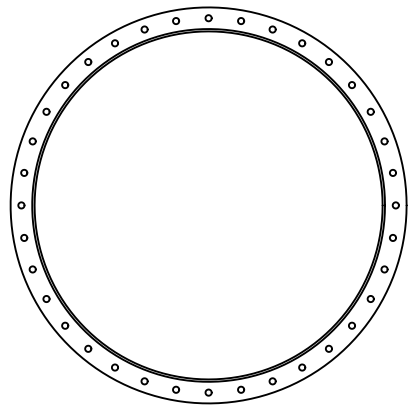
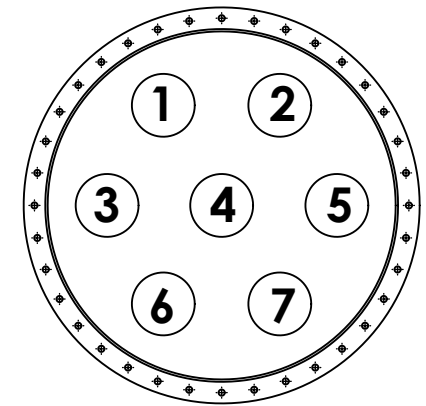


D1101775 ALIGO, FEEDTHROUGH TYPES, TYPICAL SUBFLANGES, AND PORT CONFIGURATIONS, PART PDM REV: X-004, DRAWING PDM REV: X-006

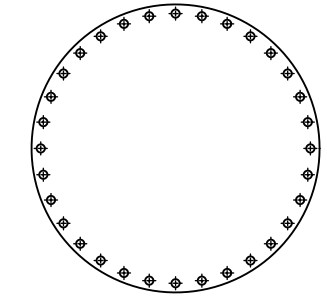
REV.	DATE	DCN #	DRAWING TREE #
v1	06 SEP 2011	-	-
v6	12 MAY 2016	E1600147-x0	-
-	-	-	-



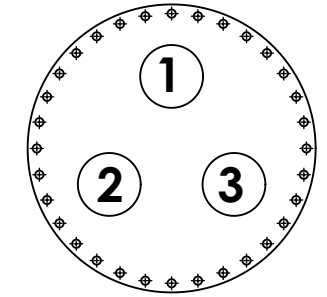
16 IN. BLANK  
FLANGE TYPE: 'E'



16 IN. W/ SUBFLANGE MT. HOLES  
FLANGE TYPE: 'E'

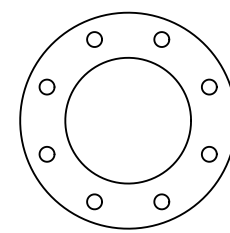


12 IN. BLANK  
FLANGE TYPE: 'F', OR 'D'

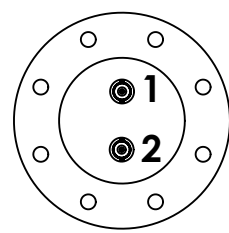


12 IN. W/ SUBFLANGE MT. HOLES  
FLANGE TYPE: 'D' OR 'F'

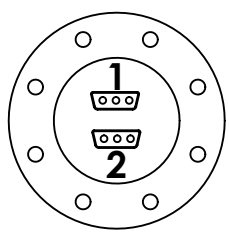
**TYPICAL FLANGE TYPE / SIZE / SLOT DESIGNATION**  
(AS VIEWED FROM OUTSIDE THE CHAMBER)



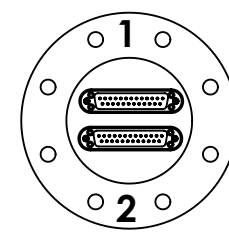
4.5 IN. BLANK  
SUBFLANGE TYPE 'BLANK'  
SCALE 1 : 2



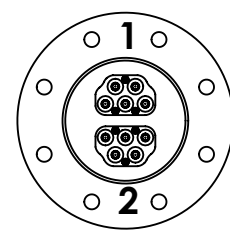
4.5 IN. SUBFLANGE  
DUAL BNC CONNECTORS  
TYPE 'A'



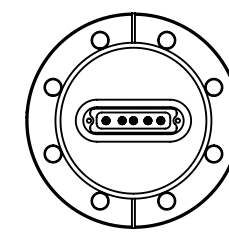
4.5 IN. SUBFLANGE  
DUAL 3PWR CONNECTOR  
TYPE 'B'



