

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

1	2	3	4	5	6	7	8																					
A	132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL							A																				
B	<table border="1"><thead><tr><th colspan="5">LIST OF DOCUMENTS</th></tr><tr><th>DRAWING</th><th>DESCRIPTION.</th><th>REVISION</th><th>DATE</th><th>ISSUE</th></tr></thead><tbody><tr><td>3269PP621-GL-07</td><td>GENERAL ARRANGEMENT & LEGEND</td><td>Z</td><td>09-02-2015</td><td>AS MANUFACTURED</td></tr><tr><td>3269PP621-S-07</td><td>SCHEMATIC DRAWINGS</td><td>Z</td><td>09-02-2015</td><td>AS MANUFACTURED</td></tr></tbody></table>							LIST OF DOCUMENTS					DRAWING	DESCRIPTION.	REVISION	DATE	ISSUE	3269PP621-GL-07	GENERAL ARRANGEMENT & LEGEND	Z	09-02-2015	AS MANUFACTURED	3269PP621-S-07	SCHEMATIC DRAWINGS	Z	09-02-2015	AS MANUFACTURED	B
LIST OF DOCUMENTS																												
DRAWING	DESCRIPTION.	REVISION	DATE	ISSUE																								
3269PP621-GL-07	GENERAL ARRANGEMENT & LEGEND	Z	09-02-2015	AS MANUFACTURED																								
3269PP621-S-07	SCHEMATIC DRAWINGS	Z	09-02-2015	AS MANUFACTURED																								
C								C																				
D								D																				
E					PANEL TYPES : <table border="1"><tr><td>CUSTOMER: APTRANSCO</td></tr><tr><td>CONTRACTOR: SPR CONSTRUCTIONS</td></tr><tr><td>PROJECT: 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.</td></tr><tr><td>SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014</td></tr></table>			CUSTOMER: APTRANSCO	CONTRACTOR: SPR CONSTRUCTIONS	PROJECT: 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.	SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014	E																
CUSTOMER: APTRANSCO																												
CONTRACTOR: SPR CONSTRUCTIONS																												
PROJECT: 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.																												
SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014																												
F	<table border="1"><thead><tr><th colspan="3">THIS TYPICAL SCHEMATIC IS APPLICABLE FOR THE FOLLOWING CIRCUITS</th></tr><tr><th>SL.NO</th><th>CIRCUIT</th><th>PANEL TYPES</th></tr></thead><tbody><tr><td>1</td><td>132/33KV, 31.5MVA POWER TRANSFORMER-1 CONTROL AND RELAY PANEL</td><td>+1TR1A, +1TR1B</td></tr><tr><td>2</td><td>132/33KV, 31.5MVA POWER TRANSFORMER-2 CONTROL AND RELAY PANEL</td><td>+1TR2A, +1TR2B</td></tr></tbody></table>  Schneider Electric Infrastructure Ltd CHENNAI , INDIA				THIS TYPICAL SCHEMATIC IS APPLICABLE FOR THE FOLLOWING CIRCUITS			SL.NO	CIRCUIT	PANEL TYPES	1	132/33KV, 31.5MVA POWER TRANSFORMER-1 CONTROL AND RELAY PANEL	+1TR1A, +1TR1B	2	132/33KV, 31.5MVA POWER TRANSFORMER-2 CONTROL AND RELAY PANEL	+1TR2A, +1TR2B				F								
THIS TYPICAL SCHEMATIC IS APPLICABLE FOR THE FOLLOWING CIRCUITS																												
SL.NO	CIRCUIT	PANEL TYPES																										
1	132/33KV, 31.5MVA POWER TRANSFORMER-1 CONTROL AND RELAY PANEL	+1TR1A, +1TR1B																										
2	132/33KV, 31.5MVA POWER TRANSFORMER-2 CONTROL AND RELAY PANEL	+1TR2A, +1TR2B																										
1	2	3	4	5	6	7	8																					

1	2	3	4	5	6	7	8
A							A
B							B
C							C
D							D
E							E
F							F

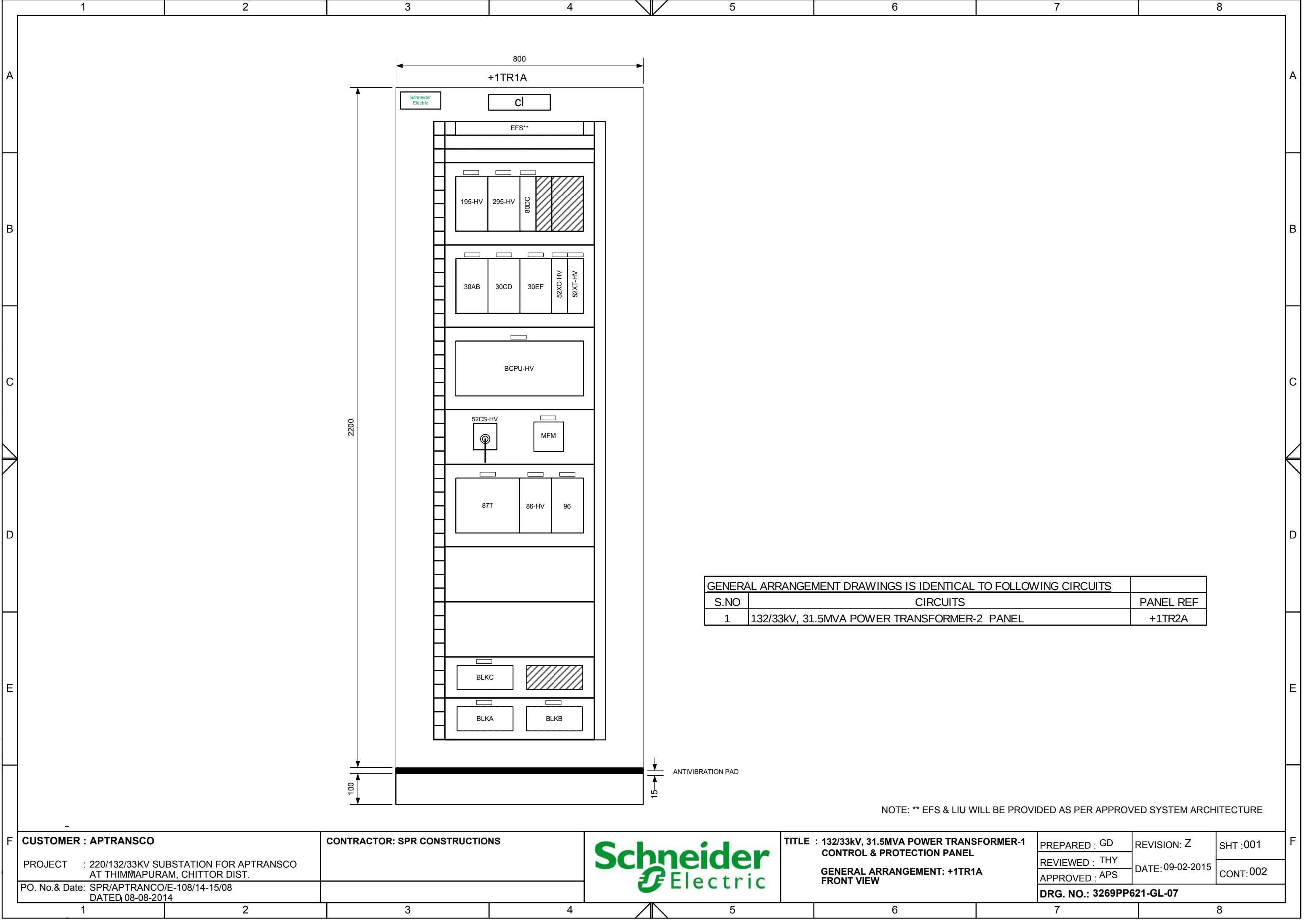
SHEET	DESCRIPTION
00	
000	INDEX SHEET
001	GENERAL ARRANGEMENT: +1TR1A
002	BILL OF MATERIALS : +1TR1A
003	BILL OF MATERIALS : +1TR1A
004	BILL OF MATERIALS : +1TR1A
005	BILL OF MATERIALS : +1TR1A
006	BILL OF MATERIALS : +1TR1A
007	GENERAL ARRANGEMENT: +1TR1B
008	BILL OF MATERIALS : +1TR1B
009	BILL OF MATERIALS : +1TR1B
010	BILL OF MATERIALS : +1TR1B
011	BILL OF MATERIALS : +1TR1B

CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL INDEX SHEET		PREPARED : GD	REVISION: Z	SHT :000			
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.							REVIEWED : THY	DATE: 09-02-2015	CONT:001			
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014							APPROVED : APS					
							DRG. NO.: 3269PP621-GL-07					
1	2	3	4	5	6	7	8					

SHEET	DESCRIPTION
00	
000	INDEX SHEET
001	GENERAL ARRANGEMENT: +1TR1A
002	BILL OF MATERIALS : +1TR1A
003	BILL OF MATERIALS : +1TR1A
004	BILL OF MATERIALS : +1TR1A
005	BILL OF MATERIALS : +1TR1A
006	BILL OF MATERIALS : +1TR1A
007	GENERAL ARRANGEMENT: +1TR1B
008	BILL OF MATERIALS : +1TR1B
009	BILL OF MATERIALS : +1TR1B
010	BILL OF MATERIALS : +1TR1B
011	BILL OF MATERIALS : +1TR1B

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

	1	2	3	4	5	6	7	8	
A	BILL OF MATERIALS FOR INERNAL MOUNTED DEVICES								A
B									B
C									C
D									D
E									E
F									F

CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL BILL OF MATERIALS : +1TR1A		PREPARED : GD	REVISION: Z	SHT :003
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.							REVIEWED : THY	DATE: 09-02-2015	CONT:004
					APPROVED : APS				
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014					PANEL TYPE :		DRG. NO.: 3269PP621-GL-07		

	1	2	3	4	5	6	7	8
--	---	---	---	---	---	---	---	---

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

	1	2	3	4	5	6	7	8		
BILL OF MATERIALS FOR INERNAL MOUNTED DEVICES										
A	DESIGNATION	MANUFACTURER	MATERIAL	DESCRIPTION			COMMENT			
	LK1	COOPER BUSSMANN	GB2515003232001A	LINK						
	LK2	COOPER BUSSMANN	GB2515003232001A	LINK						
	LK171	COOPER BUSSMANN	GB2515003232001A	LINK						
B	LK271	COOPER BUSSMANN	GB2515003232001A	LINK						
	MCB1	SCHNEIDER	GBSEMCBDC2P16A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 16A			MAIN DC SOURCE			
	MCB2	SCHNEIDER	GBSEMCBDC2P6A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 6A			FOR HV BCPU CKT.			
	MCB3	SCHNEIDER	GBSEMCBDC2P6A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 6A			FOR ISOLATOR CKT.			
C	MCB4	SCHNEIDER	GBSEMCBDC2P10A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 10A			FOR HV CB TC-1 CKT.			
	MCB5	SCHNEIDER	GBSEMCBDC2P10A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 10A			FOR HV CB TC-2 CKT.			
	MCB6	SCHNEIDER	GBSEMCBDC2P6A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 6A			FOR DIFFERENTIAL RELAY			
	MCB7	SCHNEIDER	GBSEMCBDC2P6A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 6A			FOR HV TRIP RELAY 86-HV			
D	MCB8	SCHNEIDER	GBSEMCBDC2P10A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 10A			FOR TRAF0 TROUBLES & CONTACT MULT. CKT.			
	MCB9	SCHNEIDER	GBSEMCBDC2P4A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 4A			FOR EFS CKT.			
	MCB10	SCHNEIDER	GBSEMCBDC2P6A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 6A			ISOLATOR CTRL. CKT.			
	MCB91	SCHNEIDER	GBSEMCBAC2P16A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 240V AC, 16A			FOR AC SUPPLY			
E	X1	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL						
	X2	CONNECTWELL	STH4DTSH	DISCONNECTING TERMINAL						
	X3	CONNECTWELL	STH4DT	DISCONNECTING TERMINAL						
	X4	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL						
	X5	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL						
F	CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL BILL OF MATERIALS : +1TR1A		PREPARED : GD	REVISION: Z	SHT :004
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.				REVIEWED : THY		DATE: 09-02-2015	CONT:005			
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014				APPROVED : APS						
				PANEL TYPE :		DRG. NO.: 3269PP621-GL-07				
	1	2	3	4	5	6	7	8		

