

CONNECTOR ID# : TC- J6-(1, 2, 3) ← NOTE 6

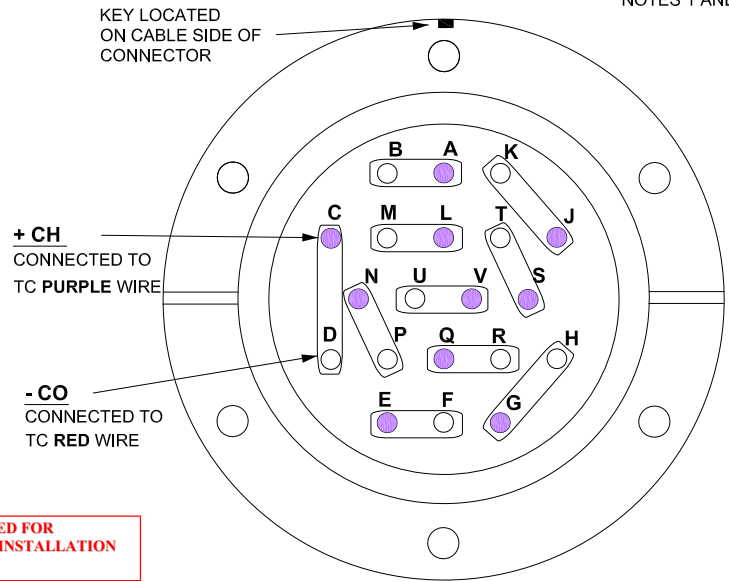
DESCRIPTION : V V -TOP, PORT 12 THERMOCOUPLES, FLANGE 16

CONNECTOR TERMINAL	SIGNAL PHASE	TC WIRE TRACER COLOR	LOCATION DESCRIPTOR	CONTROL TC IDENTIFIER	VESSEL SUB-ASSEMBLY
DWG.: SE121 - 004					
A	+ CH	PUR	NOTE 5	07	-1,-2 OR -3
B	- CO	RED			
C	+ CH	PUR		08	-1,-2 OR -3
D	- CO	RED			
E	+ CH	PUR		09	-1,-2 OR -3
F	- CO	RED			
G	+ CH	PUR		10	-1,-2 OR -3
H	- CO	RED			
J	+ CH	PUR		13	-1,-2 OR -3
K	- CO	RED			
L	+ CH	PUR		14	-1,-2 OR -3
M	- CO	RED			
N	+ CH	PUR		27	-1,-2 OR -3
P	- CO	RED			
Q	+ CH	PUR		28	-1,-2 OR -3
R	- CO	RED			
S	+ CH	PUR		29	-1,-2 OR -3
T	- CO	RED			
V	+ CH	PUR		30	-1,-2 OR -3
U	- CO	RED			

NOTE 6
 VVSA NUMBER
 (-1) =VVSA 1
 (-2) =VVSA 2
 (-3) =VVSA 3

THERMOCOUPLE FEEDTHRU
 (REAR VIEW - WIRE SIDE)

NOTES 1 AND 2



RELEASED FOR FABRICATION / INSTALLATION
 PPPL Drafting

NOTES:

- 1) TYPE-E THERMOCOUPLE FEED THRU WITH MATING TYPE-E CABLE CONNECTOR;
 INSULATOR SEAL - PN 9332024
- 2) CRIMP PUSH ON CONNECTORS;
 INSULATOR SEAL - CHROMEL _PN 9923013 , CONSTANTAN _PN 9923017
- 3) PHYSICAL REFERENCE DWG.: SE 123-124, SH TS 2, 4 AND 6
- 4) THERMOCOUPLES ARE BROUGHT OUT ON FLANGES 7, 12 AND 16
- 5) THERMOCOUPLE LOCATION REFERENCE DWG.: SE121 - 004 APPLIES TO VVSA1, VVSA2, VVSA3.
- 6) COMMON CONTROL ID'S APPLIES TO ALL THREE VACUUM VESSEL SUB ASSEMBLIES WITH ID DASH NUMBER INDICATING THE VV SEGMENT (-1)= VVSA1, (-2) = VVSA2, (-3) = VVSA3