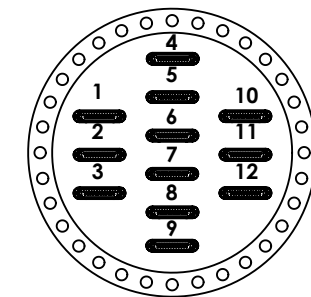
4.5 IN. SUBFLANGE  
DUAL 25 P CONNECTOR  
TYPE 'C'



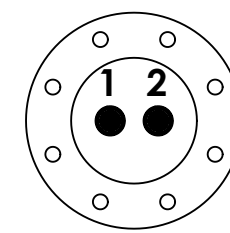
4.5 IN. SUBFLANGE  
DUAL 5-WAY COAX  
TYPE 'D'



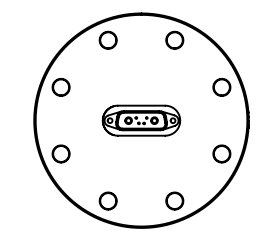
4.5 IN. SUBFLANGE  
SINGLE 5-PIN COAX  
TYPE 'E'



12 IN. SUBFLANGE  
MULTI-25P CONNECTORS  
TYPE 'F'



4.5 IN. SUBFLANGE  
DUAL TRIAXIAL CONNECTOR  
TYPE 'G'



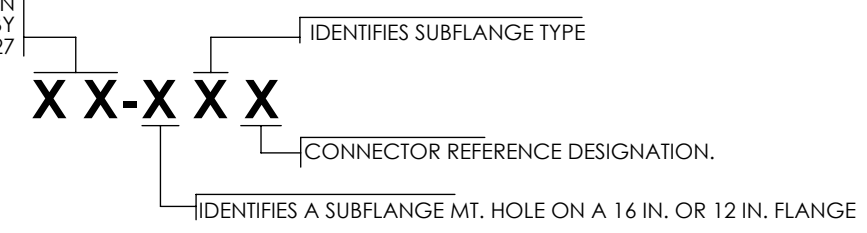
4.5 IN. SUBFLANGE  
2 Thermocouple Pairs/2 Power Pins  
TYPE 'H'

**TYPICAL SUBFLANGE TYPE / SIZE / CONNECTOR DESIGNATION**  
(AS VIEWED FROM OUTSIDE THE CHAMBER)

**FEEDTHROUGH / PORT/ CONNECTOR-DESIGNATION: ANATOMY**

THE NAMING CONVENTION FOR ALL BSC AND HAM CHAMBER FEEDTHROUGHS IS DEFINED BASED ON CHAMBER PORT DESIGNATION / FLANGE TYPE / SUBFLANGE COMBINATION.

IDENTIFIES THE BSC OR HAM PORT DESIGNATION TO WHICH A PARTICULAR FLANGE ATTACHES TO AS DEFINED BY LIGO DOCUMENTS D980226 AND D980227



- BSC PORTS NAMING CONVENTIONS ARE PER DRAWING D980227.
- HAM PORTS NAMING CONVENTIONS ARE PER DRAWING D980226.
- SEE CHAMBER FLANGE LISTING, ALIGO D1002892 FOR REFERENCE.

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)				LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY				PART NAME ALIGO, ELECTRICAL FEEDTHROUGH TYPES, TYP. SUBFLANGES, AND PORT CONFIGURATIONS					
MATERIAL	N/A	FINISH	N/A μinch	SYSTEM	ADVANCED LIGO SYSTEMS	SUB-SYSTEM	SYSTEMS	DESIGNER	E.SANCHEZ	06 SEP 2011	SIZE	DWG. NO.	REV.
				NEXT ASSY	MULTIPLE			DRAFTER	E.SANCHEZ	06 SEP 2011	B	D1101775	v6
								CHECKER	SEE DCC	SEE DCC	SCALE: 1:8	PROJECTION:	SHEET 1 OF 4
								APPROVAL	SEE DCC	SEE DCC			