	1	2	3	4	5	6	7	8			
A	BILL OF MATERIALS FOR INERNAL MOUNTED DEVICES								A		
B		DESIGNATION	MANUFACTURER	MATERIAL	DESCRIPTION		COMMENT				
	X6	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL							
	X7	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL							
	X-BCPU-AIU-D	CONNECTWELL	CTS2.5UN	NON-DISCONNECTING TERMINAL							
	X-BCPU-DIU-L	CONNECTWELL	CKT4U/CMC1-2	DISCONNECTING TERMINAL							
	X-BCPU-DIU-M	CONNECTWELL	CKT4U/CMC1-2	DISCONNECTING TERMINAL							
	X-BCPU-DIU-N	CONNECTWELL	CKT4U/CMC1-2	DISCONNECTING TERMINAL							
	X-BCPU-DIU-O	CONNECTWELL	CKT4U/CMC1-2	DISCONNECTING TERMINAL							
	X-BCPU-DIU-P	CONNECTWELL	CKT4U/CMC1-2	DISCONNECTING TERMINAL							
C	X-BCPU-DOU-E	CONNECTWELL	CKT4U	DISCONNECTING TERMINAL							
	X-BCPU-DOU-F	CONNECTWELL	CKT4U	DISCONNECTING TERMINAL							
	X-BCPU-PS-A	CONNECTWELL	CSFL4U	NON-DISCONNECTING TERMINAL							
	86AT	RELPOL	GBR42014231220WT	RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC							
	R86-HV	REPUTED	GB40422330001350	RESISTOR, 3.3K-OHMS, 30W							
	R96	REPUTED	GB40422330001350	RESISTOR, 3.3K-OHMS, 30W							
	X101	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL							
	X200	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL							
	X201	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL							
D	WTI-HV-T	REPUTED	-	WTI-HV TRANSDUCER,O/P: 4-20mA(4 O/P), AUX SUP:220V DC;I/P1:RTD and I/P2:BUSHONG CT		FOR HV WTI					
	WTI-LV-T	REPUTED	-	WTI -LVTRANSDUCER,O/P: 4-20mA(4 O/P), AUX SUP:220V DC;I/P1:RTD and I/P2:BUSHONG CT		FOR LV WTI					
	OTI-T	REPUTED	-	OTI TRANSDUCER,O/P: 4-20mA(4 O/P), AUX SUP:220V DC		FOR OTI					
E									E		
F	CUSTOMER : APTRANSCO PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST. PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014		CONTRACTOR: SPR CONSTRUCTIONS				TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL BILL OF MATERIALS : +1TR1A PANEL TYPE :	PREPARED : GD REVIEWED : THY APPROVED : APS DRG. NO.: 3269PP621-GL-07	REVISION: Z DATE: 09-02-2015	SHT :005 CONT:006	F
	1	2	3	4	5	6	7	8			

BILL OF MATERIALS FOR INTERNAL MOUNTED DEVICES

DESIGNATION	MANUFACTURER	MATERIAL	DESCRIPTION	COMMENT
TAP-T	REPUTED	-	TAP POSITION TRANSDUCER, O/P: 4-20mA(4 O/P), AUX SUP:220V DC	FOR TAP POSITION
X8	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL	
X10	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL	
MCB11	SCHNEIDER	GBSEMCBDC2P4A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 4A	FOR EFS CKT.
MCB12	SCHNEIDER	GBSEMCBDC2P6A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 6A	FOR LBB TRIP RELAY 96
X-BCPU-DIU-K	CONNECTWELL	CKT4U/CMC1-2	DISCONNECTING TERMINAL	
R86UF	REPUTED	GB40422330001350	RESISTOR, 3.3K-OHMS, 30W	
FS117	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC	
FS137	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC	
	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC	
	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC	
86BT	RELPOL	GBR42014231220WT	RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC	SPARE RELAY

CUSTOMER : APTRANSCO

CONTRACTOR: SPR CONSTRUCTIONS



**TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
BILL OF MATERIALS : +1TR1A**

PREPARED · GD

REVISION: Z

SHT-006

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

DATE: 09-02-2015

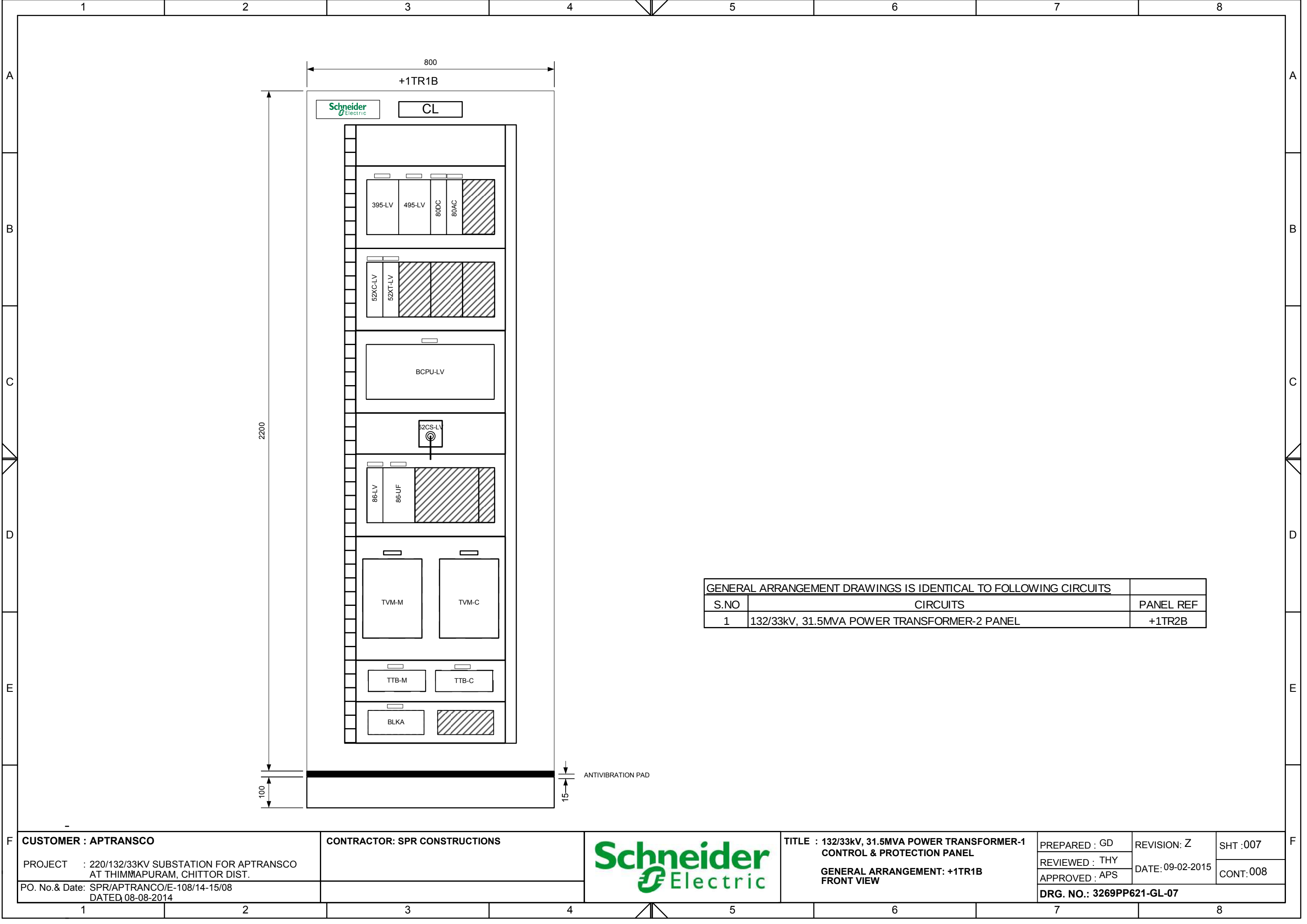
007

PO. No.& Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

PANEL TYPE :

