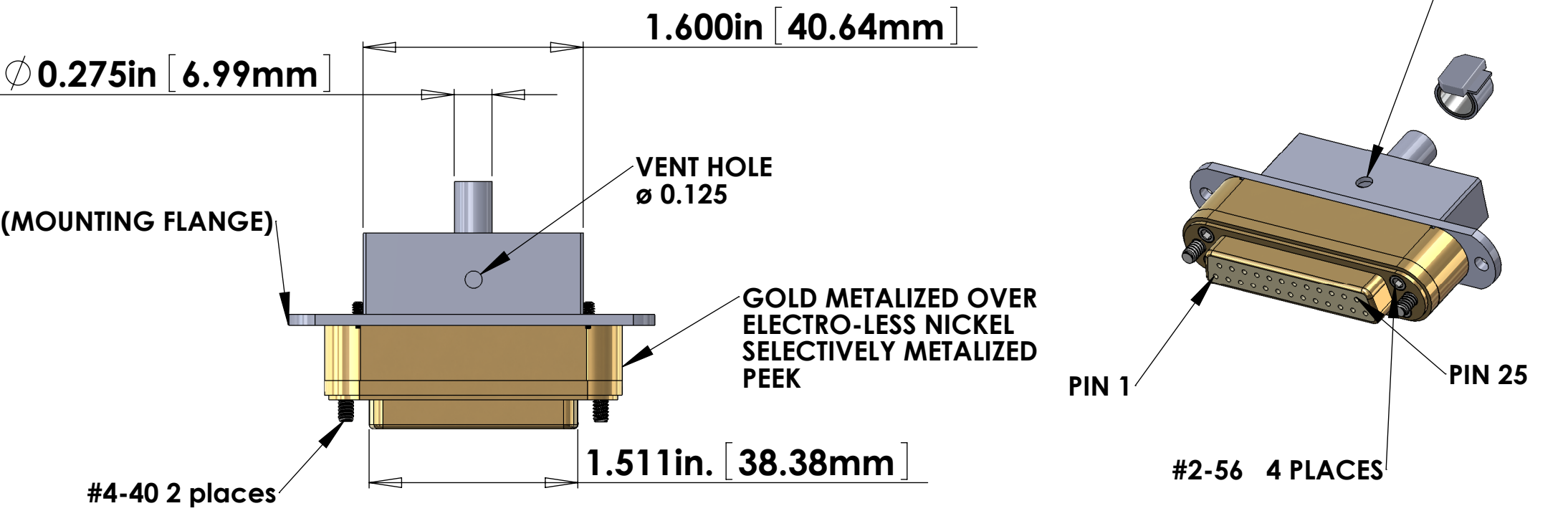
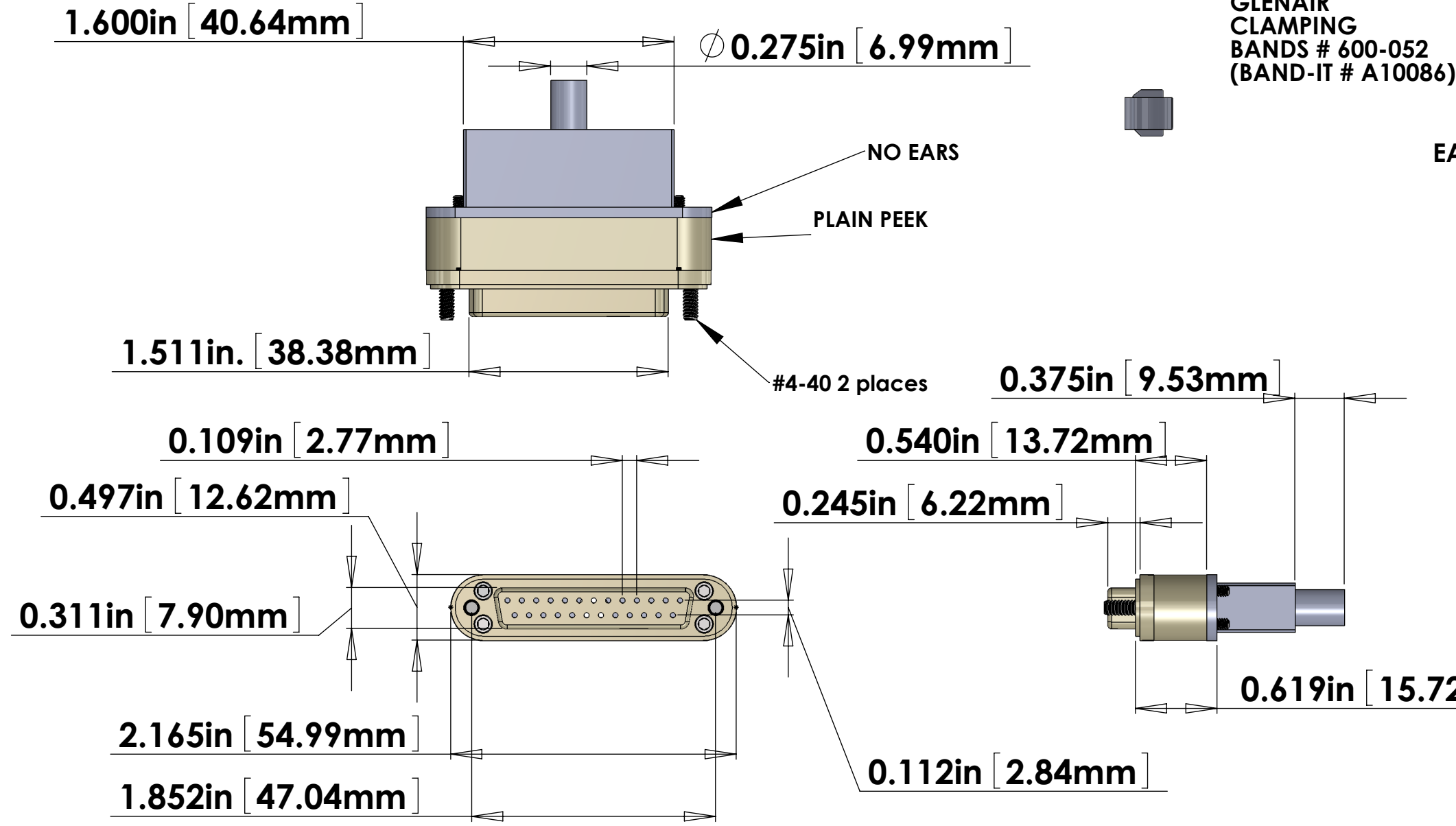
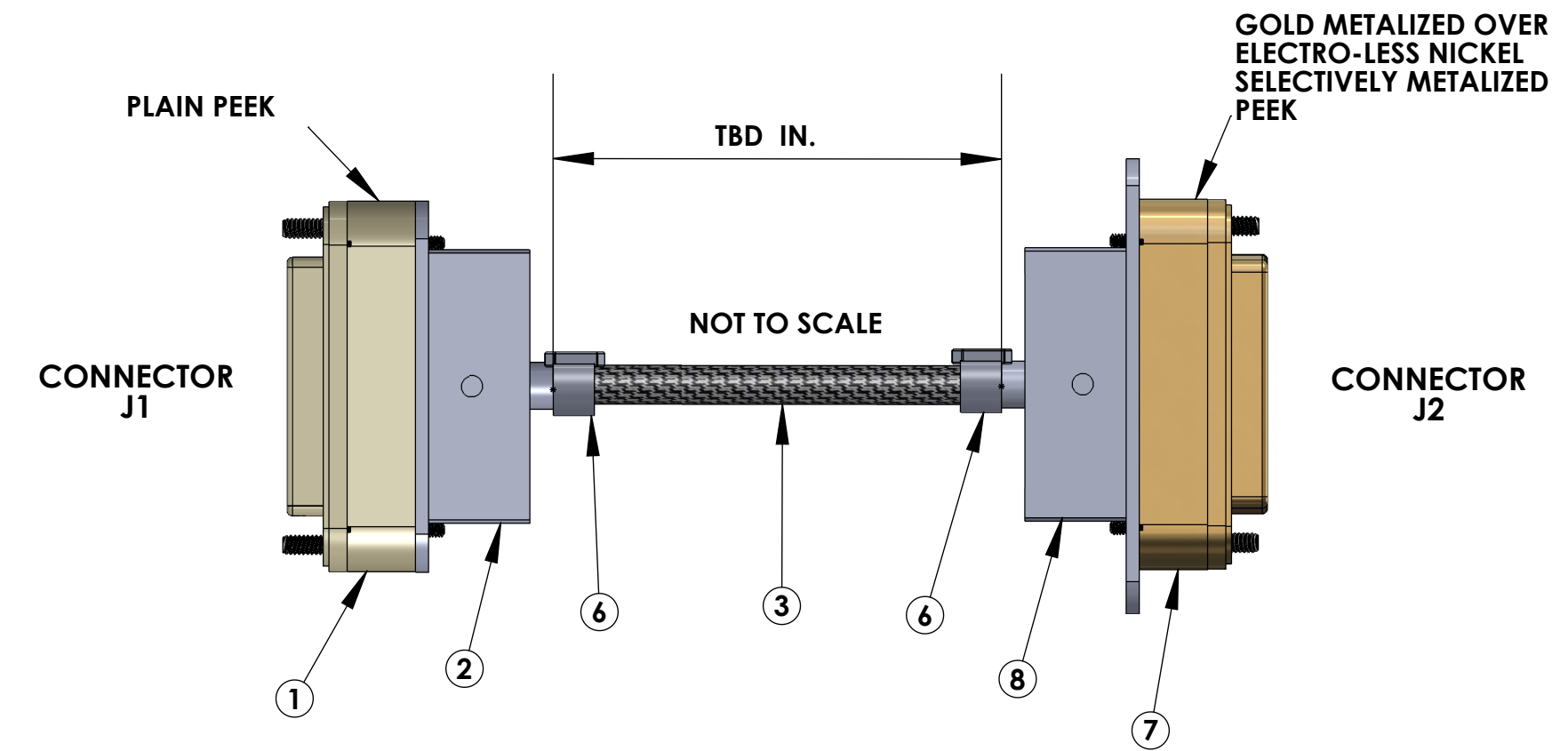
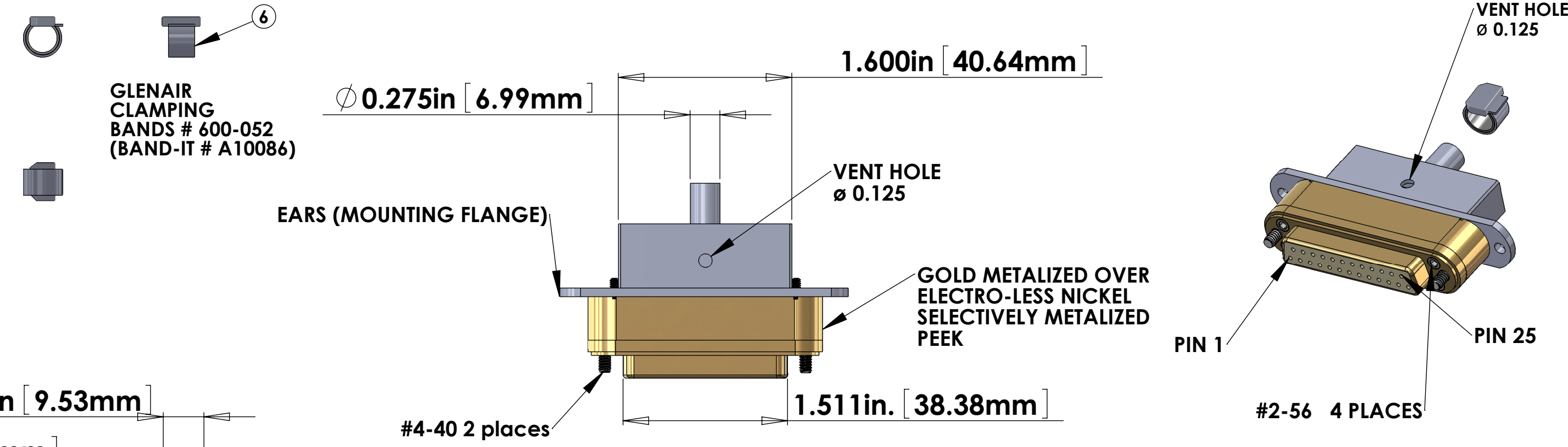
- NOTES CONTINUED:
- SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER AND REVISION ON UNNOTED SURFACE FOLLOWED ON THE NEXT LINE BY A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: DXXXXX-VY S/N 001. VIBRATORY TOOL MAY BE USED.
  - APPROXIMATE WEIGHT = X.XXX LB.
  - MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364
  - ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.
  - ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELI-COIL PRODUCT CATALOG, HC2000, REV 4
  - ALL HELI-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL AFTER DELIVERY OF FINISHED PARTS. USE NITRONIC 60 THREADED INSERTS.
  - 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.
  - SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER. FREE FROM SCRATCHES OR GOUGES.
  - 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.
  - DIMENSIONS APPLY BEFORE PORCELAIN COATING UNLESS SPECIFIED.
  - 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