**FEEDTHROUGH TYPES & ALLOCATIONS WRT CHAMBER\***

FLANGE TYPE	WHERE-USED	FLANGE TYPE	WHERE-USED	FLANGE TYPE	WHERE-USED
	<ul style="list-style-type: none"> <li>• HAM 1 D2 (H1) (L1)</li> <li>• HAM 7 D2 (H2)</li> </ul>		<ul style="list-style-type: none"> <li>• HAM 5 D6 (H1) (L1)</li> <li>• HAM 11 D6 (H2)</li> <li>• BSC5 F5 (H2)</li> </ul>		<ul style="list-style-type: none"> <li>• HAM 6 D5 (H1) (L1)</li> <li>• HAM 12 D5 (H2)</li> </ul>
	<ul style="list-style-type: none"> <li>• HAM 1 D1 (H1) (L1)</li> <li>• HAM 7 D1 (H2)</li> </ul>		<ul style="list-style-type: none"> <li>• HAM 12 D3 (H2)</li> </ul>		<ul style="list-style-type: none"> <li>• HAM 2 D1, D4, AND D5 (H1) (L1)</li> <li>• HAM 3 D1, D2, AND D4 (H1) (L1)</li> <li>• HAM 4 D1, D2, AND D4 (H1) (L1)</li> <li>• HAM 5 D1, D2, AND D4 (H1) (L1)</li> <li>• HAM 6 D1, D2, AND D4 (H1) (L1)</li> <li>• HAM 8 D1, D4, AND D5 (H2)</li> <li>• HAM 9 D1, D2, AND D4 (H2)</li> <li>• HAM 10 D1, D2, AND D4 (H2)</li> <li>• HAM 11 D1, D2, AND D4 (H2)</li> <li>• HAM 12 D1, D2, AND D4 (H2)</li> </ul>
	<ul style="list-style-type: none"> <li>• HAM 1 D4 (H1) (L1)</li> <li>• HAM 1 D5 (H1) (L1)</li> <li>• HAM 7 D4 (H2)</li> <li>• HAM 7 D5 (H2)</li> </ul>		<ul style="list-style-type: none"> <li>• HAM 3 D3 (H1) (L1)</li> <li>• HAM 3 D6 (H1) (L1)</li> <li>• HAM 4 D6 (H1) (L1)</li> <li>• HAM 5 D3 (H1) (L1)</li> <li>• HAM 9 D3 (H2)</li> <li>• HAM 9 D6 (H2)</li> <li>• HAM 10 D3 (H2)</li> <li>• HAM 11 D3 (H2)</li> <li>• BSC1 F3 (H1) (L1)</li> <li>• BSC3 F3 (H1) (L1)</li> <li>• BSC4 F3 (L1)</li> <li>• BSC5 F3 (L1) (H2)</li> <li>• BSC9 F3 (H1)</li> <li>• BSC10 F3 (H1)</li> <li>• BSC8 F3 (H2)</li> <li>• BSC6 F3 (H2)</li> <li>• BSC7 F3 (H2)</li> </ul>		<ul style="list-style-type: none"> <li>• HAM 2 D3 (H1) (L1)</li> <li>• HAM 2 D6 (H1) (L1)</li> <li>• HAM 6 D6 (H1) (L1)</li> <li>• HAM 8 D3 (H2)</li> <li>• HAM 8 D6 (H2)</li> <li>• HAM 12 D6 (H2)</li> </ul>
	<ul style="list-style-type: none"> <li>• HAM 1D6 (H1) (L1)</li> <li>• HAM 7 D6 (H2)</li> <li>• HAM 2 D2 (H1) (L1)</li> <li>• HAM 8 D2 (H2)</li> </ul>		<p>12 IN. BLANK</p>		<ul style="list-style-type: none"> <li>• HAM 1 D3, D7, D8 (H1) (L1)</li> <li>• HAM 2 D7, D8 (H1) (L1)</li> <li>• HAM 3 D5, D7, D8 (H1) (L1)</li> <li>• HAM 4 D5, D3, D7, D8 (H1) (L1)</li> <li>• HAM 5 D5, D7, D8 (H1) (L1)</li> <li>• HAM 6 D7, D8 (H1) (L1)</li> <li>• HAM 7 D3, D7, D8 (H2)</li> <li>• HAM 8 D7, D8 (H2)</li> <li>• HAM 9 D5, D7, D8 (H2)</li> <li>• HAM 10 D5, D6, D7, D8 (H2)</li> <li>• HAM 11 D5, D7, D8 (H2)</li> <li>• HAM 12 D7, D8 (H2)</li> </ul>

D1101775 ALIGO, FEEDTHROUGH TYPES, TYPICAL SUBFLANGES, AND PORT CONFIGURATIONS, PART PDM REV: X-004, DRAWING PDM REV: X-006

\*FOR FLANGE TYPE, SIZE, AND SUBFLANGE SLOT DESIGNATIONS, SEE SHEET 1.

