
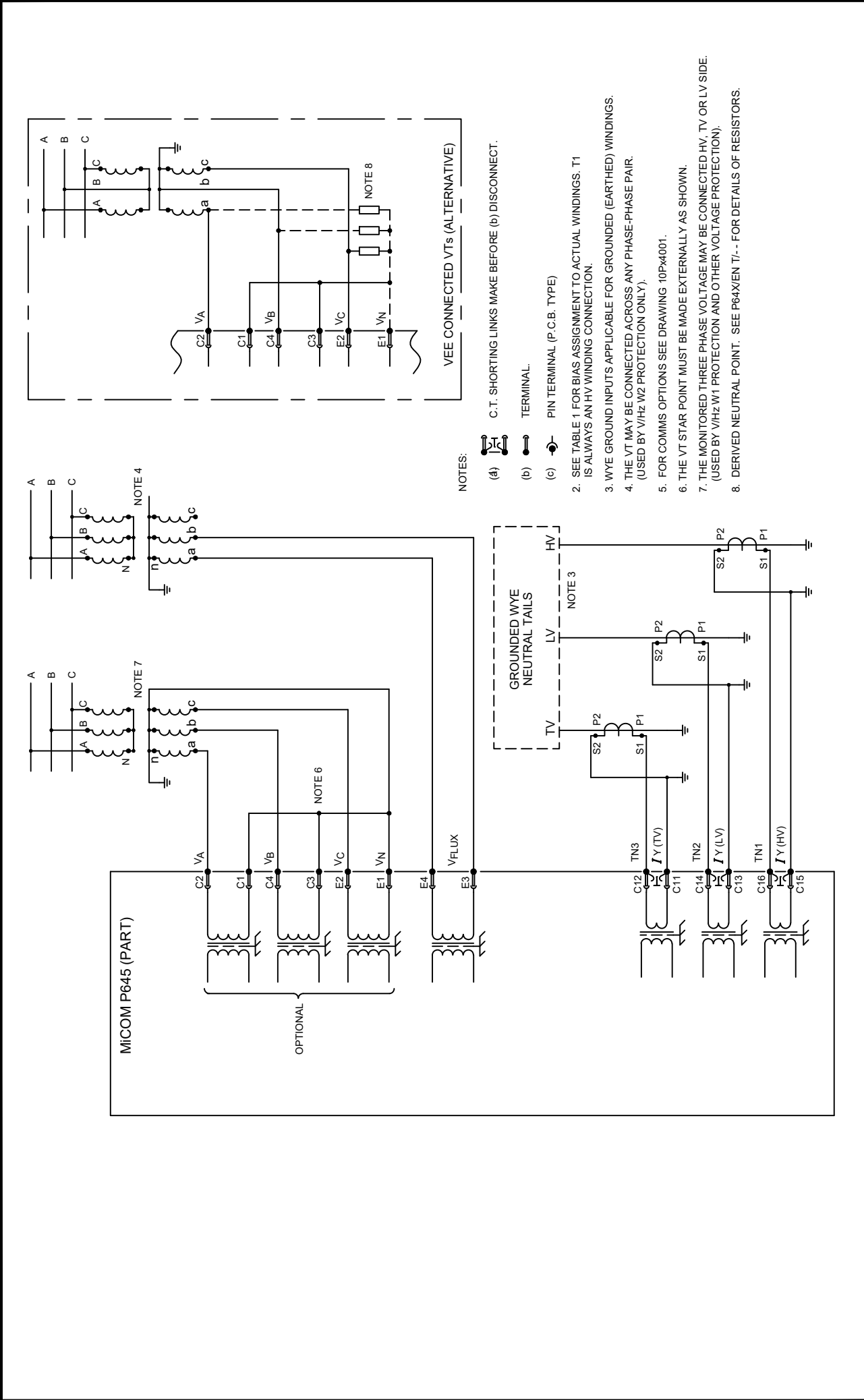

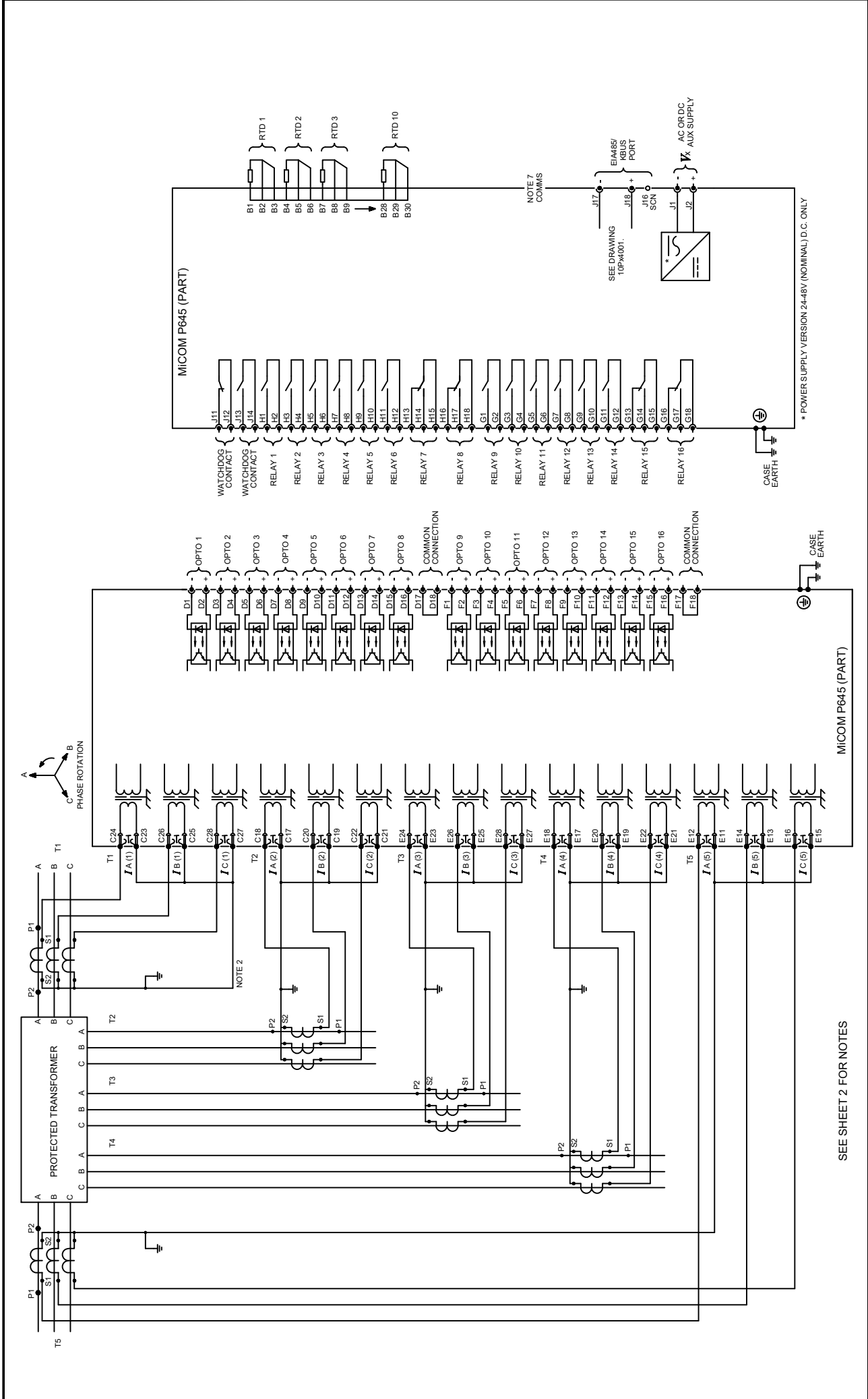



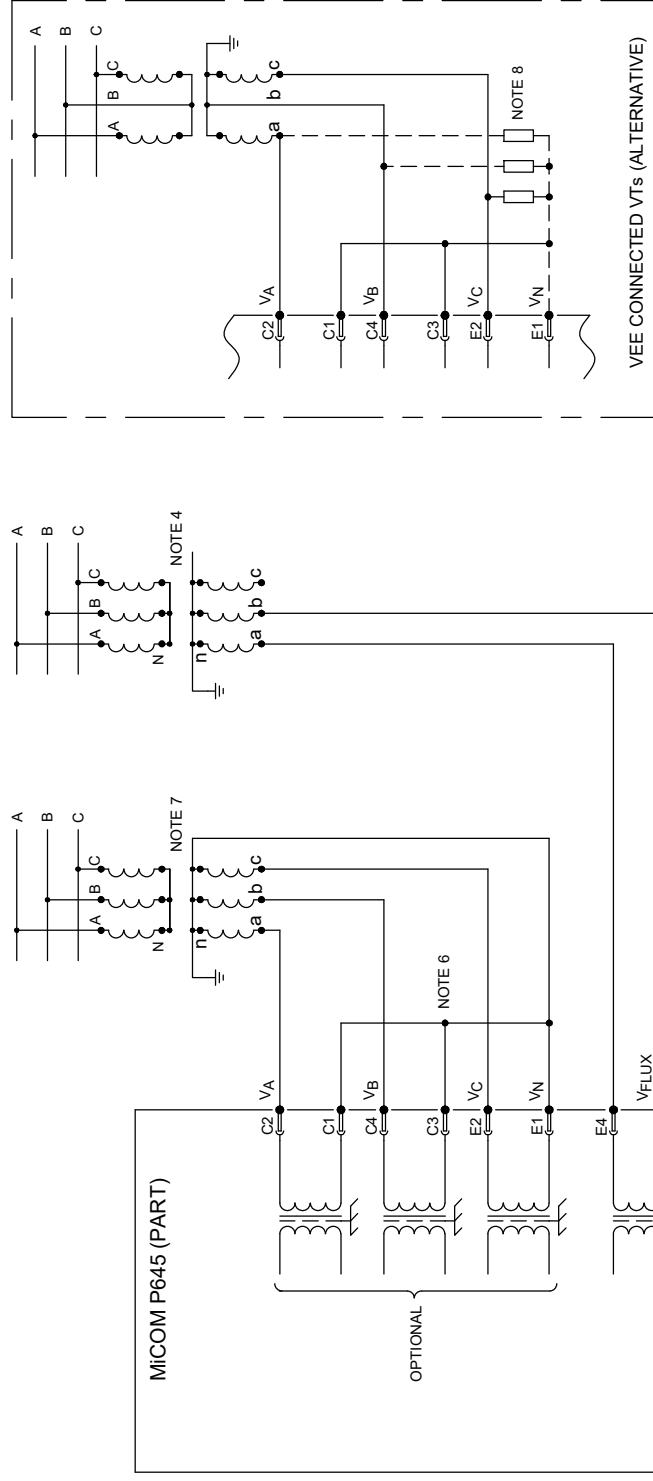
Issue: E		Revision: CID HONG-9CRNL3		Title: EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (16 I/P & 16 O/P) WITH 4 POLE VT INPUTS (60TE)			
Date: 10/12/2013	Name: H.ONG	CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE			Dig No: 10P64501	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	Sht: 1
Date:	Chkd:						
				ALSTOM			






Issue:		Revision:		Title:	
J		CID SW00-9LNAWE. TABLE 1 REMOVED. NOTES 5&6 REMOVED. TMLS C1-C4 & E1-E2 CHANGED.		EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (16 I/P & 16 O/P) WITH 4 POLE VT INPUTS (60TE)	
Date:	14/07/2014	Name:	S.WOOTTON	Dwg No:	10P64501
Date:		Chkd:			
				ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	Next Shr:
				CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	-
					

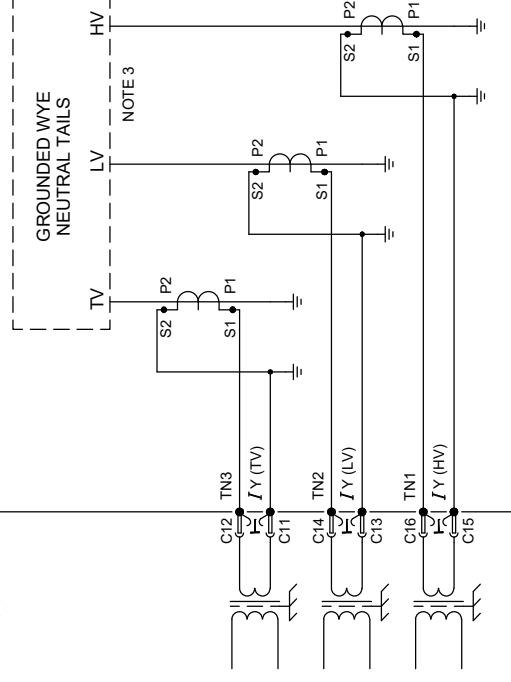



Issue: E		Revision: CID HONG-9CRNL3		Title: EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (16 I/P & 16 O/P + RTD) WITH 4 POLE VT INPUTS (60TE)		
Date: 10/12/2013	Name: H. ONG		CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	Dig No: 10P64502	Sht: 1
Date:	Chkd:					Next Sht: 2
ALSTOM						