						4				
6						3				
5						2				
REV	ECN#	DATE	BY	APPROVED	REV	ECN#	DATE	BY	APPROVED	

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Rev 6-Vectorworks 12.5	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES MACHINE SURFACES ✓	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLATOR EXPERIMENT THERMOCOUPLE FEEDTHRU WIRING - DETAIL V V S A -TOP; PORT 12 ; FLANGE 16				
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/020	SCALE=	TOLERANCES NON-CUMULATIVE	DIV: FOM	DATE: 05/05/08	CADD FILE:
NEXT ASSEMBLY	DECIMAL - INCH X ±.100 XX ±.030 XXX ±.005 ANGULAR ±.15°	FRACTIONS 0'-12" ±1/16 12'-72" ±1/8 72'-120" ±1/4 OVER 120" ± 1/2	ENG: G.LABIK	APPROVED		se 123-128
			DWN: R.GERNHARDT	CHK: G.TCHILINGUIRIAN	SUPV: JS	SHEET 6 OF 6 REV 0

CONNECTOR ID# : TC- J5-(1, 2, 3) ← NOTE 6

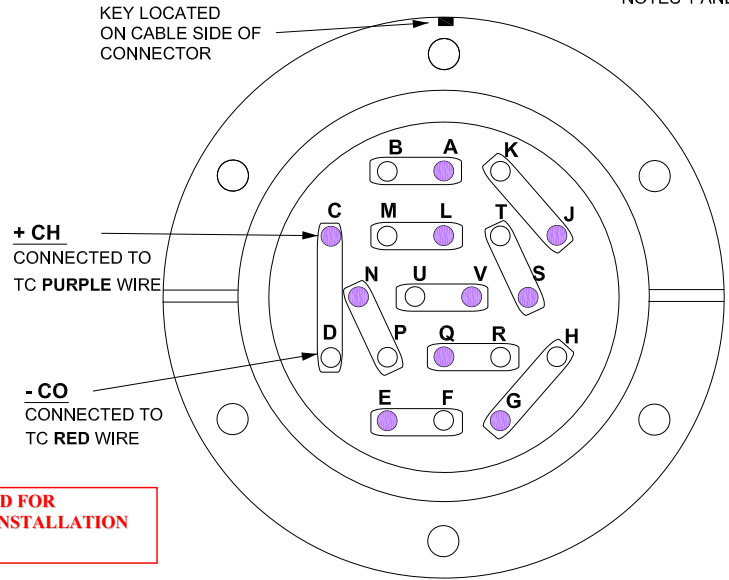
DESCRIPTION : V V -TOP, PORT 12 THERMOCOUPLES, FLANGE 12

CONNECTOR TERMINAL	SIGNAL PHASE	TC WIRE TRACER COLOR	LOCATION DESCRIPTOR	CONTROL TC IDENTIFIER	VESSEL SUB-ASSEMBLY
DWG.: SE121 - 004					
A	+ CH	PUR	NOTE 5	15	-1,-2 OR -3
B	- CO	RED			
C	+ CH	PUR		16	-1,-2 OR -3
D	- CO	RED			
E	+ CH	PUR		17	-1,-2 OR -3
F	- CO	RED			
G	+ CH	PUR		18	-1,-2 OR -3
H	- CO	RED			
J	+ CH	PUR		23	-1,-2 OR -3
K	- CO	RED			
L	+ CH	PUR		24	-1,-2 OR -3
M	- CO	RED			
N	+ CH	PUR		31	-1,-2 OR -3
P	- CO	RED			
Q	+ CH	PUR		32	-1,-2 OR -3
R	- CO	RED			
S	+ CH	PUR		33	-1,-2 OR -3
T	- CO	RED			
V	+ CH	PUR		34	-1,-2 OR -3
U	- CO	RED			