CALIFORNIA INSTITUTE OF TECHNOLOGY  
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
 SIZE DWG. NO. **B** D1101775 REV. **v6**  
 SCALE: 1:8 PROJECTION: SHEET 2 OF 4

**FEEDTHROUGH TYPES & ALLOCATIONS WRT CHAMBER\***

FLANGE TYPE	WHERE-USED	FLANGE TYPE	WHERE-USED	FLANGE TYPE	WHERE-USED
<p>2X TYPE 'C'</p> <p>5X BLANK</p>	<ul style="list-style-type: none"> <li>• BSC4 E4 (L1)</li> <li>• BSC9 E4 (H1)</li> </ul>	<p>2X BLANK</p> <p>TYPE 'E' (ESD)</p>	<ul style="list-style-type: none"> <li>• BSC1 F2 (H1) (L1)</li> <li>• BSC3 F2 (H1) (L1)</li> <li>• BSC8 F2 (H2)</li> </ul>	<p>2X TYPE 'C'</p> <p>2X TYPE 'E' (ESD)</p>	<ul style="list-style-type: none"> <li>• BSC5 F2 (L1)</li> <li>• BSC10 F2 (H1)</li> <li>• BSC6 F2 (H2)</li> </ul>
<p>2X TYPE 'G'</p> <p>3X BLANK</p>	<ul style="list-style-type: none"> <li>• BSC1 E3, E4, AND E6 (H1)(L1)</li> <li>• BSC2 E1, AND E6 (H1)(L1)</li> <li>• BSC3 E3, E4, AND E6 (H1)(L1)</li> <li>• BSC4 E1, AND E3 (L1)</li> <li>• BSC5 E3, AND E4 (L1)</li> <li>• BSC3 E4 (H1)</li> <li>• BSC9 E1, AND E3 (H1)</li> <li>• BSC10 E3, AND E4 (H1)</li> <li>• BSC8 E4, AND E6 (H2)</li> <li>• BSC4 E4, AND E6 (H2)</li> <li>• BSC5 E1, AND E6 (H2)</li> <li>• BSC6 E4, AND E6 (H2)</li> <li>• BSC7 E1, AND E6 (H2)</li> </ul>	<p>2X TYPE 'B'</p> <p>BLANK</p>	<ul style="list-style-type: none"> <li>• BSC1 F1, F4, AND F6 (H1)</li> <li>• BSC2 F1, F2, AND F6 (H1)(L1)</li> <li>• BSC3 F1, F4, AND F6 (H1)(L1)</li> <li>• BSC4 F6 (H2)(L1)</li> <li>• BSC5 F4 (L1), AND F6 (H2)</li> <li>• BSC1 F4, AND F6 (L1)</li> <li>• BSC9 F6 (H1)</li> <li>• BSC10 F4, AND F6 (H1)</li> <li>• BSC8 F4, AND F6 (H2)</li> <li>• BSC4 F1, F4, AND F6 (H2)</li> <li>• BSC6 F4, F6, AND F1 (H2)</li> <li>• BSC7 F6 (H2)</li> <li>• BSC5 F1, AND F6 (H2)</li> </ul>	<p>2X TYPE 'G'</p> <p>BLANK</p> <p>4X TYPE 'C'</p>	<ul style="list-style-type: none"> <li>• BSC2 E3 (H1) (L1)</li> <li>• BSC8 E3 (H2)</li> <li>• BSC4 E3 (H2)</li> <li>• BSC7 E3 (H2)</li> </ul>
<p>2X TYPE 'G'</p> <p>3X TYPE 'C'</p> <p>2X BLANK</p>	<ul style="list-style-type: none"> <li>• BSC3 E4 (L1)</li> <li>• BSC4 E6 (L1)</li> <li>• BSC9 E6 (H1)</li> <li>• BSC10 E6 (H1)</li> <li>• BSC5 E3 (H2)</li> <li>• BSC6 E3 (H2)</li> <li>• BSC5 E6 (L1)</li> </ul>	<p>2X TYPE 'B'</p> <p>TYPE 'C'</p>	<ul style="list-style-type: none"> <li>• BSC1 F1 (L1)</li> <li>• BSC4 F1 (L1)</li> <li>• BSC5 F1 (L1)</li> <li>• BSC9 F1 (H1)</li> <li>• BSC10 F1 (H1)</li> <li>• BSC8 F1 (H2)</li> <li>• BSC7 F1 (H2)</li> </ul>	<p>2X TYPE 'B' (3P-POWER)</p> <p>TYPE 'E' (ESD)</p>	<ul style="list-style-type: none"> <li>• BSC4 F2 (L1)</li> <li>• BSC9 F2 (H1)</li> <li>• BSC5 F2 (H2)</li> <li>• BSC7 F2 (H2)</li> </ul>
16 IN. BLANK	<ul style="list-style-type: none"> <li>• BSC1 E1, E2, E7, E8, AND E5 (H1)(L1)</li> <li>• BSC2 E2, E4, E7, E8, AND E5 (H1)(L1)</li> <li>• BSC3 E1, E2, E7, E8, AND E5 (H1)(L1)</li> <li>• BSC4 E1, E2, E7, E8, AND E5 (H2)</li> <li>• BSC5 E4, E2, E7, E8, AND E5 (L1)(H2)</li> <li>• BSC10 E1, E2, E5, E7, AND E8 (H1)</li> <li>• BSC8 E1, E2, E5, E7, AND E8 (H2)</li> <li>• BSC4 E2, E5, E7, AND E8 (L1)</li> <li>• BSC7 E2, E4, E5, E7, AND E8 (H2)</li> <li>• BSC5 E1, E2, E5, E7, AND E8 (L1)</li> <li>• BSC6 E1, E2, E5, E7, AND E8 (H2)</li> <li>• BSC9 E2, E5, E7, AND E8 (H1)</li> </ul>				
12 IN. BLANK	<ul style="list-style-type: none"> <li>• BSC1 F5 (H1) (L1)</li> <li>• BSC2 F3, F4, AND F5 (H1) (L1)</li> <li>• BSC3 F5 (H1) (L1)</li> <li>• BSC4 F4, AND F5 (L1)</li> <li>• BSC5 F5 (L1)</li> <li>• BSC9 F4, AND F5 (H1)</li> <li>• BSC5 F4 (H2)</li> <li>• BSC4 F2, F3, AND F5 (H2)</li> <li>• BSC7 F4, AND F5 (H2)</li> <li>• BSC10 F5 (H1)</li> <li>• BSC6 F5 (H2)</li> <li>• BSC8 F5 (H2)</li> </ul>				