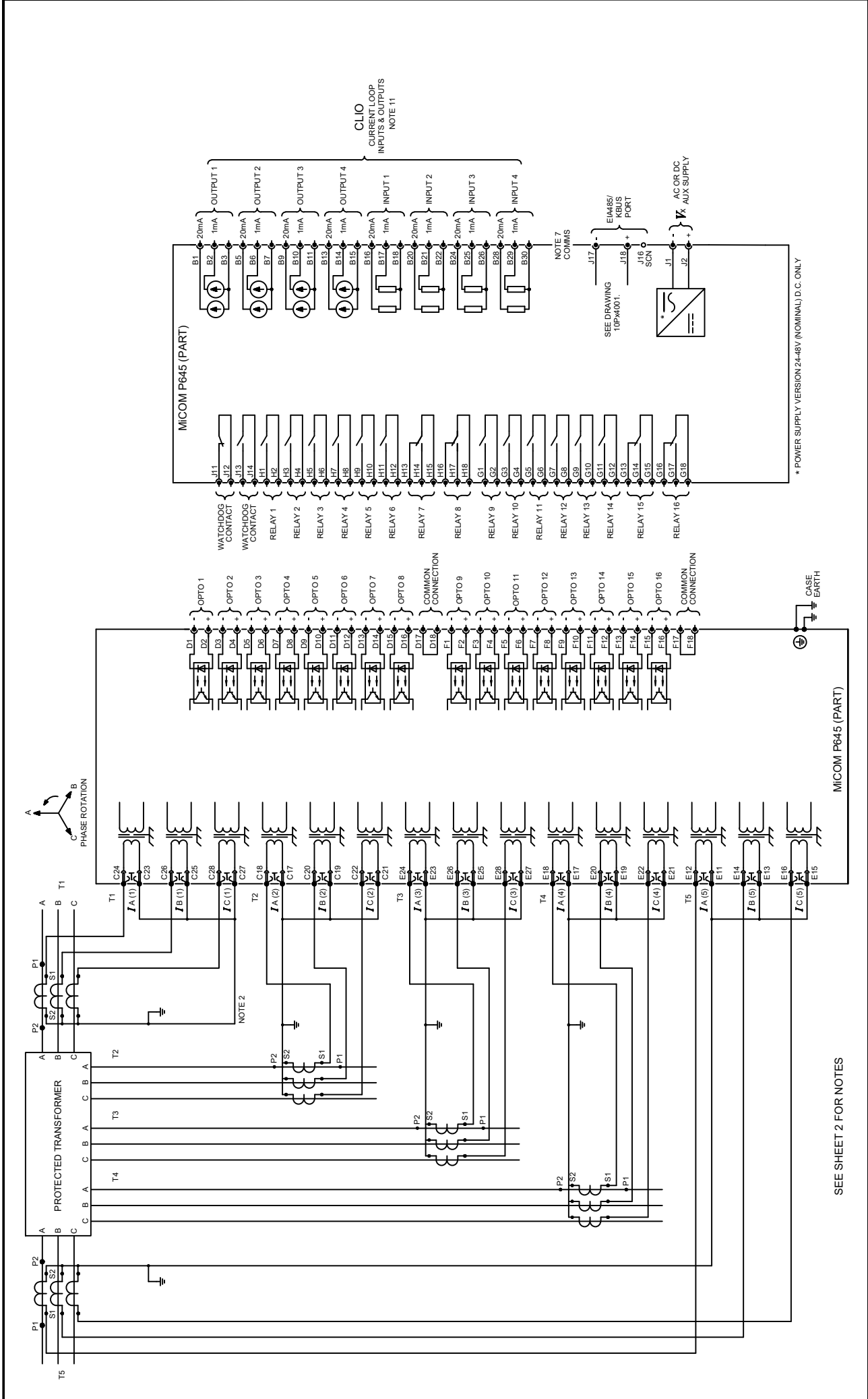



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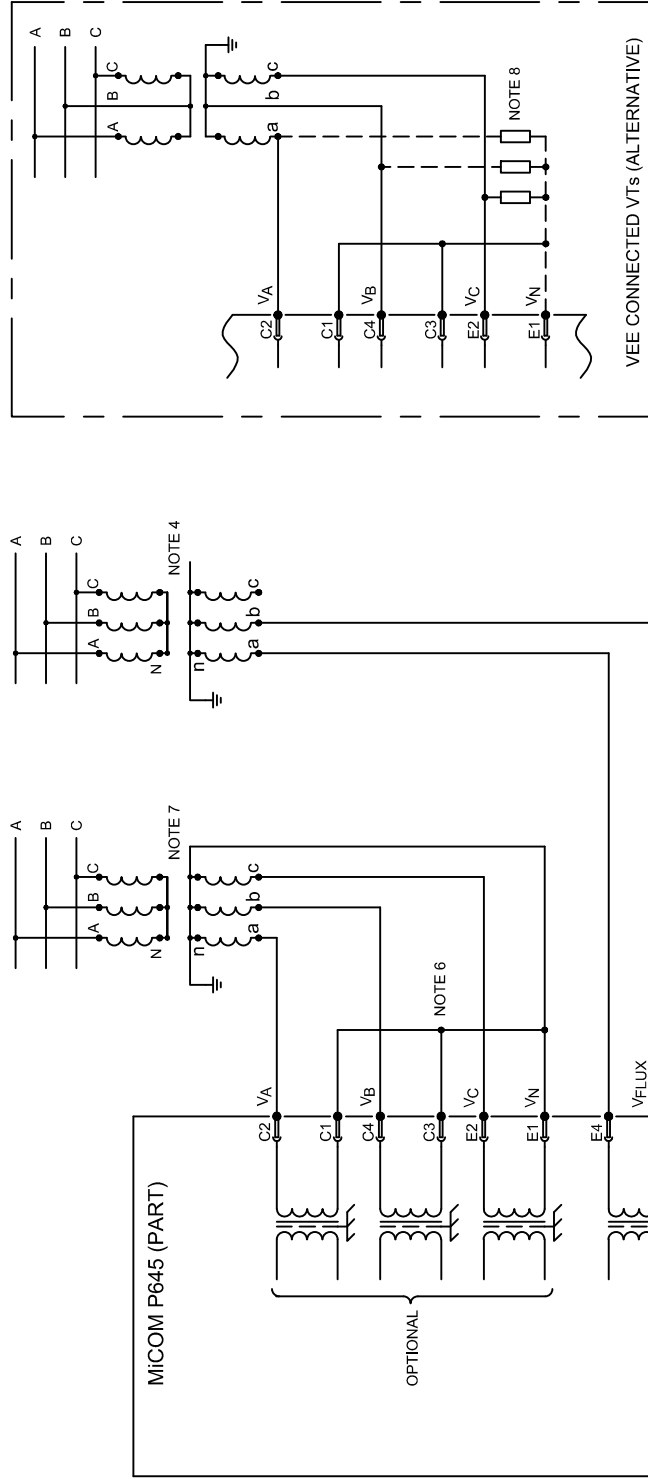
1. (a)  C.T. SHORTING LINKS MAKE BEFORE (b) DISCONNECT.
(b)  TERMINAL.
(c)  PIN TERMINAL (P.C.B. TYPE)
2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. T1 IS ALWAYS AN HV WINDING CONNECTION.
3. WYE GROUND INPUTS APPLICABLE FOR GROUND (EARTHED) WINDINGS.
4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR. (USED BY V/HZ W2 PROTECTION ONLY).
5. FOR COMMS OPTIONS SEE DRAWING 10P44001.
6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.
7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV, TV OR LV SIDE (USED BY V/HZ W1 PROTECTION AND OTHER VOLTAGE PROTECTION).
8. DERIVED NEUTRAL POINT: SEE P64/XIEN T1/- FOR DETAILS OF RESISTORS.






Issue:	Revision: CID SWOO-9\NAME. TABLE 1 REMOVED. NOTES 5&6 REMOVED.C11-C16 WAS D11-D16		Title: EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (16 I/P & 16 O/P + RTD) WITH 4 POLE VT INPUTS (60TE)			
Date:	14/07/2014	Name: S.WOOTTON	 CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	Drg No: ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	10P64502	Sht: 2 Next Sht: -
Date:		Chkd:				

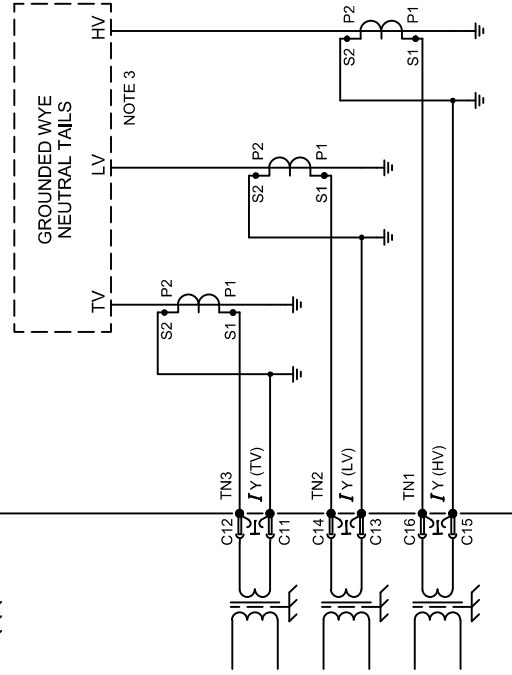



Issue:		Revision: CID HONG-9CRNL3		Title: EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (16 I/P & 16 O/P + CLIO) WITH 4 POLE VT INPUTS (60TE)	
E					
Date:	10/12/2013	Name: H.ONG		Dwg No:	10P64503
Date:		Chkd:			
				ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	
					