DRG. NO.: 3269PP621-GL-07

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

1		2		3		4		5		6		7		8	
BILL OF MATERIALS FOR FRONT VIEW EQUIPMENTS															
A	DESIGNATION	MANUFACTURER	MATERIAL	DESCRIPTION								COMMENT			
	52CS-LV	SWITRON	SS3NLSLAPGW00	CB CONTROL SWITCH 16 WAY 3 POSITION NON-LOCK SPRING RETURN WITH LOST MOTION DEVICE WITH PISTOL GRIP HANDLE								CB CONTROL SWITCH FOR LV			
	52XC-LV	EASUN	GBXRAR220V6M2BSRE2	AUXILIARY RELAY, 6M 2B SR : FLAG-NO : AUXILIARY VOLTAGE 220V DC :CASE SIZE:E2 ::WIRING DIAGRAM No: 8112W00142								LV CB REMOTE CLOSE			
	52XT-LV	EASUN	GBXRAR220V6M2BSRE2	AUXILIARY RELAY, 6M 2B SR : FLAG-NO : AUXILIARY VOLTAGE 220V DC :CASE SIZE:E2 ::WIRING DIAGRAM No: 8112W00142								LV CB REMOTE OPEN			
B	80DC	EASUN	GBAR121T32M2B220	DC SUPPLY SUPERVISION RELAY : 2M2B SR : FLAG-REV : 220V DC : 200-300 mS TDDO::WIRING DIAGRAM No: 8112W00143								DC SUPPLY SUPVN.			
	86-LV	EASUN	GBTR241HI8M2BE220	HIGH SPEED TRIP RELAY,HI BURDEN : FLAG-YES : 220V DC(50 TO 120%) : 8M 2B ER/HR CONTACT CONFIG: CASE SIZE:E2 :WIRING DIAGRAM No:8112W00138.								LV MASTER TRIP RELAY			
	395-LV	EASUN	GBXR3512202M2BSRE4	TRIP COIL SUPERVISION RELAY, 2M 2B SR : FLAG-REV : 220V DC(80 TO 120%); 400ms RESET DELAY :WIRING DIAGRAM No: 8112W00150								LV SIDE TC-1 SUPERVISION.			
	495-LV	EASUN	GBXR3512202M2BSRE4	TRIP COIL SUPERVISION RELAY, 2M 2B SR : FLAG-REV : 220V DC(80 TO 120%); 400ms RESET DELAY :WIRING DIAGRAM No: 8112W00150								LV SIDE TC-2 SUPERVISION.			
C	BCPU-LV	SCHNEIDER	C264P	BAY CONTROL UNIT WITH CT/VT MODULE, AUX VOLT: 48-250V DC, DIGITAL INPUT MODULE: 3, DIGITAL OUTPUT MODULE: 2, PROTOCOL: IEC61850, CASE: 80TE								LV BCPU			
	BLKA	NELSTER	GBBCUTESTBLKNEL	STANDARD TEST BLOCK-LV BCPU								FOR LV BCPU			
	TTB-M	DAV	GBCTB4000002	TEST TERMINAL BLOCK								TTB FOR TVM-M			
	TVM-M	SECURE	GBEA2914X098122400	TVM METER, WITH ABT,MODEL: PREMIER 300 PROJECTION MOUNTING, 3PH 3ELEMENT 4 WIRE, CL: 0.2S, CTR: 1200-800-400/1A, PTR: 33KV/110V, MDI: 15MIN, COMM: MODBUS VIA RS485,AMRI COMPATIBLE,WITH FRONT OPTICAL PORT								TVM MAIN			
D	TTB-C	DAV	GBCTB4000002	TEST TERMINAL BLOCK								TTB FOR TVM-C			
	TVM-C	SECURE	GBEA2914X098122400	TVM METER, WITH ABT,MODEL: PREMIER 300 PROJECTION MOUNTING, 3PH 3ELEMENT 4 WIRE, CL: 0.2S, CTR: 1200-800-400/1A, PTR: 33KV/110V, MDI: 15MIN, COMM: MODBUS VIA RS485,AMRI COMPATIBLE,WITH FRONT OPTICAL PORT								TVM CHECK			
	86-UF	EASUN	GBTR241HI8M2BE420	HIGH SPEED TRIP RELAY, HI BURDEN : FLAG-YES : 220V DC(50 TO 120%) : 18M 2B ER/HR CONTACT CONFIG: CASE SIZE:E4 :WIRING DIAGRAM No: 8112W00084.								UNDER FREQUENCY TRIP RELAY			
	80AC	EASUN	GBAR121T34BSRA230	AC SUPPLY SUPERVISION RELAY : 4B SR : FLAG-REV : 230V AC : 200-300 mS TDDO::WIRING DIAGRAM No: 8112W00143								AC SUPPLY SUPERVISION			
CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS				TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL BILL OF MATERIALS : +1TR1B FRONT VIEW		PREPARED : GD	REVISION: Z	SHT :008					
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.						REVIEWED : THY	DATE: 09-02-2015	CONT:009							
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014						APPROVED : APS									
						PANEL TYPE :		DRG. NO.: 3269PP621-GL-07							
1		2		3		4		5		6		7		8	