STANDARD CABLE LENGTH CHART		
DESIGNATOR	INCHES	FEET and INCHES
V25A-156	156	13 ft.
V25A-108	108	9 ft.
V25A-180	180	15 ft.
V25A-199	199	16 ft. 7 in.
V25A-209	209	17 ft. 5 in.
V25A-230	230	19 ft. 2 in.
V25A-TBD	TBD * ADDITIONAL CUSTOM LENGTHS	* LENGTH To Be Determined AT TIME OF ORDER

### CONNECTOR J2



### V25A-TBD CABLE ASSEMBLY CIRCUIT SUMMARY V-DB25 F/S1-TBD-DB25 F/S1

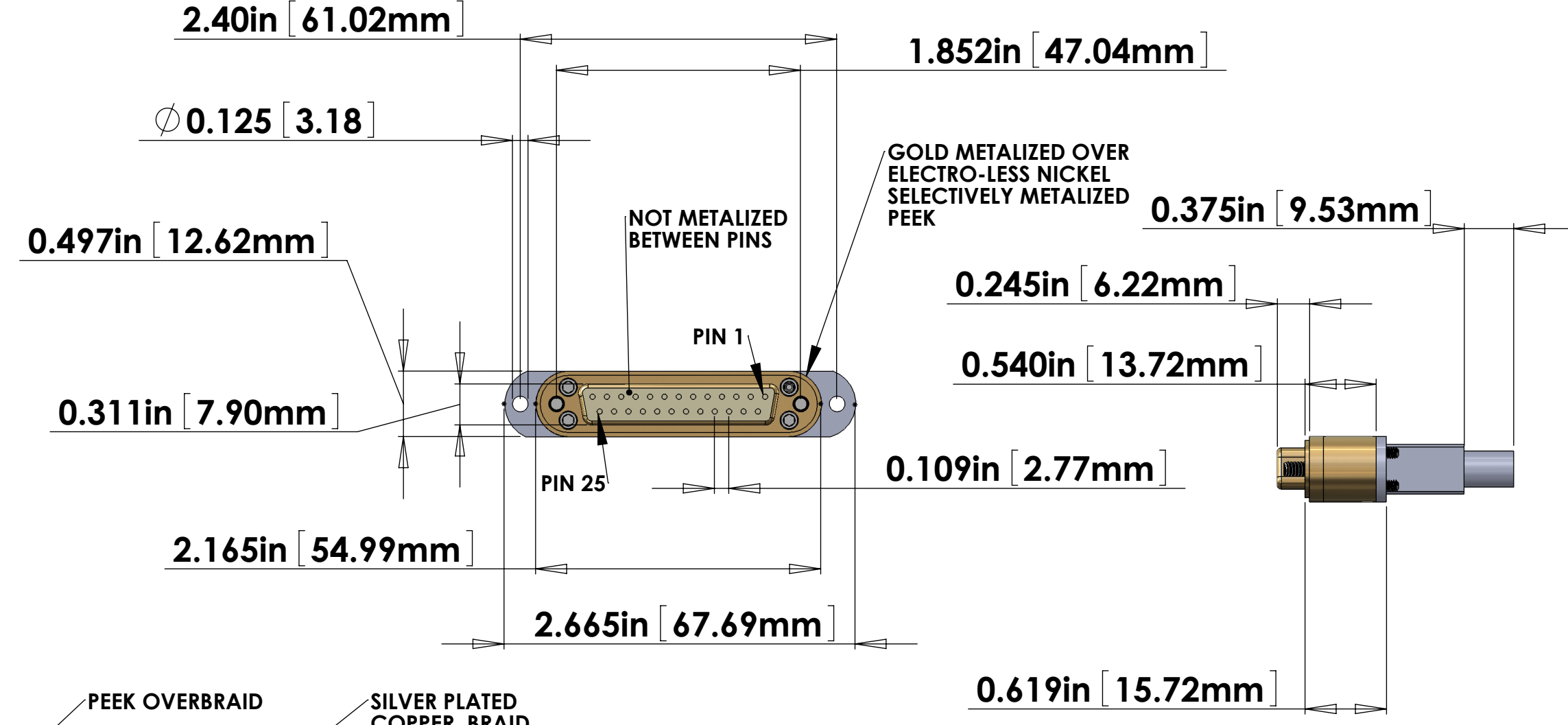
CABLE NAME	COND.- WIRE ID	TWISTED PAIR	LENGTH *	FROM	TO
V25A-TBD	25 COND. CABLE	(12 TOTAL)	TBD in.	Conn. J1	Conn. J2
	W1	SHIELD	TBD in	PIN 1, SHELL	PIN 1, SHELL
	W2		TBD in	PIN 2	PIN 2
	W14	TP-1	TBD in	PIN 14	PIN 14
	W3		TBD in	PIN 3	PIN 3
	W15	TP-2	TBD in	PIN 15	PIN 15
	W4		TBD in	PIN 4	PIN 4
	W16	TP-3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