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				ALSTOM	

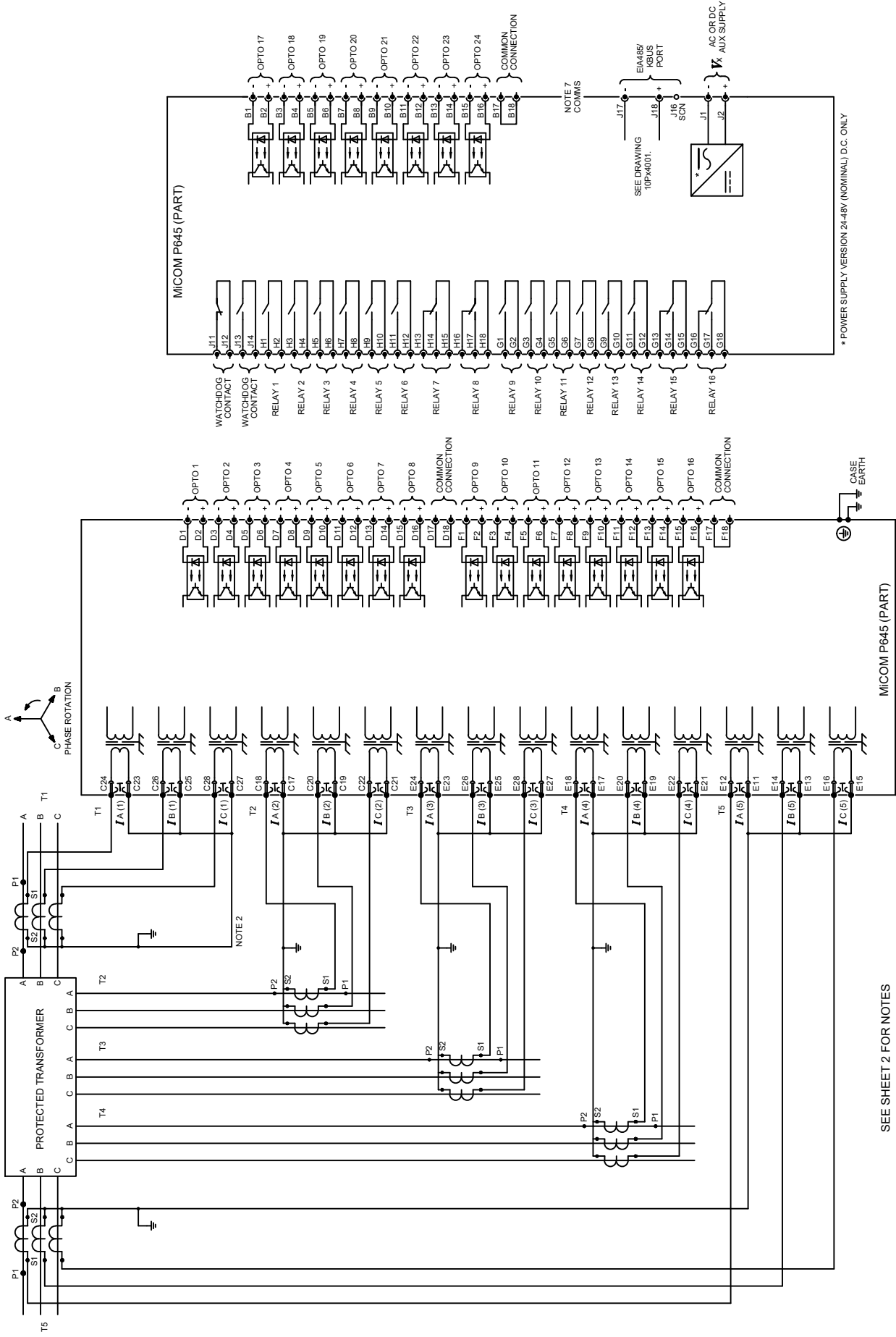


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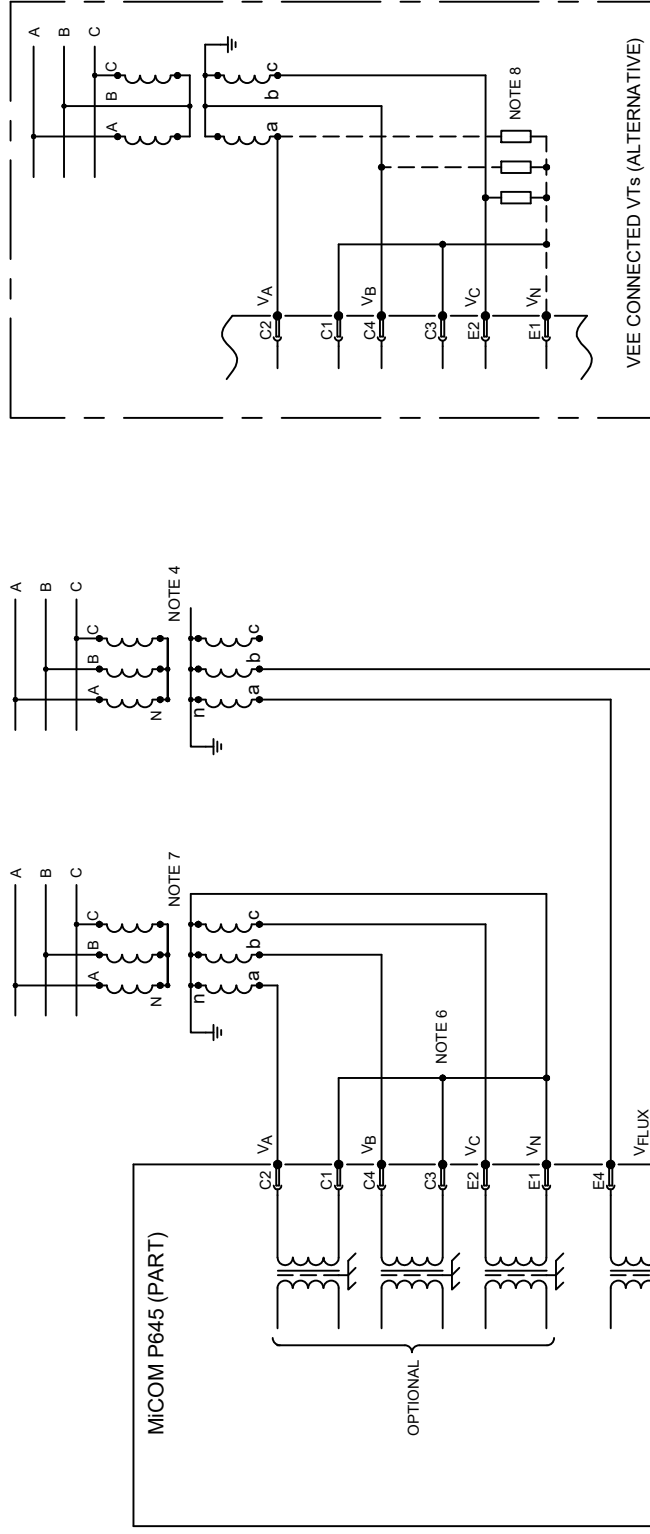
1. (a)  C.T. SHORTING LINKS MAKE BEFORE (b) DISCONNECT.
(b)  TERMINAL.
(c)  PIN TERMINAL (P.C.B. TYPE)
2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. T1 IS ALWAYS AN HV WINDING CONNECTION.
3. WYE GROUND INPUTS APPLICABLE FOR GROUNDED (EARTHED) WINDINGS.
4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR. (USED BY V/Hz W2 PROTECTION ONLY).
5. FOR COMMS OPTIONS SEE DRAWING 10Px4001.
6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.
7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV, TV OR LV (USED BY V/Hz W1 PROTECTION AND OTHER VOLTAGE PROTECTION).
8. DERIVED NEUTRAL POINT. SEE P64XVEN T1/- FOR DETAILS OF RESISTORS.
9. FOR 0-10mA, 0-20mA, 4-20mA RANGE USE 20mA INPUTS & OUTPUTS FOR 0-1mA RANGE USE 1mA INPUTS & OUTPUTS.






Issue:	Revision: CID SWOO-9\NAWE. TABLE 1 REMOVED. NOTES 5&6 REMOVED. TMLS C11-C16 WERE D11-D16.		Title:		EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (16 I/P & 16 O/P + CLIO) WITH 4 POLE VT INPUTS (60TE)	
Date: 14/07/2014	Name: S. WOOTTON		CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	Drg No:	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	10P64503
Date:	Chkd:					
<div>ALSTOM</div>						




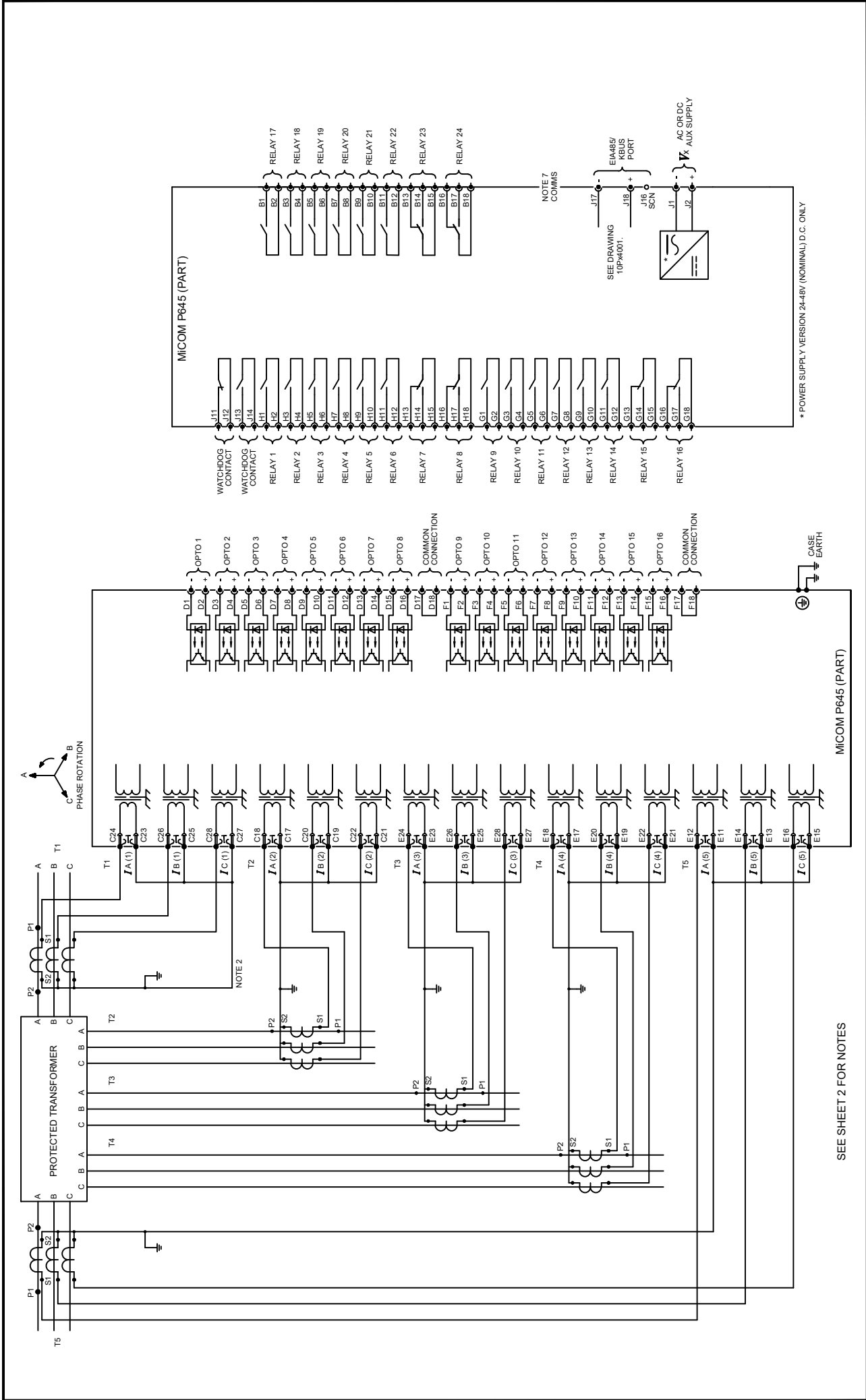
Issue:	Revision: CID HONG-9CRNL3	Title: EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (24 I/P & 16 O/P) WITH 4 POLE VT INPUTS (60TE)	
		Drig No:	Drig No:
Date: 10/12/2013	Name: H. LONG	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	
Date:	Chkd:	CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	
		10P64504	
		Sht: 1	Sht: 2
		ALSTOM	



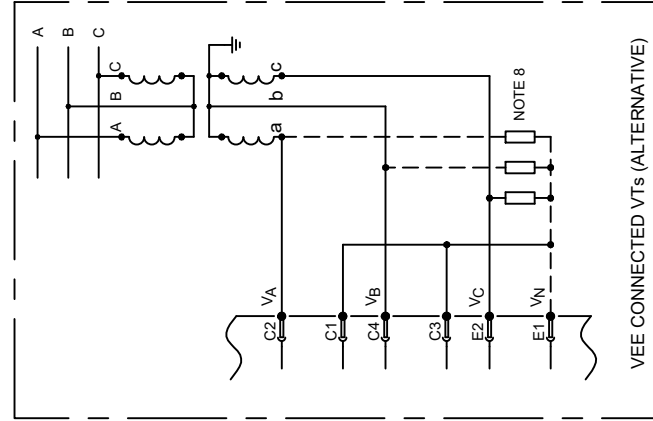
NOTES:




1. (a)  C.T. SHORTING LINKS MAKE BEFORE (b) DISCONNECT.
(b)  TERMINAL.
(c)  PIN TERMINAL (P C.B. TYPE)
2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. T1 IS ALWAYS AN HV WINDING CONNECTION.
3. WYE GROUND INPUTS APPLICABLE FOR GROUND (EARTHED) WINDINGS.
4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR. (USED BY V/Hz W2 PROTECTION ONLY).
5. FOR COMMS OPTIONS SEE DRAWING 10Px4001.
6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.
7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV, TV OR LV SIDE (USED BY V/Hz W1 PROTECTION AND OTHER VOLTAGE PROTECTION).
8. DERIVED NEUTRAL POINT. SEE P64/XIEN T1 - FOR DETAILS OF RESISTORS.

Issue:	Revision: CID SWOO-9LNAWE. TABLE 1 REMOVED. NOTES 5&6 REMOVED. TMLS C11-C16 WERE D11-D16.			Title: EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (24 I/P & 16 O/P) WITH 4 POLE VT INPUTS (60TE)		
Date:	14/07/2014	Name:	S.WOOTTON		Drg No: 10P64504	
Date:		Chkd:			Sht: 2 Next Sht: -	
CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE				ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)		
				ALSTOM		

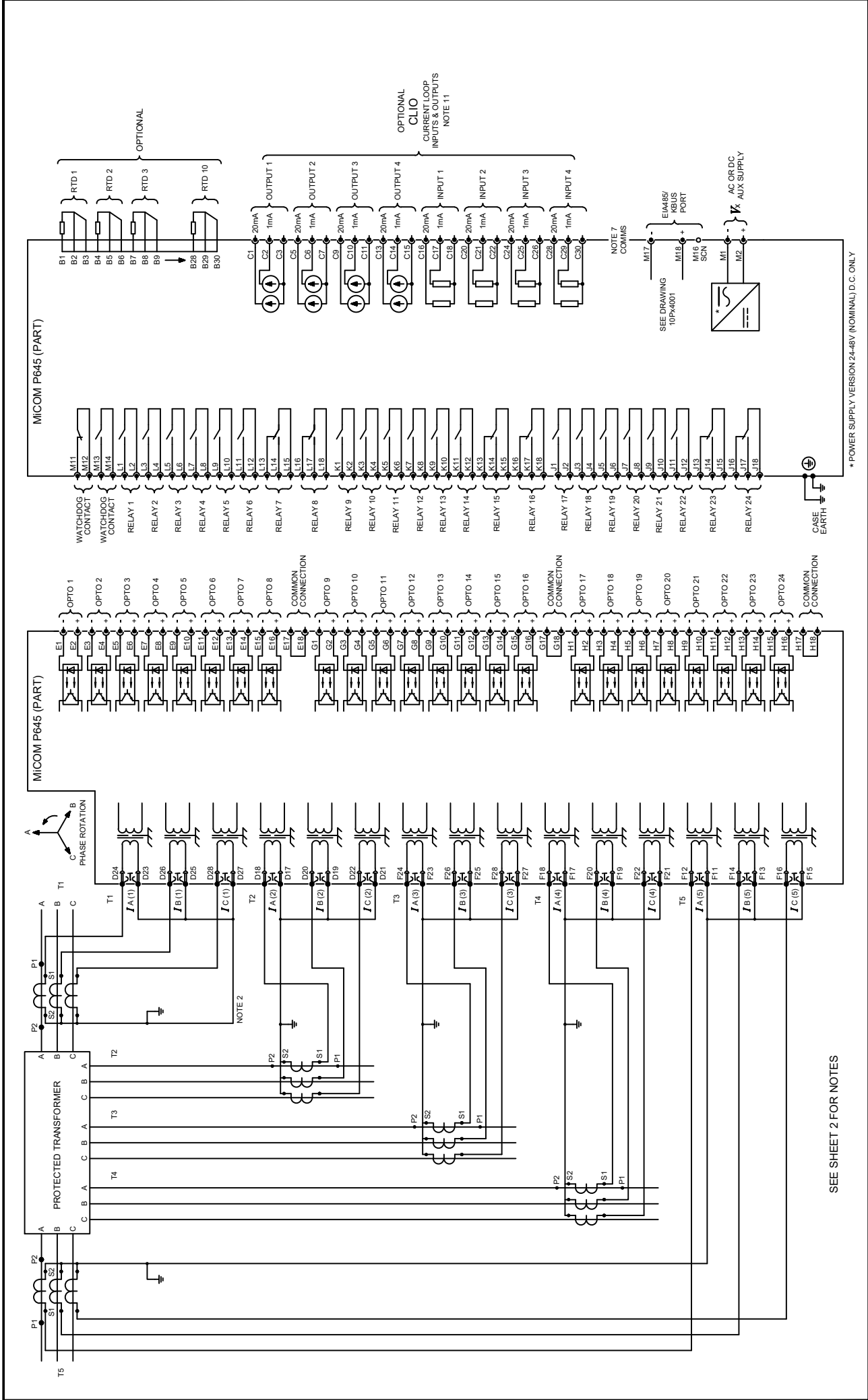


Issue: E	Revision: CID HONG-9CRNL3		Title: EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (16 I/P & 24 O/P) WITH 4 POLE VT INPUTS (60TE)	
	Date: 10/12/2013	Name: H. LONG	Dig No: 10P64505	
Date:	Chkd:	CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	Sht: 1
			Next Sht: 2	ALSTOM



1. (a)  (b)  (c) 