	1	2	3	4	5	6	7	8																																																			
A	BILL OF MATERIALS FOR INERNAL MOUNTED DEVICES								A																																																		
B	<table border="1"><thead><tr><th>DESIGNATION</th><th>MANUFACTURER</th><th>MATERIAL</th><th>DESCRIPTION</th><th>COMMENT</th></tr></thead><tbody><tr><td>E1</td><td>COOPER BUSSMANN</td><td>GB2515003232001A</td><td>LINK</td><td></td></tr><tr><td>E2</td><td>COOPER BUSSMANN</td><td>GB2515003232001A</td><td>LINK</td><td></td></tr><tr><td>E3</td><td>COOPER BUSSMANN</td><td>GB2515003232001A</td><td>LINK</td><td></td></tr><tr><td>E4</td><td>COOPER BUSSMANN</td><td>GB2515003232001A</td><td>LINK</td><td></td></tr><tr><td>FS511</td><td>COOPER BUSSMANN</td><td>GB2513400023000A</td><td>FUSE - 4A, AC</td><td></td></tr><tr><td>FS531</td><td>COOPER BUSSMANN</td><td>GB2513400023000A</td><td>FUSE - 4A, AC</td><td></td></tr><tr><td>FS551</td><td>COOPER BUSSMANN</td><td>GB2513400023000A</td><td>FUSE - 4A, AC</td><td></td></tr><tr><td>FS611</td><td>COOPER BUSSMANN</td><td>GB2513400023000A</td><td>FUSE - 4A, AC</td><td></td></tr><tr><td>FS631</td><td>COOPER BUSSMANN</td><td>GB2513400023000A</td><td>FUSE - 4A, AC</td><td></td></tr></tbody></table>								DESIGNATION	MANUFACTURER	MATERIAL	DESCRIPTION	COMMENT	E1	COOPER BUSSMANN	GB2515003232001A	LINK		E2	COOPER BUSSMANN	GB2515003232001A	LINK		E3	COOPER BUSSMANN	GB2515003232001A	LINK		E4	COOPER BUSSMANN	GB2515003232001A	LINK		FS511	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC		FS531	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC		FS551	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC		FS611	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC		FS631	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC		B
	DESIGNATION	MANUFACTURER	MATERIAL	DESCRIPTION	COMMENT																																																						
	E1	COOPER BUSSMANN	GB2515003232001A	LINK																																																							
	E2	COOPER BUSSMANN	GB2515003232001A	LINK																																																							
	E3	COOPER BUSSMANN	GB2515003232001A	LINK																																																							
	E4	COOPER BUSSMANN	GB2515003232001A	LINK																																																							
	FS511	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC																																																							
	FS531	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC																																																							
	FS551	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC																																																							
	FS611	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC																																																							
FS631	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC																																																								
C									C																																																		
	<table border="1"><tbody><tr><td>FS651</td><td>COOPER BUSSMANN</td><td>GB2513400023000A</td><td>FUSE - 4A, AC</td><td></td></tr><tr><td>LK2</td><td>COOPER BUSSMANN</td><td>GB2515003232001A</td><td>LINK</td><td></td></tr><tr><td>LK3</td><td>COOPER BUSSMANN</td><td>GB2515003232001A</td><td>LINK</td><td></td></tr><tr><td>LK571</td><td>COOPER BUSSMANN</td><td>GB2515003232001A</td><td>LINK</td><td></td></tr><tr><td>LK671</td><td>COOPER BUSSMANN</td><td>GB2515003232001A</td><td>LINK</td><td></td></tr><tr><td>289A-C</td><td>RELPOL</td><td>GBR42014231220WT</td><td>RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC</td><td>ISOLATOR 289A CLOSE</td></tr><tr><td>289A-T</td><td>RELPOL</td><td>GBR42014231220WT</td><td>RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC</td><td>ISOLATOR 289A OPEN</td></tr><tr><td>R86-LV</td><td>REPUTED</td><td>GB40422330001350</td><td>RESISTOR, 3.3K-OHMS, 30W</td><td></td></tr><tr><td>86AT</td><td>RELPOL</td><td>GBR42014231220WT</td><td>RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC</td><td>SPARE RELAY</td></tr><tr><td>MCB92</td><td>SCHNEIDER</td><td>GBSEMCBAC2P16A</td><td>DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 240V AC, 16A</td><td>FOR AC SUPPLY</td></tr></tbody></table>								FS651	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC		LK2	COOPER BUSSMANN	GB2515003232001A	LINK		LK3	COOPER BUSSMANN	GB2515003232001A	LINK		LK571	COOPER BUSSMANN	GB2515003232001A	LINK		LK671	COOPER BUSSMANN	GB2515003232001A	LINK		289A-C	RELPOL	GBR42014231220WT	RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC	ISOLATOR 289A CLOSE	289A-T	RELPOL	GBR42014231220WT	RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC	ISOLATOR 289A OPEN	R86-LV	REPUTED	GB40422330001350	RESISTOR, 3.3K-OHMS, 30W		86AT	RELPOL	GBR42014231220WT	RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC	SPARE RELAY	MCB92	SCHNEIDER	GBSEMCBAC2P16A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 240V AC, 16A	FOR AC SUPPLY	D
	FS651	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC																																																							
	LK2	COOPER BUSSMANN	GB2515003232001A	LINK																																																							
	LK3	COOPER BUSSMANN	GB2515003232001A	LINK																																																							
	LK571	COOPER BUSSMANN	GB2515003232001A	LINK																																																							
	LK671	COOPER BUSSMANN	GB2515003232001A	LINK																																																							
	289A-C	RELPOL	GBR42014231220WT	RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC	ISOLATOR 289A CLOSE																																																						
	289A-T	RELPOL	GBR42014231220WT	RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC	ISOLATOR 289A OPEN																																																						
	R86-LV	REPUTED	GB40422330001350	RESISTOR, 3.3K-OHMS, 30W																																																							
86AT	RELPOL	GBR42014231220WT	RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC	SPARE RELAY																																																							
MCB92	SCHNEIDER	GBSEMCBAC2P16A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 240V AC, 16A	FOR AC SUPPLY																																																							
E									E																																																		
	<table border="1"><tbody><tr><td>MCB14</td><td>SCHNEIDER</td><td>GBSEMCBDC2P16A</td><td>DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 16A</td><td>MAIN DC SOURCE</td></tr></tbody></table>								MCB14	SCHNEIDER	GBSEMCBDC2P16A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 16A	MAIN DC SOURCE	F																																													
MCB14	SCHNEIDER	GBSEMCBDC2P16A	DOUBLE POLE MCB WITH AUX CONTACT: 1 C/O, 250V DC, 16A	MAIN DC SOURCE																																																							
F	<table border="1"><tr><td colspan="2">CUSTOMER : APTRANSCO</td><td colspan="2">CONTRACTOR: SPR CONSTRUCTIONS</td><td rowspan="4"></td><td colspan="2">TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL BILL OF MATERIALS : +1TR1B</td><td>PREPARED : GD</td><td>REVISION: Z</td><td>SHT :009</td></tr><tr><td colspan="2">PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.</td><td colspan="2"></td><td>REVIEWED : THY</td><td rowspan="2">DATE: 09-02-2015</td><td rowspan="2">CONT: 010</td></tr><tr><td colspan="2">PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014</td><td colspan="2"></td><td>APPROVED : APS</td></tr><tr><td colspan="2"></td><td colspan="2"></td><td>PANEL TYPE :</td><td colspan="2">DRG. NO.: 3269PP621-GL-07</td></tr></table>								CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL BILL OF MATERIALS : +1TR1B		PREPARED : GD	REVISION: Z	SHT :009	PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.				REVIEWED : THY	DATE: 09-02-2015	CONT: 010	PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014				APPROVED : APS					PANEL TYPE :	DRG. NO.: 3269PP621-GL-07		F																					
CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL BILL OF MATERIALS : +1TR1B		PREPARED : GD	REVISION: Z	SHT :009																																																		
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.					REVIEWED : THY	DATE: 09-02-2015	CONT: 010																																																				
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014					APPROVED : APS																																																						
					PANEL TYPE :	DRG. NO.: 3269PP621-GL-07																																																					
	1	2	3	4	5	6	7	8																																																			