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	C1	25 COND. (12 TW PAIR + 1 WIRE + SHIELD) CABLE WITH COPPER BRAID (4) (SHIELD) AND PEEK OVERBRAID (5)	1	VARIOUS LENGTHS* see STANDARD CABLE LENGTH CHART
4	CONTINENTAL PART #24x3x40BC	COPPER BRAID - CONTINENTAL CORDAGE PART #24x3x40BC	1	
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	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.

- ELECTRICAL NOTES: ( UNLESS OTHERWISE SPECIFIED )
- MATERIAL:
    - J1 CONNECTOR SHELL - PEEK VICTREX 450GL30
    - J2 CONNECTOR SHELL - SELECTIVELY METALIZED OVER PEEK VICTREX 450GL30.
    - BACKSHELLS - STAINLESS STEEL WITH VENT HOLE.
    - CONTACTS - BERYLLIUM COPPER ALLOY C17300 0.00050 MIN. GOLD OVER NICKEL
    - HARDWARE: CORROSION RESISTANCE STEEL, PASSIVATED
    - PEEK BRAID - PEEK VICTREX GRADE TDS-450CA30 CARBON LOADED - SUPPLIED BY LIGO



V-DB25 F/S1-TBD-DB25 F/S1		
STANDARD USE FOR THIS CABLE		
SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	OMC, DCPD

- CABLE 25 COND. 28 AWG, (40 STRD 44 AWG) WITH 2 LAYERS OF KAPTON TAPE 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.
- CONNECTORS WILL BE SUPPLIED WITH HARDWARE (LENGTH OF SCREWS AS SHOWN ARE APPROXIMATE SCREWS SHOULD BE THE PROPER LENGTH FOR PROPER MATING)

DIMENSIONS ARE IN	
TOLERANCES:	.XX ±
	.XXX ±
ANGULAR ± °	
MATERIAL	Material <not specified>
FINISH	µinch

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

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

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM LIGO

NEXT ASSY

PART NAME		CUSTOM CABLE SPECIFICATION	
V25A- TBD		V25A- TBD	
DESIGNER	B.ABBOTT	NOV/16/2011	SIZE DWG. NO.
DRAFTER	E.BROWN	NOV/16/2011	D
CHECKER			<b>D1000225</b>
APPROVAL			<b>v4</b>
SCALE: 1:1	PROJECTION:		SHEET 1 OF 1