NOTE 6
 VVSA NUMBER
 (-1) = VVSA 1
 (-2) = VVSA 2
 (-3) = VVSA 3

THERMOCOUPLE FEEDTHRU
 (REAR VIEW - WIRE SIDE)

NOTES 1 AND 2



RELEASED FOR FABRICATION / INSTALLATION
 PPPL Drafting:

NOTES:

- 1) TYPE-E THERMOCOUPLE FEED THRU WITH MATING TYPE-E CABLE CONNECTOR;
 INSULATOR SEAL - PN 9332024
- 2) CRIMP PUSH ON CONNECTORS;
 INSULATOR SEAL - CHROMEL _PN 9923013 , CONSTANTAN _PN 9923017
- 3) PHYSICAL REFERENCE DWG.: SE 123-124, SHTS 2, 4 AND 6
- 4) THERMOCOUPLES ARE BROUGHT OUT ON FLANGES 7, 12 AND 16
- 5) THERMOCOUPLE LOCATION REFERENCE DWG.: SE121 - 004 APPLIES TO VVSA1, VVSA2, VVSA3.
- 6) COMMON CONTROL ID'S APPLIES TO ALL THREE VACUUM VESSEL SUB ASSEMBLIES WITH ID DASH NUMBER INDICATING THE VV SEGMENT (-1)= VVSA1, (-2) = VVSA2, (-3) = VVSA3

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Rev 6-Vectorworks 12.5	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES MACHINE SURFACES	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLATOR EXPERIMENT THERMOCOUPLE FEEDTHRU WIRING - DETAIL V V S A -TOP; PORT 12 ; FLANGE 12												
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/020	DIV: FOM	DATE: 05/05/08	CADD FILE:										
SCALE=	TOLERANCES NON-CUMULATIVE	ENG: G.LABIK	APPROVED		se 123-128									
NEXT ASSEMBLY	<table border="1"> <thead> <tr> <th>DECIMAL - INCH</th> <th>FRACTIONS</th> </tr> </thead> <tbody> <tr> <td>X ±.100</td> <td>0"-12" ±1/16</td> </tr> <tr> <td>.XX ±.030</td> <td>12"-72" ±1/8</td> </tr> <tr> <td>.XXX ±.005</td> <td>72"-120" ±1/4</td> </tr> <tr> <td>ANGULAR ±.15°</td> <td>OVER 120" ± 1/2</td> </tr> </tbody> </table>	DECIMAL - INCH	FRACTIONS	X ±.100	0"-12" ±1/16	.XX ±.030	12"-72" ±1/8	.XXX ±.005	72"-120" ±1/4	ANGULAR ±.15°	OVER 120" ± 1/2	DWN: R.GERNHARDT	CHK: G.TCHILINGUIRIAN	SUPV: JS
DECIMAL - INCH	FRACTIONS													
X ±.100	0"-12" ±1/16													
.XX ±.030	12"-72" ±1/8													
.XXX ±.005	72"-120" ±1/4													
ANGULAR ±.15°	OVER 120" ± 1/2													
REV	ECN#	DATE	BY	APPROVED	SHEET 5 OF 6									
REV	ECN#	DATE	BY	APPROVED	REV 0									