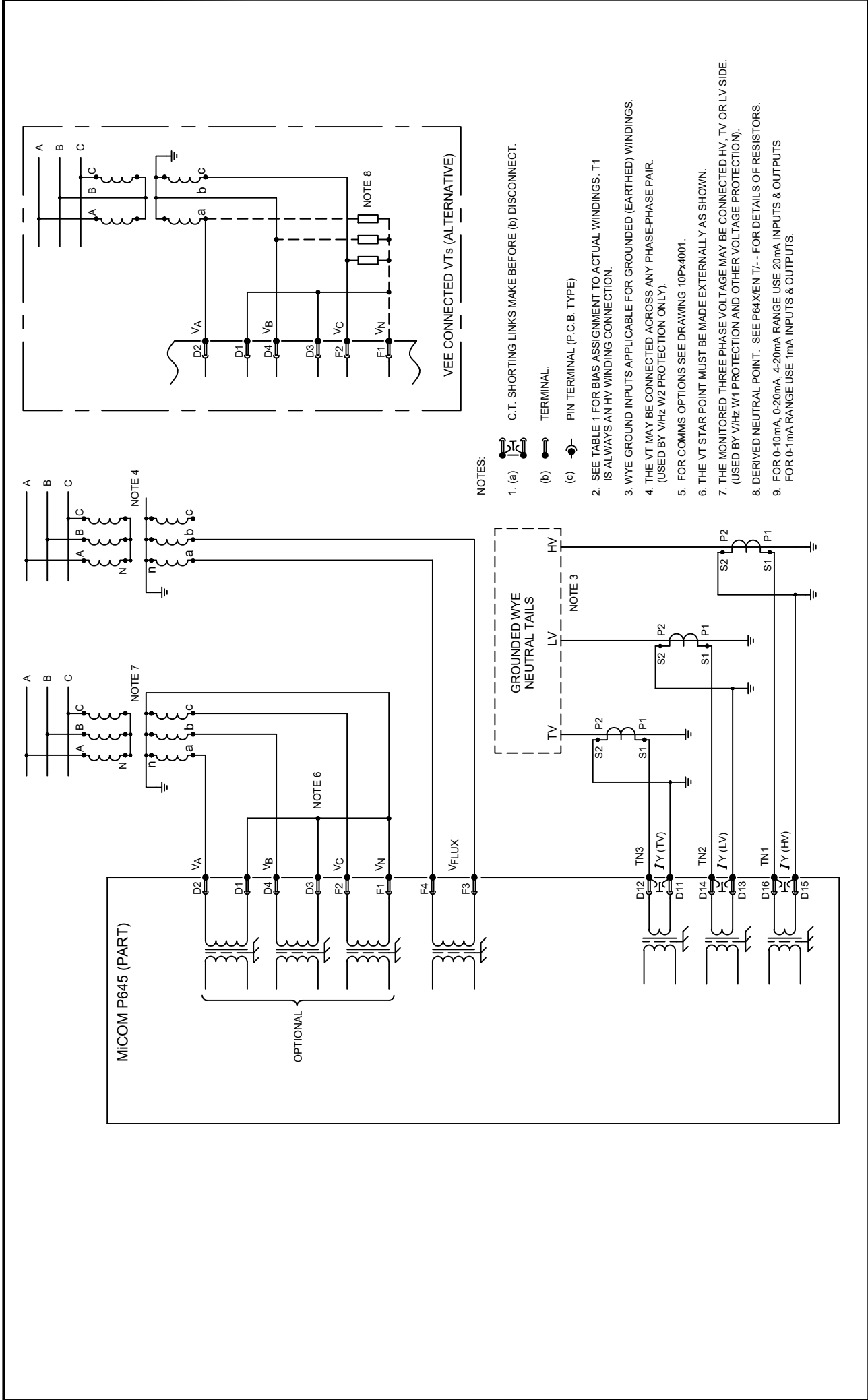
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Issue:	Revision: CID HONG-9CRNL3	Title: EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (24 I/P & 24 O/P + CLIO & RTD) WITH 4 POLE VT INPUTS (80TE)	
		Dwg No:	Sht: 1
Date: 10/12/2013	Name: H. ONG	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	Next Sht: 2
Date:	Chkd:		

10P64506

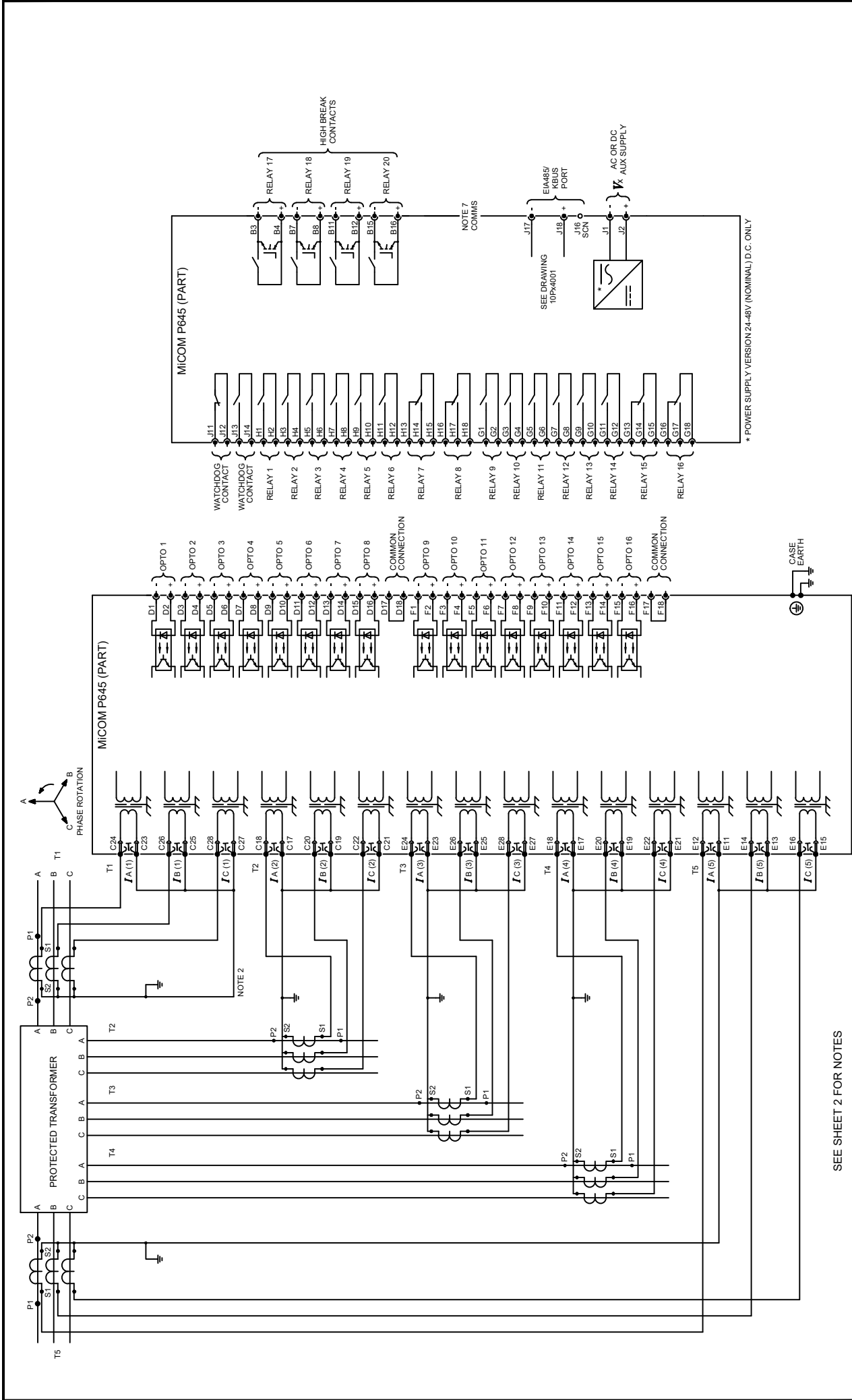
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NOTES:

- 1. (a) (b) (c) C.T. SHORTING LINKS MAKE BEFORE (b) DISCONNECT. TERMINAL.
- 2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. T1 IS ALWAYS AN HV WINDING CONNECTION.
- 3. WYE GROUND INPUTS APPLICABLE FOR GROUNDED (EARTHED) WINDINGS.
- 4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR. (USED BY VHz W2 PROTECTION ONLY).
- 5. FOR COMMS OPTIONS SEE DRAWING 10P4001.
- 6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.
- 7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV, TV OR LV SIDE. (USED BY VHz W1 PROTECTION AND OTHER VOLTAGE PROTECTION).
- 8. DERIVED NEUTRAL POINT. SEE P64XEN T1-- FOR DETAILS OF RESISTORS.
- 9. FOR 0-10mA, 0-20mA, 4-20mA RANGE USE 20mA INPUTS & OUTPUTS. FOR 0-1mA RANGE USE 1mA INPUTS & OUTPUTS.

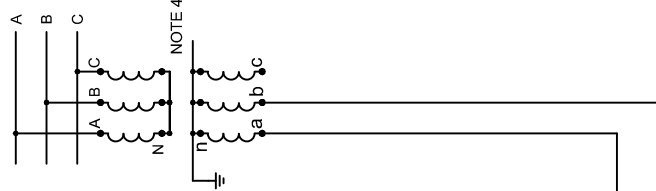
Issue:		Revision: CID SWOO-9LNAWE. TABLE 1 REMOVED. NOTES 5&6 REMOVED.		Title: EXT. CONNECTION DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (24 I/P & 24 O/P + CLIO & RTD) WITH 4 POLE VT INPUTS (80TE)	
I					
Date:	14/07/2014	Name: S.WOOTTON		Dwg No:	
Date:		Chkd:		Sht: 2	
				Next Sht: -	
				10P64506	
				ALSTOM	



SEE SHEET 2 FOR NOTES

Issue: E		Revision: CID HONG-9CRNL3		Title: EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (24 I/P 20 O/P) WITH 4 POLE VT INPUTS (60TE)	
Date: 10/12/2013	Name: H. ONG	CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE			Dig No: ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)
Date:	Chkd:				
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ALSTOM					


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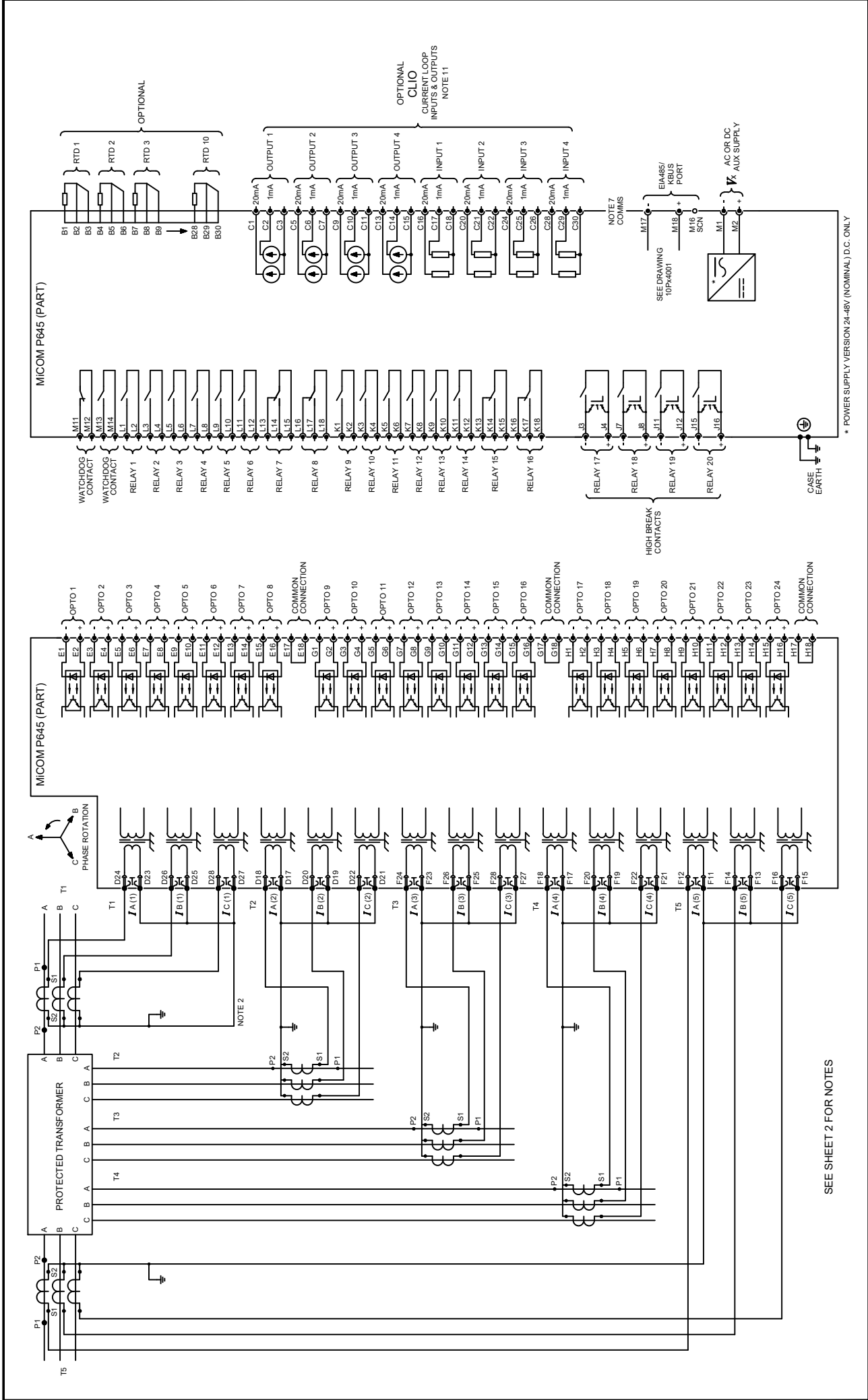


(a)

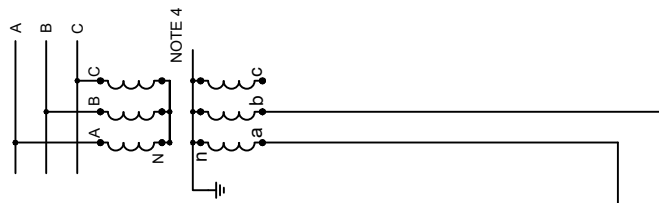
- C.T. SHORTING LINKS MAKE BEFORE (b) DISCONNECT:
- (a)  (b)  (c) 
- TERMINAL.
- PIN TERMINAL (P.C.B. TYPE)

-
- Figure 1 is a schematic diagram of a three-phase, three-wire, grounded wye neutral tails distribution system. The diagram shows three transformers connected to a common neutral point. The primary windings are connected to a three-phase supply (HV, LV, TV) and the secondary windings are connected to a three-phase load (TN1, TN2, TN3). The neutral tails are grounded at the transformer secondary terminals. The diagram includes labels for the grounded wye neutral tails, the HV, LV, and TV lines, and the TN1, TN2, and TN3 lines. The diagram also includes a note 3 and a ground symbol.