Schneider
Electric

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

1										2										3										4										5										6										7										8																													
BILL OF MATERIALS FOR INERNAL MOUNTED DEVICES																																																																																																			

1	2	3	4	5	6	7	8		
BILL OF MATERIALS FOR INERNAL MOUNTED DEVICES									
A	DESIGNATION	MANUFACTURER	MATERIAL	DESCRIPTION		COMMENT			
	X1	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL					
	X2	CONNECTWELL	STH4DTSH	DISCONNECTING TERMINAL					
	X3	CONNECTWELL	STH4DT	DISCONNECTING TERMINAL					
	X4	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL					
B	X5	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL					
	X6	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL					
	X7	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL					
	X7A	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL					
C	X101	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL					
	X200	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL					
	X201	CONNECTWELL	STH4	NON-DISCONNECTING TERMINAL					
	FS617	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC					
D	FS637	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC					
	FS657	COOPER BUSSMANN	GB2513400023000A	FUSE - 4A, AC					
	LK677	COOPER BUSSMANN	GB2515003232001A	LINK					
	86BT	RELPOL	GBR42014231220WT	RELPOL MAKE MINIATURE RELAY;4 CHANGE OVER;AUX SUPPLY: 220V DC		SPARE RELAY			
E									
F	CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1	PREPARED : GD	REVISION: Z	SHT :011
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.				CONTROL & PROTECTION PANEL		REVIEWED : THY	DATE: 09-02-2015		
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014				BILL OF MATERIALS : +1TR1B		APPROVED : APS		CONT: NIL	
				PANEL TYPE :		DRG. NO.: 3269PP621-GL-07			
1	2	3	4	5	6	7	8		

Schneider
Electric

	1	2	3	4	5	6	7	8
A								
B								
C								
D								
E								
F								

SHEET	DESCRIPTION
000	INDEX SHEET
001	LIST OF SYMBOLS
002	SINGLE LINE DIAGRAM
003	TRIP LOGIC
004	AC DISTRIBUTION
005	HV SIDE-DC DISTRIBUTION CKT.
006	HV SIDE-DC DISTRIBUTION CKT.
007	HV BUS PT EXTENSION
008	HV METERING CIRCUIT
009	DIFFERENTIAL PROTN CT&VT CIRCUIT
010	DIFFERENTIAL PROTN CT&VT CIRCUIT
011	DIFFERENTIAL - OPTO INPUT CIRCUIT
012	DIFFERENTIAL - OPTO INPUT CIRCUIT
013	HV-MASTER TRIP RELAY 86A-HV CKT
014	LBB TRIP RELAY 96 CKT
015	HV CB CLOSING CKT.
016	HV CB TC-1 CIRCUIT
017	HV CB TC-2 CIRCUIT
018	TRAFO TROUBLE-AUX. RELAY CKT.
019	TRANSDUCER CKT
020	ISOLATOR CONTROL CKT
021	AUXILARY RELAY CIRCUIT
022	HV-BCPU CARD DETAILS
023	HV-BCPU POWER SUPPLY UNIT
024	HV-BCPU-TMU CARD
025	HV-BCPU-INPUT CARD
026	HV-BCPU-INPUT CARD
027	HV-BCPU-INPUT CARD
028	HV-BCPU-INPUT CARD
029	HV-BCPU-INPUT CARD
030	HV-BCPU-INPUT CARD
031	HV-BCPU-INPUT CARD
032	HV-BCPU-INPUT CARD
033	HV-BCPU-INPUT CARD
034	HV-BCPU-INPUT CARD
035	HV-BCPU-INPUT CARD
036	HV-BCPU-INPUT CARD
037	HV-BCPU-OUTPUT CARD
038	HV-BCPU-OUTPUT CARD
039	BCPU-ANALOG INPUT CARD

SHEET	DESCRIPTION
040	LV SIDE-DC DISTRIBUTION CKT.
041	LV BUS PT EXTENSION
042	LV MAIN METERING CIRCUIT
043	LV CHECKMETERING CIRCUIT
044	LV-MASTER TRIP RELAY 86-LV CKT
045	UNDER FREQUENCY TRIP RELAY(86-UF)
046	LV CB CLOSING CKT.
047	LV-CIRCUIT BREAKER TC-1 CIRCUIT
048	LV-CIRCUIT BREAKER TC-2 CIRCUIT
049	ISOLATOR CONTROL CKT
050	AUXILARY RELAY CIRCUIT
051	LV-BCPU CARD DETAILS
052	LV-BCPU POWER SUPPLY UNIT
053	LV-BCPU-TMU CARD
054	LV-BCPU-INPUT CARD
055	LV-BCPU-INPUT CARD
056	LV-BCPU-INPUT CARD
057	LV-BCPU-INPUT CARD
058	LV-BCPU-INPUT CARD
059	LV-BCPU-INPUT CARD
060	LV-BCPU-OUTPUT CARD
061	LV-BCPU-OUTPUT CARD
062	CONTACT DISTRIBUTION TO TRAFO PANEL
063	CONTACTS DISTRIBUTION
064	SPARE CONTACTS DISTRIBUTION
065	CONTACTS DISTRIBUTION
066	SWITCH CONTACT & TEST BLOCK DISTRIBUTION
067	DEVICE REFERENCE
068	TERMINAL BLOCK REFERENCE
069	TERMINAL BLOCK REFERENCE
070	TB REFERENCE
071	TB REFERENCE
072	BUS WIRING - INTRA-PANEL
073	BUS WIRING - INTER-PANEL
074	BCPU INTERLOCK LOGICS
075	BCPU INTERLOCK LOGICS
076	BCPU INTERLOCK LOGICS

CUSTOMER : APTRANSCO	CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL INDEX SHEET	PREPARED : GD	REVISION: Z	SHT :000
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.				REVIEWED : THY	DATE: 09-02-2015	CONT:001
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014				APPROVED : APS		
				PANEL TYPE : +1TR1A,+1TR1B	DRG. NO.: 3269PP621-S-07	