						4				
6						3				
5						2				
REV	ECN#	DATE	BY	APPROVED	REV	ECN#	DATE	BY	APPROVED	

CONNECTOR ID# : TC- J4-(1, 2, 3) ← NOTE 6

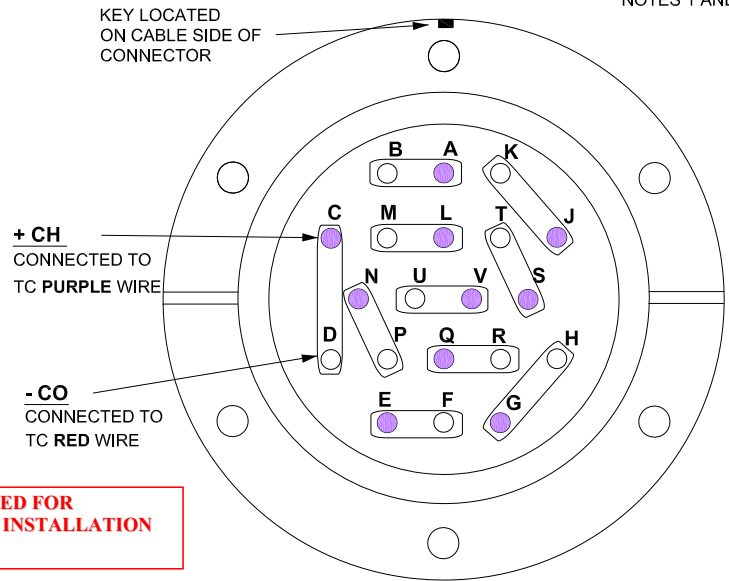
DESCRIPTION : V V -TOP, PORT 12 THERMOCOUPLES, FLANGE 7

CONNECTOR TERMINAL	SIGNAL PHASE	TC WIRE TRACER COLOR	LOCATION DESCRIPTOR	CONTROL TC IDENTIFIER	VESSEL SUB-ASSEMBLY
DWG.: SE121 - 004					
A	+ CH	PUR	NOTE 5	35	-1,-2 OR -3
B	- CO	RED			
C	+ CH	PUR		36	-1,-2 OR -3
D	- CO	RED			
E	+ CH	PUR		37	-1,-2 OR -3
F	- CO	RED			
G	+ CH	PUR		38	-1,-2 OR -3
H	- CO	RED			
J	+ CH	PUR		39	-1,-2 OR -3
K	- CO	RED			
L	+ CH	PUR		40	-1,-2 OR -3
M	- CO	RED			
N	+ CH	PUR		41	-1,-2 OR -3
P	- CO	RED			
Q	+ CH	PUR		42	-1,-2 OR -3
R	- CO	RED			
S	+ CH	PUR		N/A	-1,-2 OR -3
T	- CO	RED			
V	+ CH	PUR		N/A	-1,-2 OR -3
U	- CO	RED			

NOTE 6
 VVSA NUMBER
 (-1) = VVSA 1
 (-2) = VVSA 2
 (-3) = VVSA 3

THERMOCOUPLE FEEDTHRU
 (REAR VIEW - WIRE SIDE)

NOTES 1 AND 2



**RELEASED FOR
 FABRICATION / INSTALLATION**
 PPPL Drafting:

NOTES:

- 1) TYPE-E THERMOCOUPLE FEED THRU WITH MATING TYPE-E CABLE CONNECTOR;
 INSULATOR SEAL - PN 9332024
- 2) CRIMP PUSH ON CONNECTORS;
 INSULATOR SEAL - CHROMEL _PN 9923013 , CONSTANTAN _PN 9923017
- 3) PHYSICAL REFERENCE DWG.: SE 123-124, SHTS 2, 4 AND 6
- 4) THERMOCOUPLES ARE BROUGHT OUT ON FLANGES 7, 12 AND 16
- 5) THERMOCOUPLE LOCATION REFERENCE DWG.: SE121 - 004 APPLIES TO VVSA1, VVSA2, VVSA3.
- 6) COMMON CONTROL ID'S APPLIES TO ALL THREE VACUUM VESSEL SUB ASSEMBLIES WITH ID DASH NUMBER INDICATING THE VV SEGMENT (-1)= VVSA1, (-2) = VVSA2, (-3) = VVSA3