Issue:	Revision: CID SWOO-9LNAWE: TABLE 1 REMOVED. NOTES 5&6 REMOVED.		Title: EXTERNAL CONNECTION DIAGRAM: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (24 I/P 20 O/P) WITH 4 POLE VT INPUTS (60TE)		
	H				
Date:	14/07/2014	Name: S. WOOTTON	 CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	Dwg No:	Sht: 2 Next Sht: -
Date:		Chkd:			
			10P64507		
			ALSTOM		




Issue:	Revision:		Title:	
	CID HONG-9CRNL3		EXT. CONNECTION DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (24 I/P 20 O/P + CLIO & RTD)) WITH 4 POLE VT INPUTS (80TE)	
Date:	10/12/2013	Name:	H. ONG	Dig No:
Date:		Chkd:		
CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE				ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)
10P64508				Sht: 1 Next Sht: 2
ALSTOM				

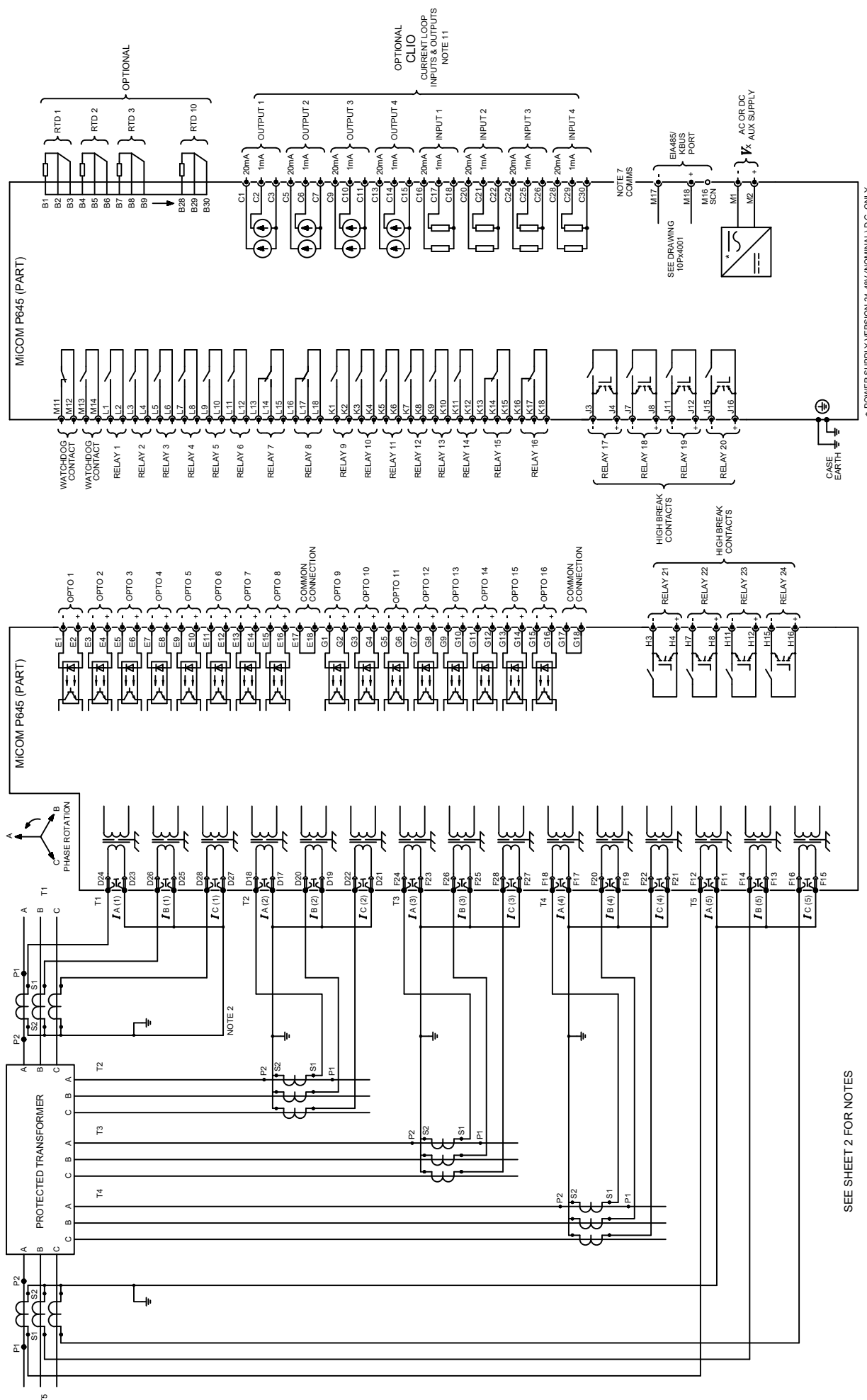


2. SEE

PIN TERMINAL (P.C.B. TYPE)

2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. BIAS INPUT 1 IS ALWAYS AN HV WINDING CONNECTION.
3. WYE GROUND INPUTS APPLICABLE FOR GROUNDED (EARTHED) WINDINGS.
4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR.
(USED BY V/Hz W2 PROTECTION ONLY).
5. FOR COMMS OPTIONS SEE DRAWING 10Px4001.
6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.
7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV, TV OR LV SIDE.
(USED BY V/Hz W1 PROTECTION AND OTHER VOLTAGE PROTECTION).
8. DERIVED NEUTRAL POINT. SEE P64 X1EN T1/- FOR DETAILS OF RESISTORS.
9. FOR 0-10mA, 0-20mA, 4-20mA RANGE USE 20mA INPUTS & OUTPUTS
FOR 0-1mA RANGE USE 1mA INPI T1S & OUTPI T1S.

Issue:		Revision: CID SWOO-9\NAWE: TABLE 1 REMOVED. NOTES 5&6 REMOVED.			Title: EXT. CONNECTION DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (24 I/P 20 O/P + CLIO & RTD)) WITH 4 POLE VT INPUTS (80TE)						
H											
Date: 14/07/2014		Name: S.WOOTTON		CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE				Dwg No:		Sht: 2	
Date:		Chkd:				ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)		10P64508		Next Sht: -	
								ALSTOM			



SEE SHEET 2 FOR NOTES

* POWER SUPPLY VERSION 24-48V (NOMINAL) D.C. ONLY

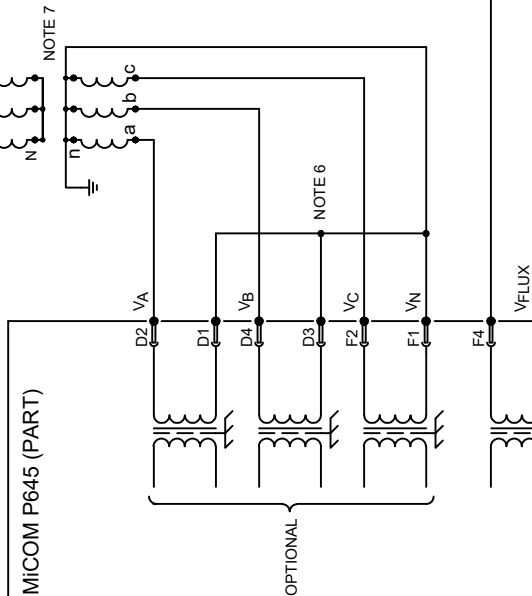
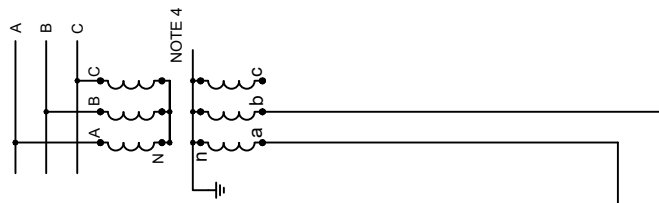
Title: EXT. CONNECTION DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (16 I/P 24 O/P + CLIO & RTD) WITH 4 POLE VT INPUTS (80TE)

Dig No: ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)

CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE

Revision: CID HONG-9CRNL3

Issue: E	Date: 10/12/2013	Name: H. ONG	10P64509		ALSTOM	
	Date:	Chkd:	Dig No:	Shit: 1 Next Shit: 2		



- TERMINAL.

(c) PIN TERMINAL (P.C.B. TYPE)

2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. T1

3 WYE GROUND IN ITS APPLICABLE FOR GROUNDED (EARTHED) WINDINGS

4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR.


FOR COMMS OPTIONS SEE DRAWING 10Bx4001

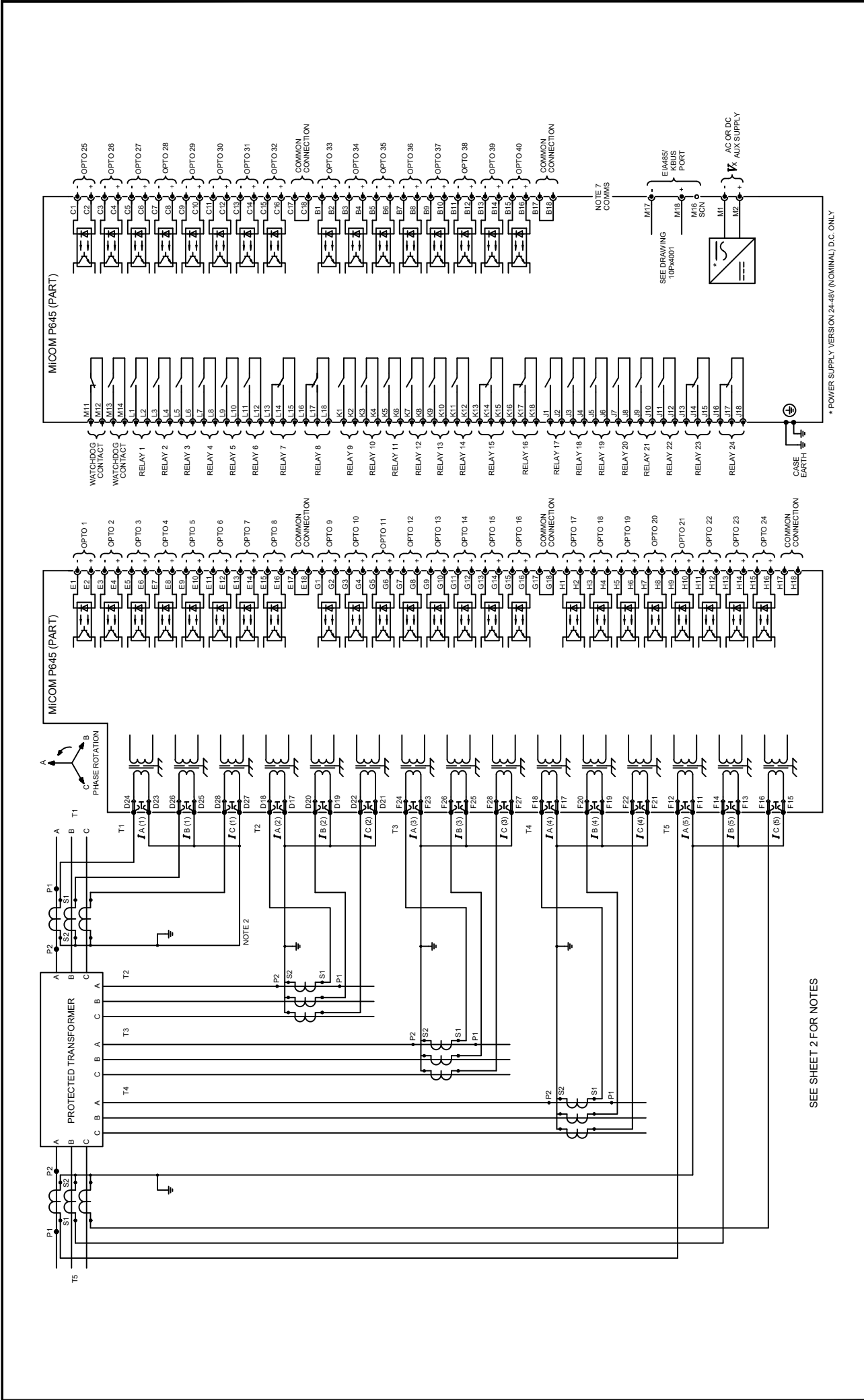
6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.

7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV, TV OR LV SIDE. (USED BY V/Hz W1 PROTECTION AND OTHER VOLTAGE PROTECTION)

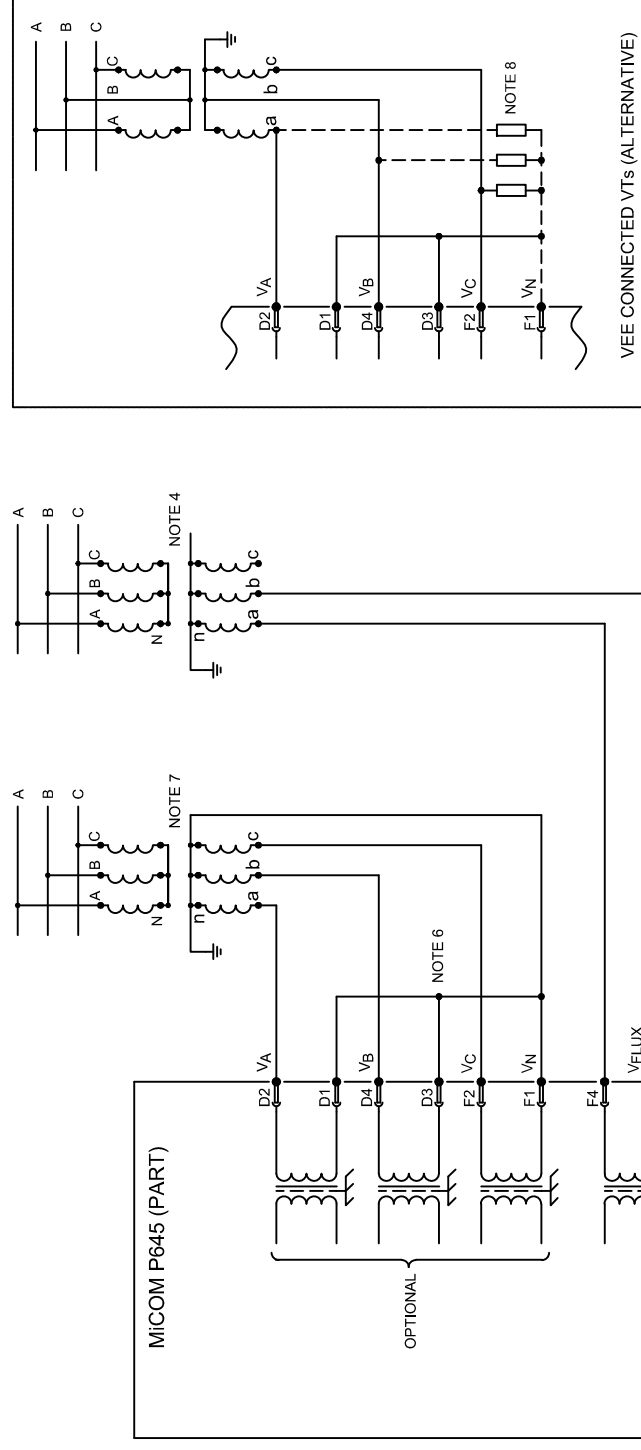
DERIVED NEUTRAL POINT. SEE P64X/EN T/- FOR DETAILS OF RESISTORS.