A

B

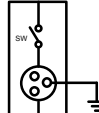
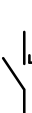
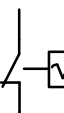
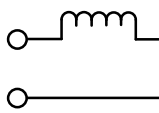
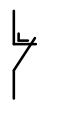
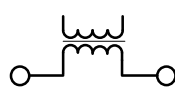
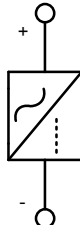
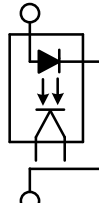
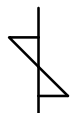
C

D

E

F

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

1		2		3		4		5		6		7		8							
LIST OF STANDARD SYMBOLS																					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION														
	COMPACT FLOURESCENT LAMP		RESISTOR		NORMALLY OPEN CONTACT SELF RESET		NON-DISCONNECTING TB FOR INTER PANEL BUS WIRING														
	DOOR/HEATER SWITCH		CONTROL / SELECTOR SWITCH		NORMALLY CLOSE CONTACT SELF RESET		NON-DISCONNECTING TB FOR SCADA/BCU														
	HEATER		TEST BLOCK		CHANGEOVER CONTACT SELF RESET		NON-DISCONNECTING TB														
	POWER SOCKET WITH SWITCH		POTENTIO METER		NORMALLY OPEN CONTACT HAND RESET		TB PRIMARY EQUIPMENTS														
	THERMOSTAT		POTENTIAL TRANSFORMER		NORMALLY CLOSE CONTACT HAND RESET		DIODE														
	FUSE		CURRENT TRANSFORMER		CHANGEOVER CONTACT HAND RESET		SEMAPHORE														
	LINK		POWER SUPPLY		DIGITAL OPTO INPUT		BUS WIRE REPRESENTATION SOURCE / TARGET														
	MCB						NORMAL WIRE REPRESENTATION SOURCE / TARGET														
	INDICATING LAMPS		SELF-RESET COIL WITH/ WITHOUT FLAG		SELT-RESET SLOW OPERAING COIL WITH REVERSE/ FORWARD FLAG																
	PUSH BUTTON NC CONTACT																				
	PUSH BUTTON NO CONTACT		HAND-RESET COIL WITH/ WITHOUT FLAG		ANNUNCIATOR WINDOW INPUT																
	METROSIL				DISCONNECTING TB																
NOTE: RELAY CONTACTS SHOWN WITH CONTACT DE ENERGIZED CONDITION.																					
CUSTOMER : APTRANSCO				CONTRACTOR: SPR CONSTRUCTIONS								TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL LIST OF SYMBOLS				PREPARED : GD		REVISION: Z		SHT :001	
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.												PANEL TYPE : +1TR1A,+1TR1B				REVIEWED : THY		DATE: 09-02-2015		CONT:002	
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014																APPROVED : APS		DRG. NO.: 3269PP621-S-07			
1		2		3		4		5		6		7		8							

TERMINAL GROUP STANDARDS	
TB REF	FUNCTION
X1	AC/DC CIRCUITS
X2	CT CIRCUITS
X3	PT CIRCUITS
X4	CONTROL INPUTS (TO OPTO/CONT MUL. RELAY)
X5	CONTROL OUTPUTS (TO CB CONTROL)
X6	CONTROL OUTPUTS (TO ISOL./ESW. CONTROL)
X7	SPARE OUTPUTS
X8	TEMP SCANNER/SCADA/RTU/DCS CKTS
X9	INDICATION/ANNUNCIATON CKTS
X9-DI-SLOT	BCU DI INPUTS
X9-DO-SLOT	BCU DO INPUTS
X9-AI-SLOT	BCU AI INPUTS
X10	FOR INTER PANEL CABLES
X100	BUS WIRING CT/PT CKTS (INTRA-BAY)
X101-X109	BUS WIRING CONTROL CKTS (INTRA-BAY)
X200	BUS WIRING CT/PT CKTS (INTER-BAY)
X201-X209	BUS WIRING CONTROL CKTS (INTER-BAY)

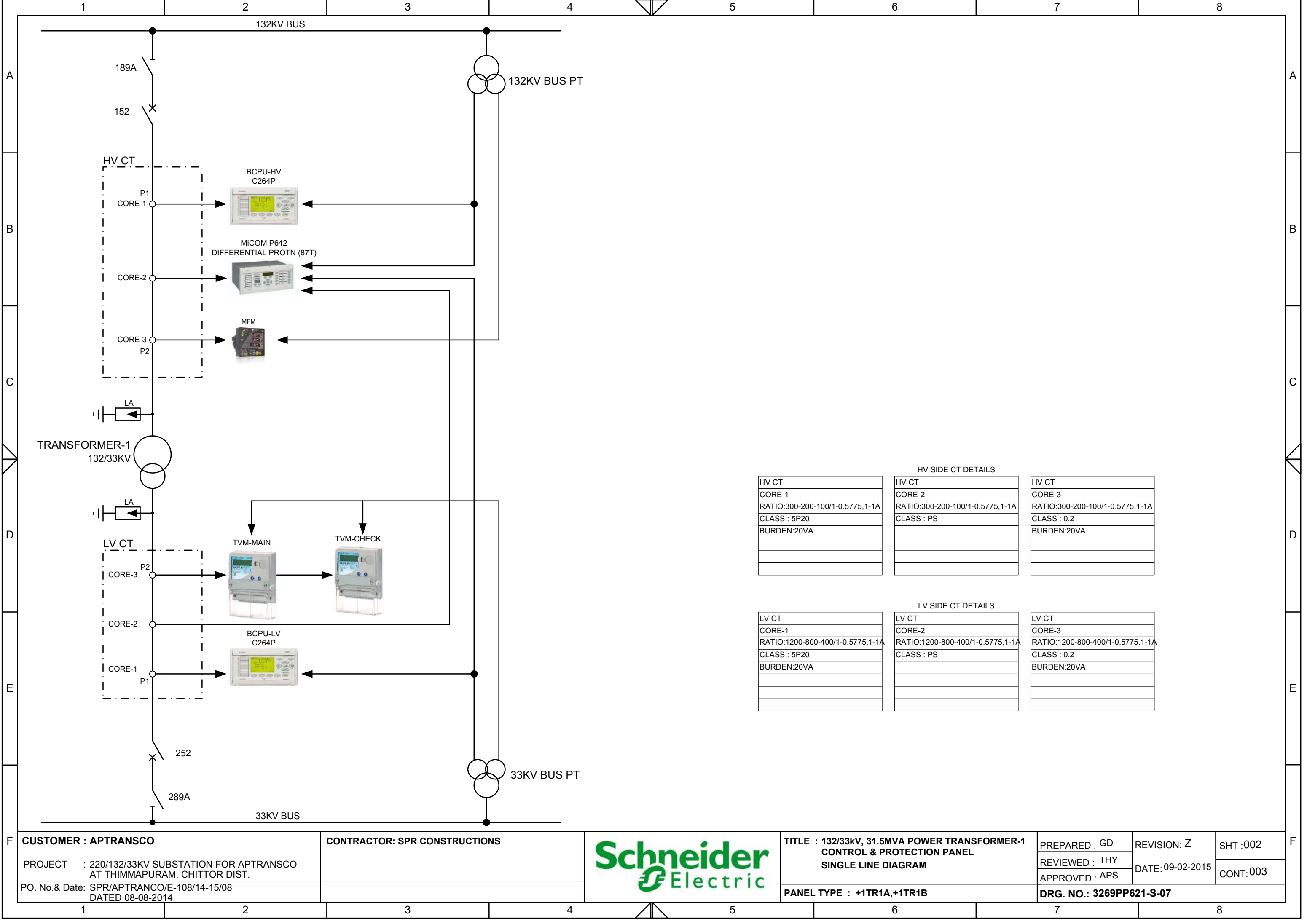
FERRULE NUMBERING STANDARDS	
FERRULE	CIRCUIT
"A"	CT CIRCUIT-MAIN PROTECTION
"B"	CT CIRCUIT-BUSBAR PROTECTION
"C"	CT CIRCUIT-BACKUP PROTECTION
"D"	CT CIRCUIT-METERING
"E"	VT CIRCUIT-PROTECTION/METERING
"G"	VT CIRCUIT-SYNCHRONISING
"H"	AUXILARY AC CIRCUIT
"J"	AUXILARY DC CIRCUIT
"K"	CONTROL CIRCUIT
"L"	INDICATION & ALARM CIRCUITS
"P"	DC CIRCUIT- BUSBAR PROTECTION CIRCUIT
"S"	SCADA/EVENT LOGGER/DAS CIRCUITS
"U"	SPARE CONTACTS