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Rev 6-Vectorworks 12.5	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES MACHINE SURFACES	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLATOR EXPERIMENT THERMOCOUPLE FEEDTHRU WIRING - DETAIL V V S A -TOP; PORT 12 ; FLANGE 7													
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/020	SCALE=	TOLERANCES NON-CUMULATIVE	DIV: FOM	DATE: 05/05/08	CADD FILE:									
NEXT ASSEMBLY	<table border="0" style="width: 100%;"> <tr> <th>DECIMAL - INCH</th> <th>FRACTIONS</th> </tr> <tr> <td>X ±.100</td> <td>0"-12" ±1/16</td> </tr> <tr> <td>.XX ±.030</td> <td>12"-72" ±1/8</td> </tr> <tr> <td>.XXX ±.005</td> <td>72"-120" ±1/4</td> </tr> <tr> <td>ANGULAR ±.15°</td> <td>OVER 120" ± 1/2</td> </tr> </table>	DECIMAL - INCH	FRACTIONS	X ±.100	0"-12" ±1/16	.XX ±.030	12"-72" ±1/8	.XXX ±.005	72"-120" ±1/4	ANGULAR ±.15°	OVER 120" ± 1/2	ENG: G.LABIK	APPROVED	se 123-128	
DECIMAL - INCH	FRACTIONS														
X ±.100	0"-12" ±1/16														
.XX ±.030	12"-72" ±1/8														
.XXX ±.005	72"-120" ±1/4														
ANGULAR ±.15°	OVER 120" ± 1/2														
		DWN: R.GERNHARDT		CHK: G.TCHILINGUIRIAN	GT	SUPV JS									
				SHEET 4 OF 6	REV 0										

6					4					
5					3					
					2					
REV	ECN#	DATE	BY	APPROVED	REV	ECN#	DATE	BY	APPROVED	

CONNECTOR ID# : TC- J3-(1, 2, 3) ← NOTE 6

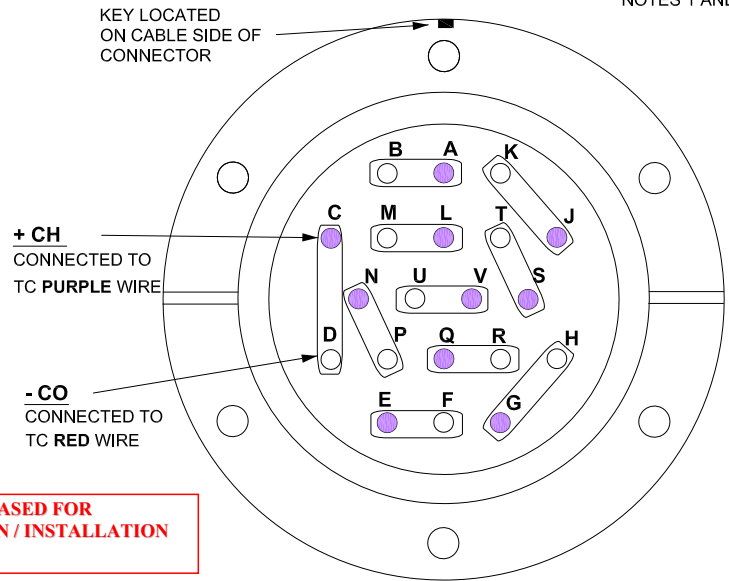
DESCRIPTION : V V -BOT, PORT 12 THERMOCOUPLES, FLANGE 16

CONNECTOR TERMINAL	SIGNAL PHASE	TC WIRE TRACER COLOR	LOCATION DESCRIPTOR	CONTROL TC IDENTIFIER	VESSEL SUB-ASSEMBLY
DWG.: SE121 - 004					
A	+ CH	PUR	NOTE 5	3	-1,-2 OR -3
B	- CO	RED			
C	+ CH	PUR		4	-1,-2 OR -3
D	- CO	RED			
E	+ CH	PUR		5	-1,-2 OR -3
F	- CO	RED			
G	+ CH	PUR		6	-1,-2 OR -3
H	- CO	RED			
J	+ CH	PUR		11	-1,-2 OR -3
K	- CO	RED			
L	+ CH	PUR		12	-1,-2 OR -3
M	- CO	RED			
N	+ CH	PUR		51	-1,-2 OR -3
P	- CO	RED			
Q	+ CH	PUR		52	-1,-2 OR -3
R	- CO	RED			
S	+ CH	PUR		55	-1,-2 OR -3
T	- CO	RED			
V	+ CH	PUR		56	-1,-2 OR -3
U	- CO	RED			