. FOR 0-10mA, 0-20mA, 4-20mA RANGE USE 20mA INPUTS & OUTPUTS.
FOR 0-1mA RANGE USE 1mA INPUTS & OUTPUTS.




Issue:	H	Revision: CID SWOO-9LNAWE. TABLE 1 REMOVED. NOTES 5&6 REMOVED.	Title: EXT. CONNECTION DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (16 I/P 24 O/P + CLJO & RTD) WITH 4 POLE VT INPUTS (80TE)
Date:	14/07/2014	Name: S.WOOTTON	Drg No:
Date:		Chkd:	Sht: 2
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		ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	10P64509
			ALSTOM

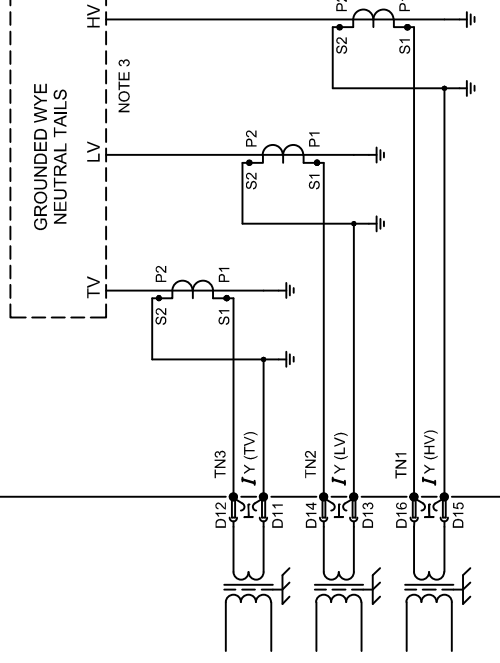



Issue:	Revision: CID HONG-9CRNL3		Title: EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 24 O/P) WITH 4 POLE VT INPUTS (80TE)	
	Date: 10/12/2013	Name: H. ONG	Dwg No: 10P64514	
Date:		Chkd:	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	
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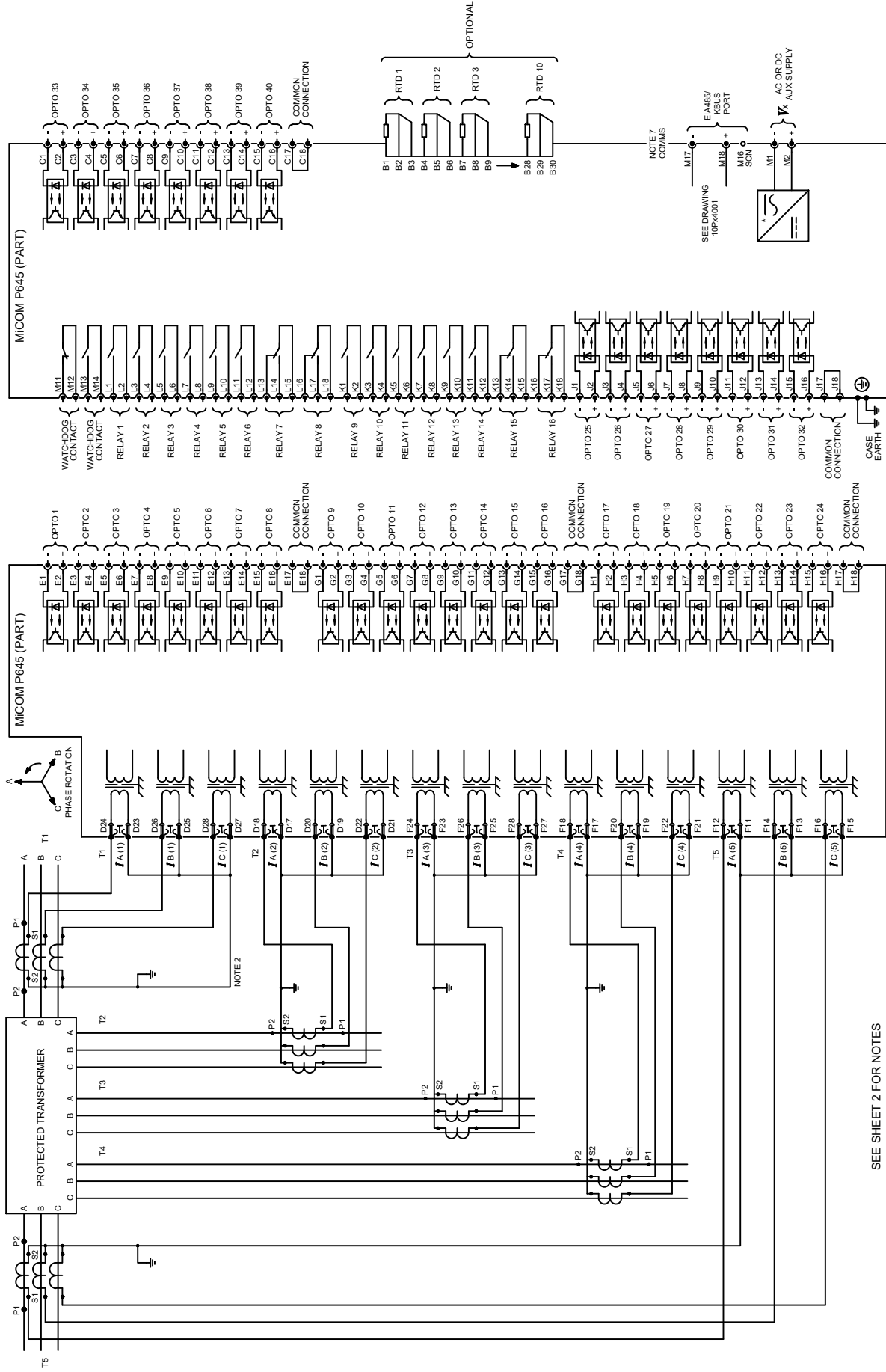


NOTES:

1. (a)  C.T. SHORTING LINKS MAKE BEFORE (b) DISCONNECT.
(b)  TERMINAL.
(c)  PIN TERMINAL (P.C.B. TYPE)
2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. T1 IS ALWAYS AN HV WINDING CONNECTION.
3. WYE GROUND INPUTS APPLICABLE FOR GROUND (EARTHED) WINDINGS.
4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR.
(USED BY V/HZ W2 PROTECTION ONLY),
5. FOR COMMS OPTIONS SEE DRAWING 10Px4001.
6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.
7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV, TV OR LV SIDE.
(USED BY V/HZ W1 PROTECTION AND OTHER VOLTAGE PROTECTION).
8. DERIVED NEUTRAL POINT. SEE P64X/EN T1. - FOR DETAILS OF RESISTORS.
9. FOR 0-10µA, 0-20mA, 4-20mA RANGE USE 20mA INPUTS & OUTPUTS
FOR 0-1mA RANGE USE 1mA INPUTS & OUTPUTS.

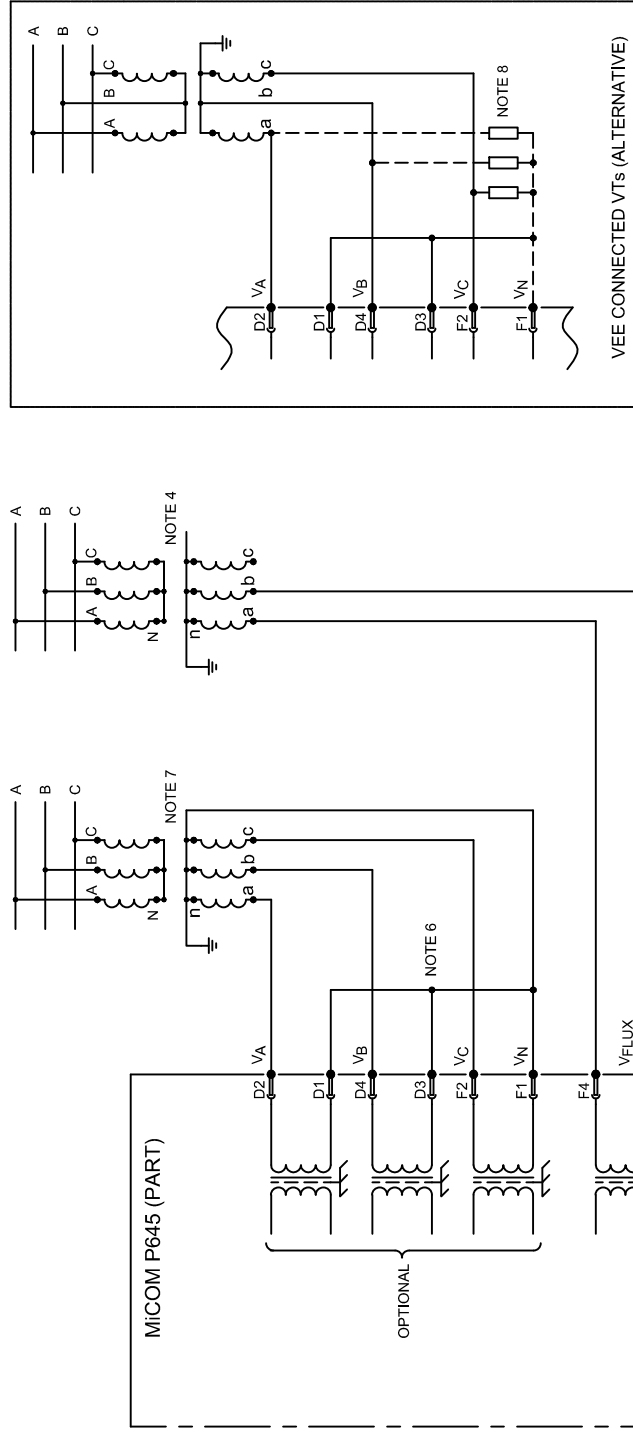


Issue:	D Revision: CID SWOO-9\NAME. TABLE 1 REMOVED. NOTES 5&6 REMOVED.		Title: EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 24 O/P) WITH 4 POLE VT INPUTS (80TE)	
Date:	14/07/2014	Name: S.WOOTTON Chkd:	CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	Dwg No: <div> <div>10P64514</div> <div> <div>Sht: 2</div> <div>Next Sht: -</div> </div> </div>
Date:				ALSTOM







SEE SHEET 2 FOR NOTES

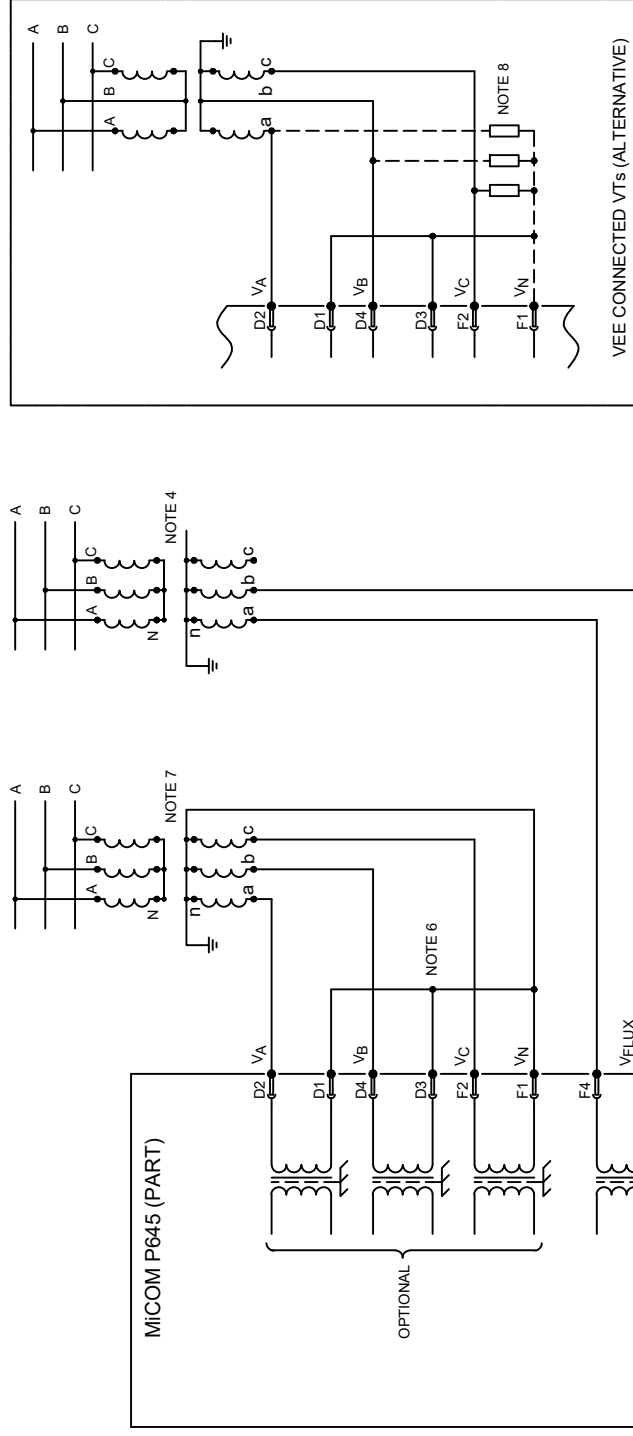
Issue: C	Revision: CID HONG-9CRNL3	Title: EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 16 O/P+RTD) WITH 4 POLE VT INPUTS (80TE)	Dig No: 10P64515
Date: 10/12/2013	Name: H. ONG	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	Sht: 1 Next Sht: 2
Date:	Chkd:		ALSTOM