D1101775 ALIGO, FEEDTHROUGH TYPES, TYPICAL SUBFLANGES, AND PORT CONFIGURATIONS, PART PDM REV: X-004, DRAWING PDM REV: X-006

\*FOR FLANGE TYPE, SIZE, AND SUBFLANGE CONNECTOR DESIGNATIONS, SEE SHEET 1.

CALIFORNIA INSTITUTE OF TECHNOLOGY  
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
 SIZE DWG. NO. **B** D1101775 REV. **v6**  
 SCALE: 1:8 PROJECTION: SHEET 3 OF 4

FEEDTHROUGH TYPES & ALLOCATIONS WRT CHAMBER\*

FLANGE TYPE		WHERE-USED	FLANGE TYPE		WHERE-USED	FLANGE TYPE		WHERE-USED
		<ul style="list-style-type: none"> <li>• HAM6 D3 (L1)</li> </ul>			<ul style="list-style-type: none"> <li>• HAM5 D6 (L1)</li> </ul>			
		<ul style="list-style-type: none"> <li>• HAM6 D5 (H1)</li> </ul>						
		<ul style="list-style-type: none"> <li>• HAM 6 D3 (H1)</li> </ul>						

D1101775 ALIGO, FEEDTHROUGH TYPES, TYPICAL SUBFLANGES, AND PORT CONFIGURATIONS, PART PDM REV: X-004, DRAWING PDM REV: X-006

\*FOR FLANGE TYPE, SIZE, AND SUBFLANGE CONNECTOR DESIGNATIONS, SEE SHEET 1.

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 SIZE DWG. NO. REV.  
**B** D1101775 v6  
 SCALE: 1:8 PROJECTION: SHEET 4 OF 4