NOTE 6
 VVSA NUMBER
 (-1) = VVSA 1
 (-2) = VVSA 2
 (-3) = VVSA 3

THERMOCOUPLE FEEDTHRU
 (REAR VIEW - WIRE SIDE)

NOTES 1 AND 2



NOTES:

- 1) TYPE-E THERMOCOUPLE FEED THRU WITH MATING TYPE-E CABLE CONNECTOR;
 INSULATOR SEAL - PN 9332024
- 2) CRIMP PUSH ON CONNECTORS;
 INSULATOR SEAL - CHROMEL _PN 9923013 , CONSTANTAN _PN 9923017
- 3) PHYSICAL REFERENCE DWG.: SE 123-124, SHTS 1, 3 AND 5
- 4) THERMOCOUPLES ARE BROUGHT OUT ON FLANGES 7, 12 AND 16
- 5) THERMOCOUPLE LOCATION REFERENCE DWG.: SE121 - 004 APPLIES TO VVSA1, VVSA2, VVSA3.
- 6) COMMON CONTROL ID'S APPLIES TO ALL THREE VACUUM VESSEL SUB ASSEMBLIES WITH ID DASH NUMBER INDICATING THE VV SEGMENT (-1)= VVSA1, (-2) = VVSA2, (-3) = VVSA3

						4				
6						3				
5						2				
REV	ECN#	DATE	BY	APPROVED	REV	ECN#	DATE	BY	APPROVED	

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Rev 6-Vectorworks 12.5	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES MACHINE SURFACES	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLATOR EXPERIMENT THERMOCOUPLE FEEDTHRU WIRING - DETAIL V V S A -BOT; PORT 12 ; FLANGE 16			
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/020	DIV: FOM	DATE: 05/05/08	CADD FILE:	
SCALE=	TOLERANCES NON-CUMULATIVE	ENG: G.LABIK	APPROVED		se 123-128
NEXT ASSEMBLY	DECIMAL - INCH X ±.100 XX ±.030 XXX ±.005 ANGULAR ±.15°	FRACTIONS 0"-12" ±1/16 12"-72" ±1/8 72"-120" ±1/4 OVER 120" ±1/2	DWN: R.GERNHARDT	CHK: G.TCHILINGUIRIAN	SUPV: JS
				SHEET 3 OF 6	REV 0

CONNECTOR ID# : TC- J2-(1, 2, 3) ← NOTE 6

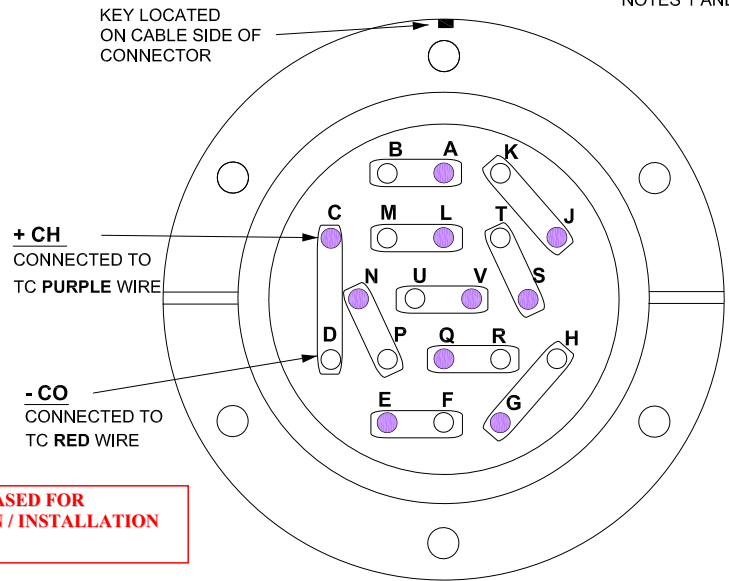
DESCRIPTION : V V -BOT, PORT 12 THERMOCOUPLES, FLANGE 12