NOTES:

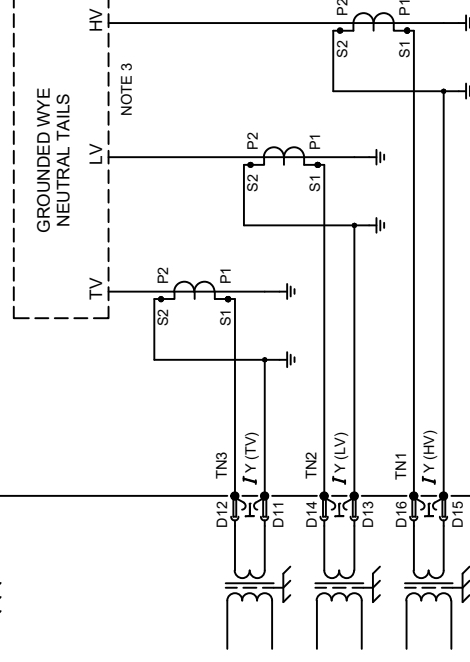
1. (a)  C.T. SHORTING LINKS MAKE BEFORE (b) DISCONNECT.
(b)  TERMINAL.
(c)  PIN TERMINAL (P.C.B. TYPE)
2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. T1 IS ALWAYS AN HV WINDING CONNECTION.
3. WYE GROUND INPUTS APPLICABLE FOR GROUND (EARTHED) WINDINGS.
4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR. (USED BY V/HZ W2 PROTECTION ONLY).
5. FOR COMMS OPTIONS SEE DRAWING 10P4X001.
6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.
7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV, TV OR LV SIDE. (USED BY V/HZ W1 PROTECTION AND OTHER VOLTAGE PROTECTION).
8. DERIVED NEUTRAL POINT. SEE P64X/EN T7/- FOR DETAILS OF RESISTORS.
9. FOR 0-10mA, 0-20mA, 4-20mA RANGE USE 20mA INPUTS & OUTPUTS FOR 0-1mA RANGE USE 1mA INPUTS & OUTPUTS.

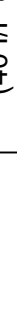
Issue:	Revision: CID SWOO-9JNAWE. TABLE 1 REMOVED. NOTES 5&6 REMOVED.		Title:	
D			EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 16 O/P+RTD) WITH 4 POLE VT INPUTS (80TE)	
Date:	14/07/2014	Name:	S.WOOTTON	 CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE
Date:		Chkd:		
			Drg No: ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	Sht: 2 Next Sht: -
			10P64515 ALSTOM	

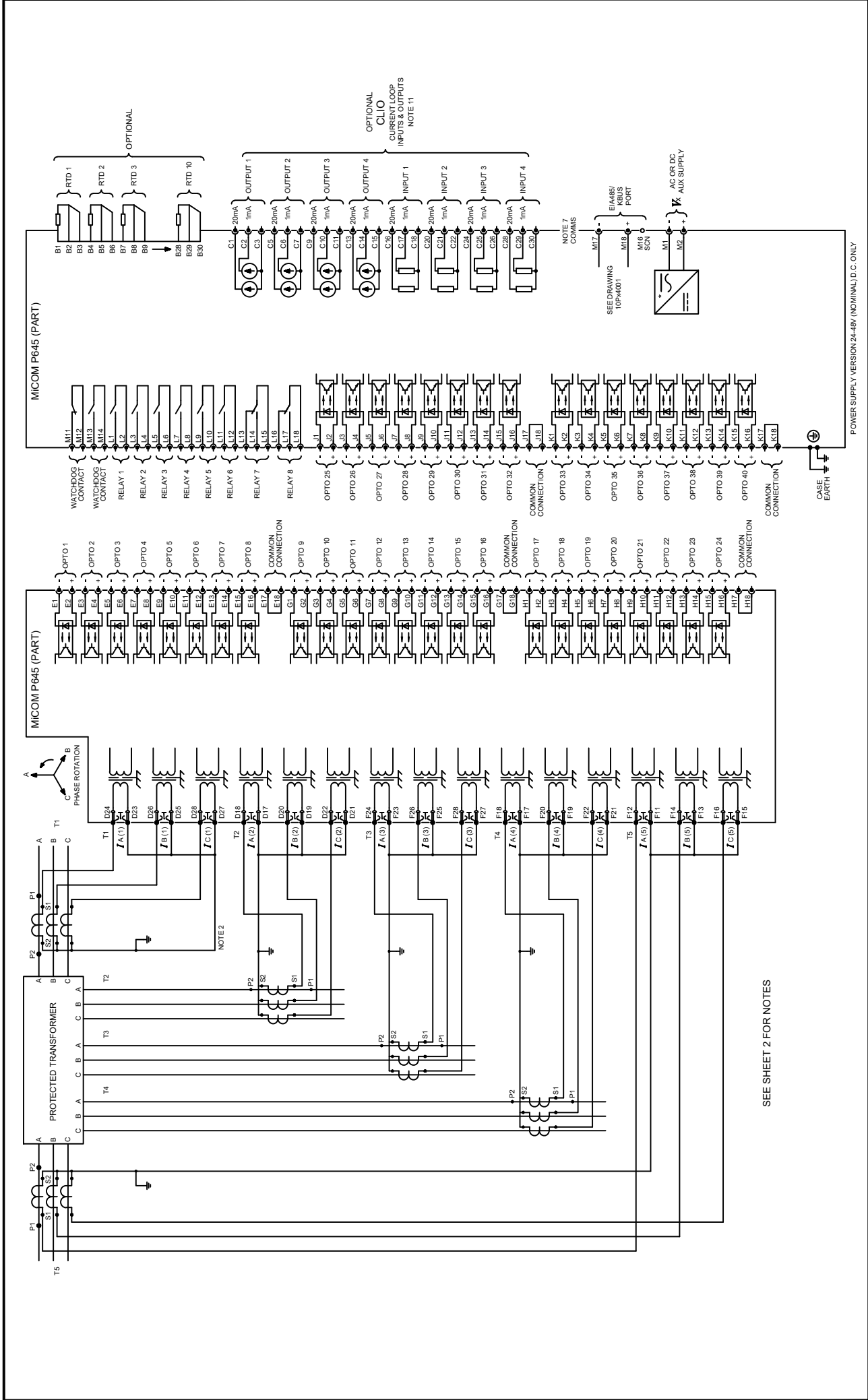



NOTES:

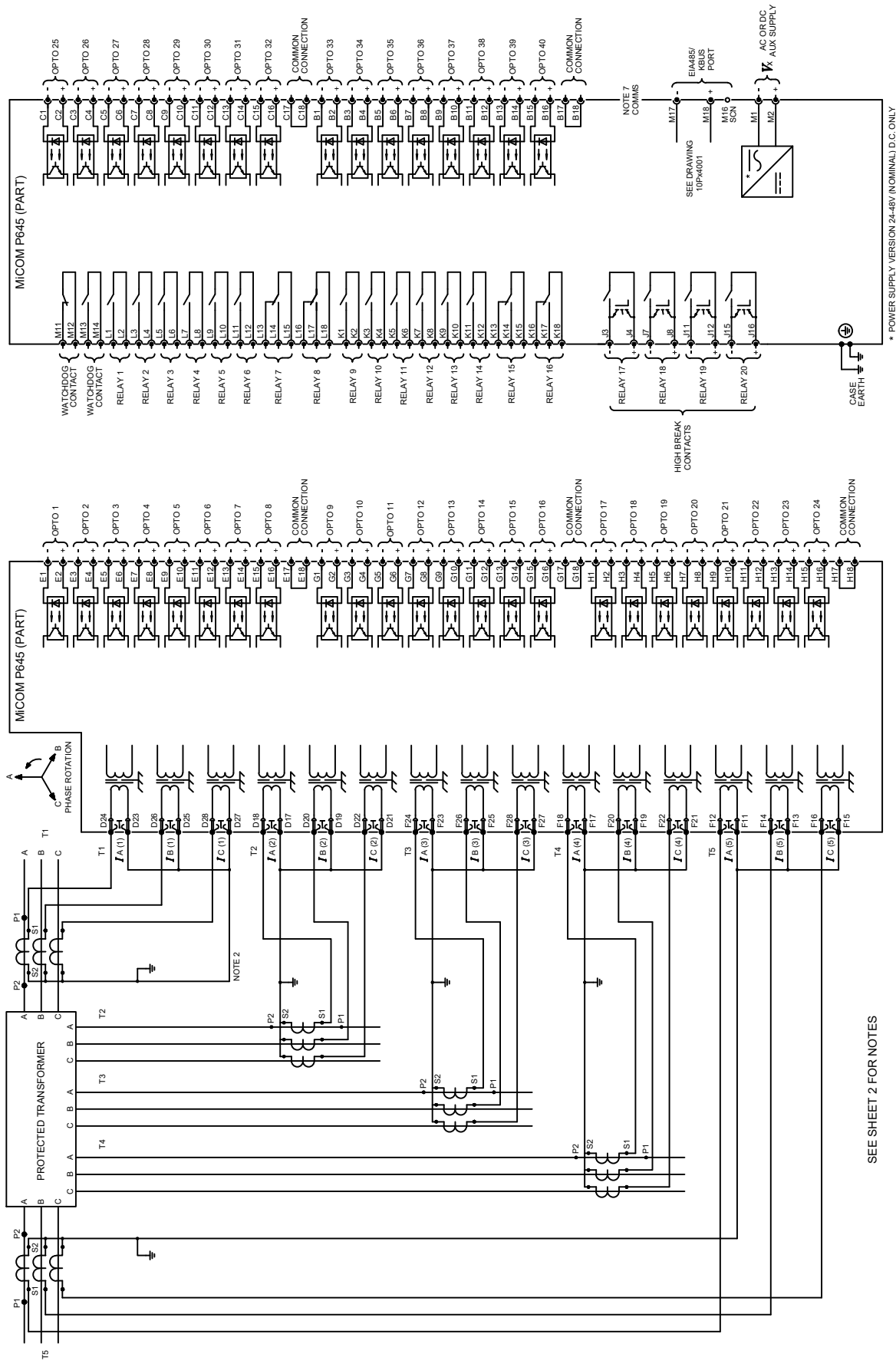
1. (a)  C.T. SHORTING LINKS MAKE BEFORE (b) DISCONNECT.
(b)  TERMINAL.
(c)  PIN TERMINAL (P.C.B. TYPE)
2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. T1 IS ALWAYS AN HV WINDING CONNECTION.
3. WYE GROUND INPUTS APPLICABLE FOR GROUNDED (EARTHED) WITH
4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR. (USED BY V/HZ W2 PROTECTION ONLY).
5. FOR COMMS OPTIONS SEE DRAWING 10Px4001.
6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.
7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV/ (USED BY V/HZ W1 PROTECTION AND OTHER VOLTAGE PROTECTION
8. DERIVED NEUTRAL POINT. SEE P64XVEN T1.- FOR DETAILS OF RESI
9. FOR 0-10mA, 0-20mA, 4-20mA RANGE USE 20mA INPUTS & OUTPUTS
FOR 0-1mA RANGE USE 1mA INPUTS & OUTPUTS.



Issue:	D Revision: CID SWOO-9\NAME. TABLE 1 REMOVED. NOTES 5&6 REMOVED.		Title: EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 16 O/P+CLIO) WITH 4 POLE VT INPUTS (80TE)	
Date:	14/07/2014	Name: S.WOOTTON Chkd:	CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	Dwg No: Sht: 2 Next Sht: -
				



Issue:	C	Revision:	CID HONG-9CRNL3	Title:		EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 8 O/P+CLIO+RTD) WITH 4 POLE VT INPUTS (80TE)				
Date:	10/12/2013	Name:	H.ONG		CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	Dwg No:	10P64517		ALSTOM
Date:		Chkd:						Sht:	1	



Issue:	Revision:
	CID HONG-9CRNL3

Date: 10/12/2013	Name: H.ONG
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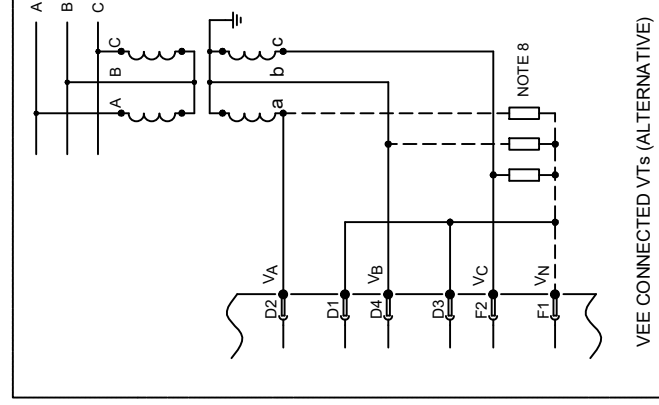
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DO NOT SCALE

ALSTOM GRID UK LTD
Substation Automation Solutions
(STAFFORD)

Title:


EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL
(40 I/P & 20 O/P) WITH 4 POLE VT INPUTS (80TE)