CONNECTOR TERMINAL	SIGNAL PHASE	TC WIRE TRACER COLOR	LOCATION DESCRIPTOR	CONTROL TC IDENTIFIER	VESSEL SUB-ASSEMBLY
DWG.: SE121 - 004					
A	+ CH	PUR	NOTE 5	1	-1,-2 OR -3
B	- CO	RED			
C	+ CH	PUR		2	-1,-2 OR -3
D	- CO	RED			
E	+ CH	PUR		43	-1,-2 OR -3
F	- CO	RED			
G	+ CH	PUR		44	-1,-2 OR -3
H	- CO	RED			
J	+ CH	PUR		45	-1,-2 OR -3
K	- CO	RED			
L	+ CH	PUR		46	-1,-2 OR -3
M	- CO	RED			
N	+ CH	PUR		47	-1,-2 OR -3
P	- CO	RED			
Q	+ CH	PUR		48	-1,-2 OR -3
R	- CO	RED			
S	+ CH	PUR		49	-1,-2 OR -3
T	- CO	RED			
V	+ CH	PUR		50	-1,-2 OR -3
U	- CO	RED			

NOTE 6
 VVSA NUMBER
 (-1) = VVSA 1
 (-2) = VVSA 2
 (-3) = VVSA 3

THERMOCOUPLE FEEDTHRU
 (REAR VIEW - WIRE SIDE)

NOTES 1 AND 2



RELEASED FOR FABRICATION / INSTALLATION
 PPPL Drafting:

NOTES:

- 1) TYPE-E THERMOCOUPLE FEED THRU WITH MATING TYPE-E CABLE CONNECTOR;
 INSULATOR SEAL - PN 9332024
- 2) CRIMP PUSH ON CONNECTORS;
 INSULATOR SEAL - CHROMEL _PN 9923013 , CONSTANTAN _PN 9923017
- 3) PHYSICAL REFERENCE DWG.: SE 123-124, SHTS 1, 3 AND 5
- 4) THERMOCOUPLES ARE BROUGHT OUT ON FLANGES 7, 12 AND 16
- 5) THERMOCOUPLE LOCATION REFERENCE DWG.: SE121 - 004 APPLIES TO VVSA1, VVSA2, VVSA3.
- 6) COMMON CONTROL ID'S APPLIES TO ALL THREE VACUUM VESSEL SUB ASSEMBLIES WITH ID DASH NUMBER INDICATING THE VV SEGMENT (-1)= VVSA1, (-2) = VVSA2, (-3) = VVSA3

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Rev 6-Vectorworks 12.5	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES MACHINE SURFACES	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLERATOR EXPERIMENT THERMOCOUPLE FEEDTHRU WIRING - DETAIL V V S A -BOT; PORT 12 ; FLANGE 12					
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/020	DIV:	FOM	DATE:	05/05/08	CADD FILE:	
SCALE=	TOLERANCES NON-CUMULATIVE	ENG:	G.LABIK	APPROVED		se 123-128	
NEXT ASSEMBLY	DECIMAL - INCH X ±.100 XX ±.030 XXX ±.005 ANGULAR ±.15°	DWN:	R.GERNHARDT	CHK:	G.TCHILINGUIRIAN	SUPV:	JS
	FRACTIONS 0'-12" ±1/16 12'-72" ±1/8 72'-120" ±1/4 OVER 120' ± 1/2					SHEET 2 OF 6	REV 0

						4				
6						3				
5						2				
REV	ECN#	DATE	BY	APPROVED	REV	ECN#	DATE	BY	APPROVED	