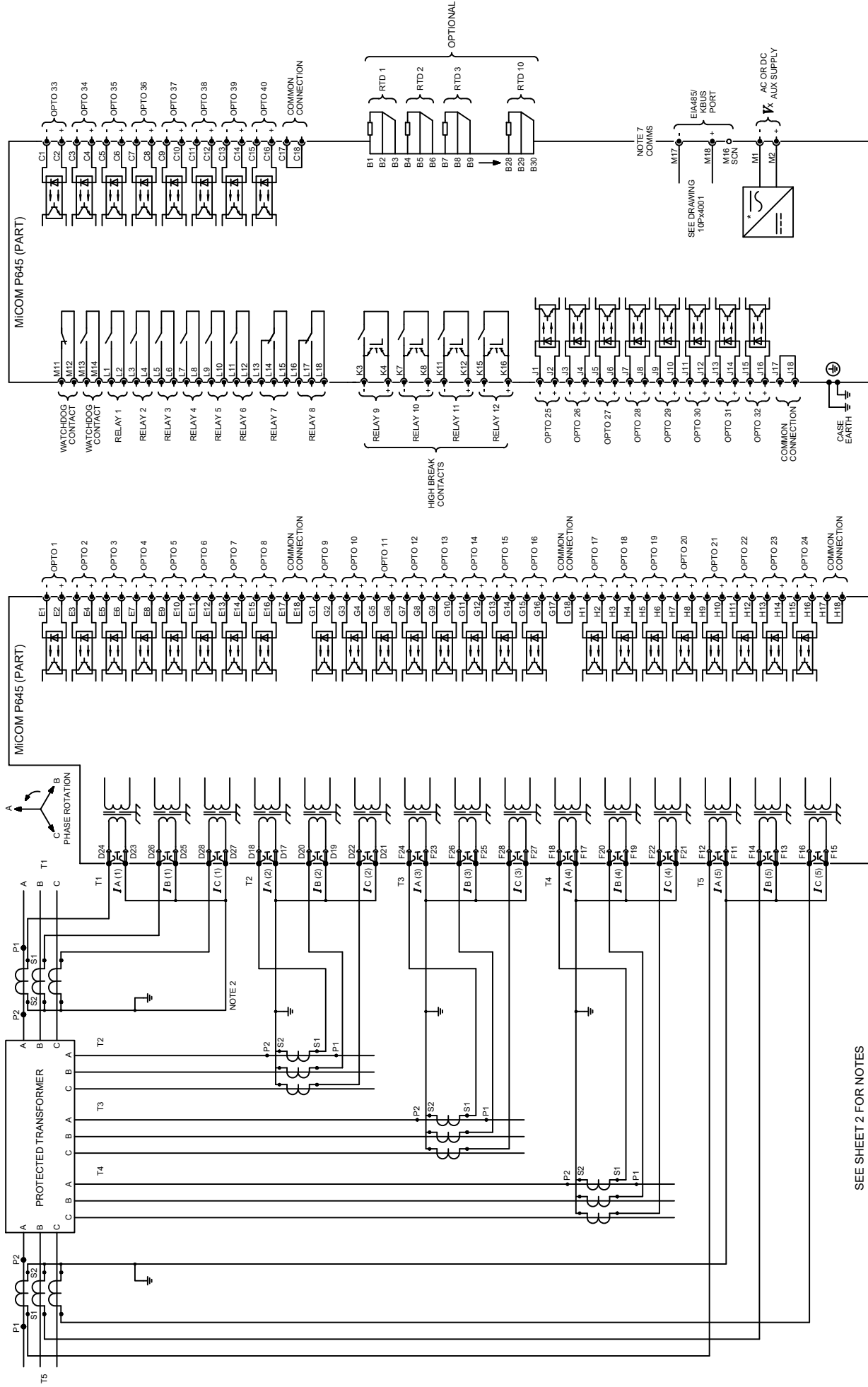
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Next Sht:	2



9. FOR 0-10mA, 0-20mA, 4-20mA RANGE USE 20mA INPUTS & OUTPUTS
FOR 0-1mA RANGE USE 1mA INPUTS & OUTPUTS.



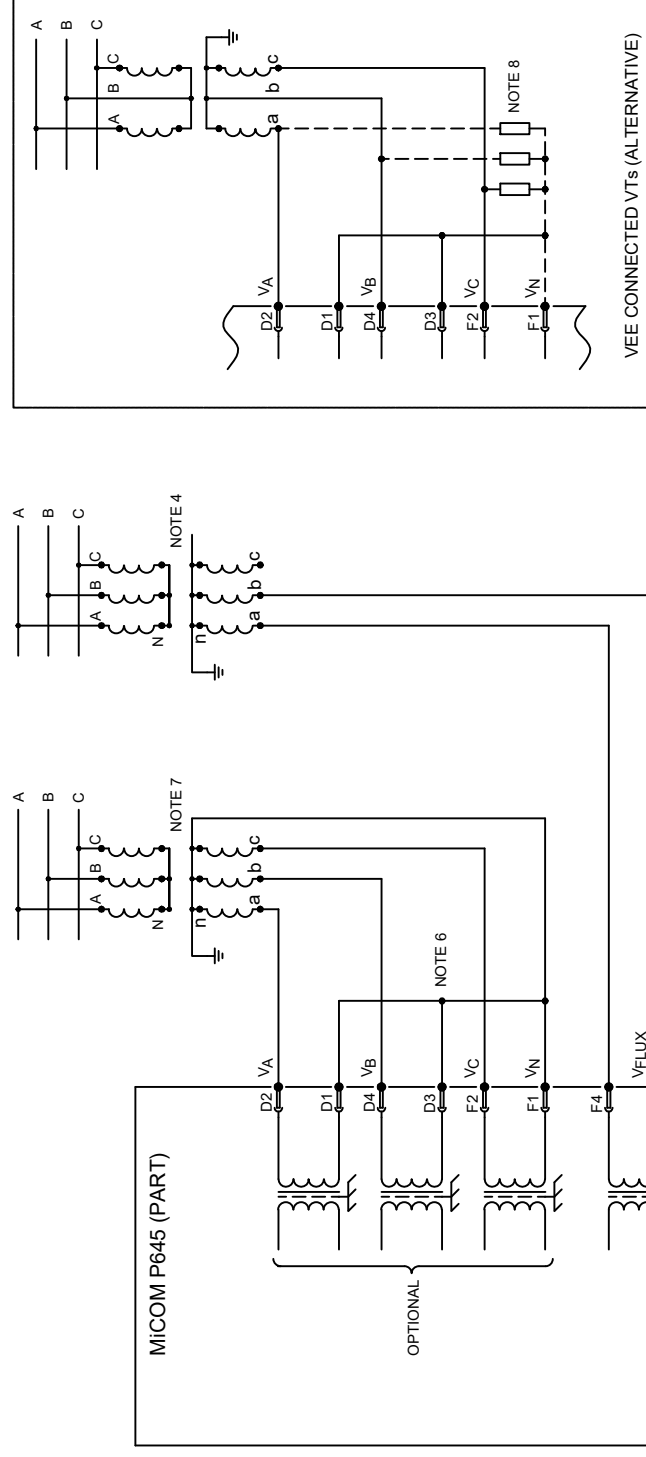
Issue:	D	Revision: CID SWOO-9LNAWE. TABLE 1 REMOVED. NOTES 5&6 REMOVED.	Title: EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 20 O/P) WITH 4 POLE VT INPUTS (80TE)	
Date:	14/07/2014	Name: S. WOOTTON	 Dwg No: 10P64518 Sht: 2 Next Sht: -	ALSTOM Substation Automation Solutions (STAFFORD)
Date:		Chkd:		
		CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE		






SEE SHEET 2 FOR NOTES

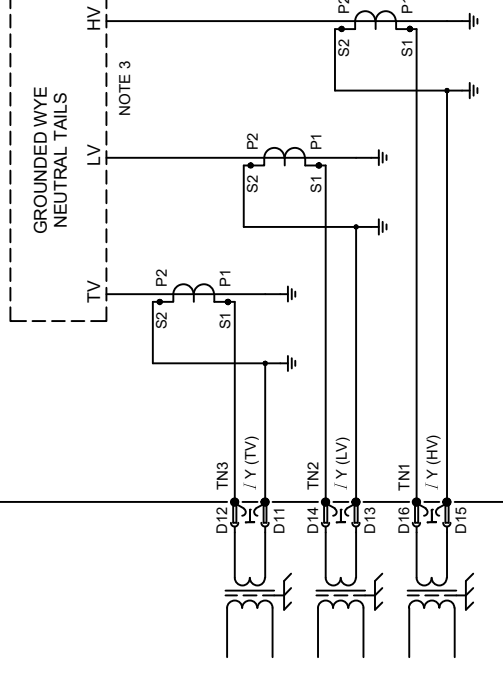
*POWER SUPPLY VERSION 24-48V (NOMINAL) D.C. ONLY


Issue: C	Revision: CID HONG-9CRNL3	Title: EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 12 O/P+RTD) WITH 4 POLE VT INPUTS (80TE)	Dwg No: 10P64519	Sht: 1 Next Sht: 2
Date: 10/12/2013	Name: H. ONG	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	ALSTOM	
Date:	Chkd:	CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE		

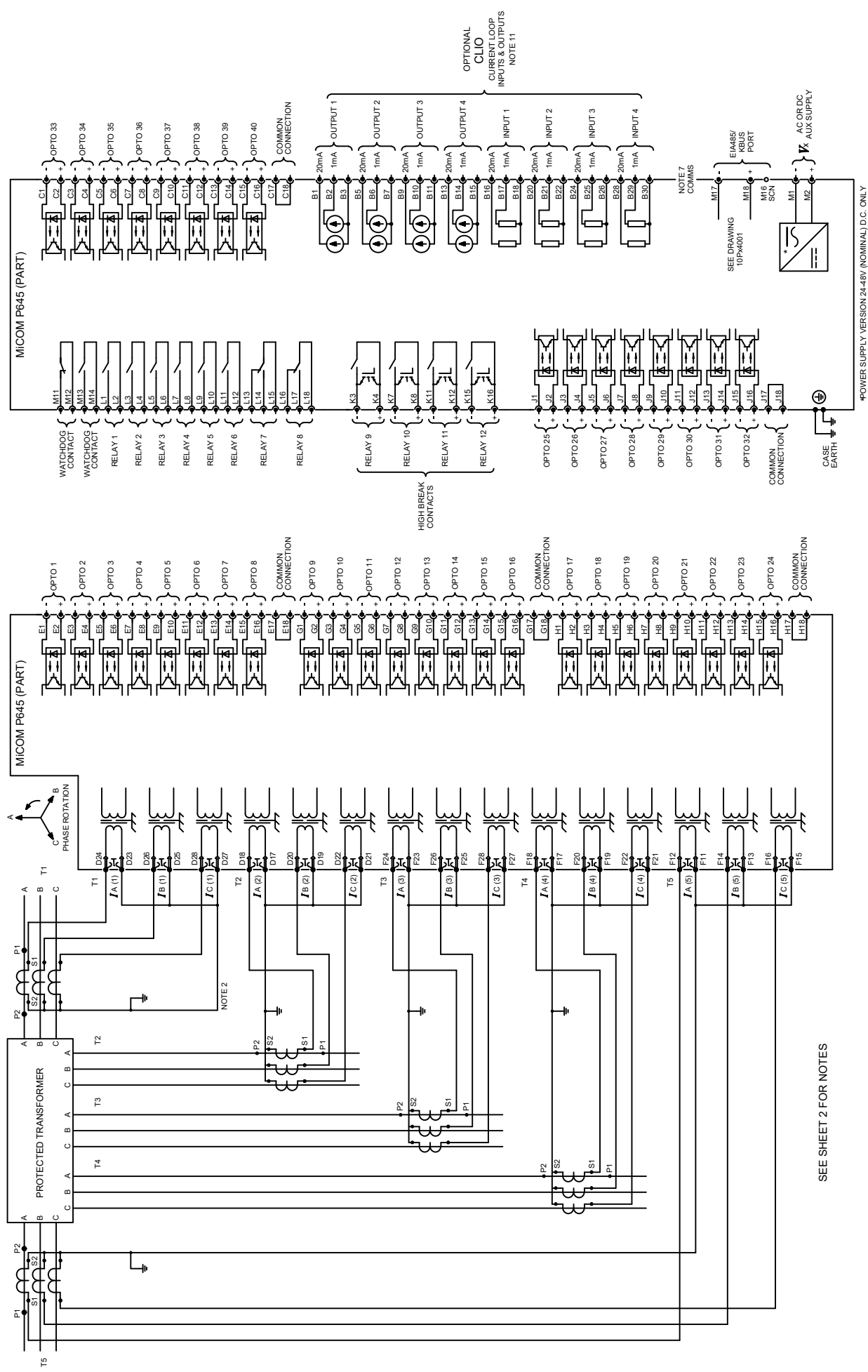


NOTES:

1. (a)  C.T. SHORTING LINKS MAKE BEFORE (b) DISCONNECT.
(b)  TERMINAL.
(c)  PIN TERMINAL (P.C.B. TYPE)
2. SEE TABLE 1 FOR BIAS ASSIGNMENT TO ACTUAL WINDINGS. T1 IS ALWAYS AN HV WINDING CONNECTION.
3. WYE GROUND INPUTS APPLICABLE FOR GROUND (EARTHED) WINDINGS.
4. THE VT MAY BE CONNECTED ACROSS ANY PHASE-PHASE PAIR. (USED BY V/HZ W2 PROTECTION ONLY).
5. FOR COMMS OPTIONS SEE DRAWING 10PX4001.
6. THE VT STAR POINT MUST BE MADE EXTERNALLY AS SHOWN.
7. THE MONITORED THREE PHASE VOLTAGE MAY BE CONNECTED HV, TV OR I (USED BY V/HZ W1 PROTECTION AND OTHER VOLTAGE PROTECTION).
8. DERIVED NEUTRAL POINT. SEE P64X/EN T1/- FOR DETAILS OF RESISTORS.
9. FOR 0-10mA, 0-20mA, 4-20mA RANGE USE 20mA INPUTS & OUTPUTS
FOR 0-1mA RANGE USE 1mA INPUTS & OUTPUTS.



Issue:	Revision: CID SWOO-9\NAME. TABLE 1 REMOVED. NOTES 5&6 REMOVED.		Title: EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 12 O/P+RTD) WITH 4 POLE VT INPUTS (80TE)				
Date: 14/07/2014	Name: S.WOOTTON		 CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	Dwg No:	10P64519	Sht: 2
	Date:	Chkd:					
ALSTOM							



Issue: C	Revision: CID HONG-9CRNL3	Title: EXT. CONN. DIAG: 5 BIAS INPUT TRANSFORMER DIFFERENTIAL (40 I/P & 12 O/P+CLIO) WITH 4 POLE VT INPUTS (80TE)	
		Dig No: 10P64520	
Date: 10/12/2013	Name: H. ONG	ALSTOM GRID UK LTD Substation Automation Solutions (STAFFORD)	
Date:	Chkd:	CAD DATA 1:1 DIMENSIONS: mm DO NOT SCALE	
		Sht: 1 Next Sht: 2	
		ALSTOM	