CUSTOMER : APTRANSCO				CONTRACTOR: SPR CONSTRUCTIONS								TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL LIST OF SYMBOLS				PREPARED : GD		REVISION: Z		SHT :001	
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.												PANEL TYPE : +1TR1A,+1TR1B				REVIEWED : THY		DATE: 09-02-2015		CONT:002	
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014																APPROVED : APS		DRG. NO.: 3269PP621-S-07			
1		2		3		4		5		6		7		8							

TERMINAL GROUP STANDARDS	
TB REF	FUNCTION
X1	AC/DC CIRCUITS
X2	CT CIRCUITS
X3	PT CIRCUITS
X4	CONTROL INPUTS (TO OPTO/CONT MUL. RELAY)
X5	CONTROL OUTPUTS (TO CB CONTROL)
X6	CONTROL OUTPUTS (TO ISOL./ESW. CONTROL)
X7	SPARE OUTPUTS
X8	TEMP SCANNER/SCADA/RTU/DCS CKTS
X9	INDICATION/ANNUNCIATON CKTS
X9-DI-SLOT	BCU DI INPUTS
X9-DO-SLOT	BCU DO INPUTS
X9-AI-SLOT	BCU AI INPUTS
X10	FOR INTER PANEL CABLES
X100	BUS WIRING CT/PT CKTS (INTRA-BAY)
X101-X109	BUS WIRING CONTROL CKTS (INTRA-BAY)
X200	BUS WIRING CT/PT CKTS (INTER-BAY)
X201-X209	BUS WIRING CONTROL CKTS (INTER-BAY)

FERRULE NUMBERING STANDARDS	
FERRULE	CIRCUIT
"A"	CT CIRCUIT-MAIN PROTECTION
"B"	CT CIRCUIT-BUSBAR PROTECTION
"C"	CT CIRCUIT-BACKUP PROTECTION
"D"	CT CIRCUIT-METERING
"E"	VT CIRCUIT-PROTECTION/METERING
"G"	VT CIRCUIT-SYNCHRONISING
"H"	AUXILARY AC CIRCUIT
"J"	AUXILARY DC CIRCUIT
"K"	CONTROL CIRCUIT
"L"	INDICATION & ALARM CIRCUITS
"P"	DC CIRCUIT- BUSBAR PROTECTION CIRCUIT
"S"	SCADA/EVENT LOGGER/DAS CIRCUITS
"U"	SPARE CONTACTS

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

Schneider Electric PROTECTION TRIP LOGIC FOR 132/33KV TRANSFORMER		DIFFERENTIAL ROTECTION MiCOM P642			TRANSFORMER TROUBLES					132kV SIDE BCPU-HV			33kV SIDE BCPU-LV	132kV SIDE			33kV SIDE
		DIFFERENTIAL	OVER FLUXING		OTI TRIP	BUCHHOLZ TRIP	WTI TRIP	OSR TRIP	PRV TRIP	NON DIR. O/C & E/F, HV PROTN. OPTD.	UNDER FREQUENCY PROTN. OPTD.	LBB OPTD.	NON DIR. O/C & E/F PROTN. OPTD.	MASTER TRIP RELAY	LBB TRIP RELAY	UNDER FREQUENCY TRIP RELAY	MASTER TRIP RELAY
RELAY CODE		87T	99-HV	99-LV						BCPU-HV	81U	HV LBB	BCPU-LV	86A-HV	96	86UF	86-LV
PROTECTION TRIP		3PH	3PH	3PH	3PH	3PH	3PH	3PH	3PH	3PH	3PH	3PH	3PH	3PH	3PH	3PH	3PH
H V C B	TO CB TRIP COIL-1													TP	TP		
	TO CB TRIP COIL-2													TP	TP		
	CLOSE MAIN CB													RS	RS		
L V C B	TO CB TRIP COIL-1													TP	TP		TP
	TO CB TRIP COIL-2													TP	TP		TP
	CLOSE MAIN CB													RS	RS		RS
MASTER TRIP RELAY (86-HV)		IP	IP		IP	IP	IP	IP	IP	IP							
MASTER TRIP RELAY (86-LV)				IP	IP	IP	IP	IP	IP				IP				
LBB TRIP RELAY(96)												IP					
**UNDER FREQUENCY TRIP RELAY (86UF)											IP						
DR		IP	IP	IP	IP	IP	IP	IP	IP	IP	IP		IP	IP	IP	IP	IP

NOTE:** UNDERFREQUENCY 86-UF RELAY, PROVISION FOR TRIPPING SELECTED CBs OF PTR AND FEEDERS

	-INDICATES INITIATION FROM PROTECTION FUNCTION
	-INDICATES TRIP FROM PROTECTION FUNCTION
	-INDICATES RESET STATUS FOR CB CLOSING

CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS

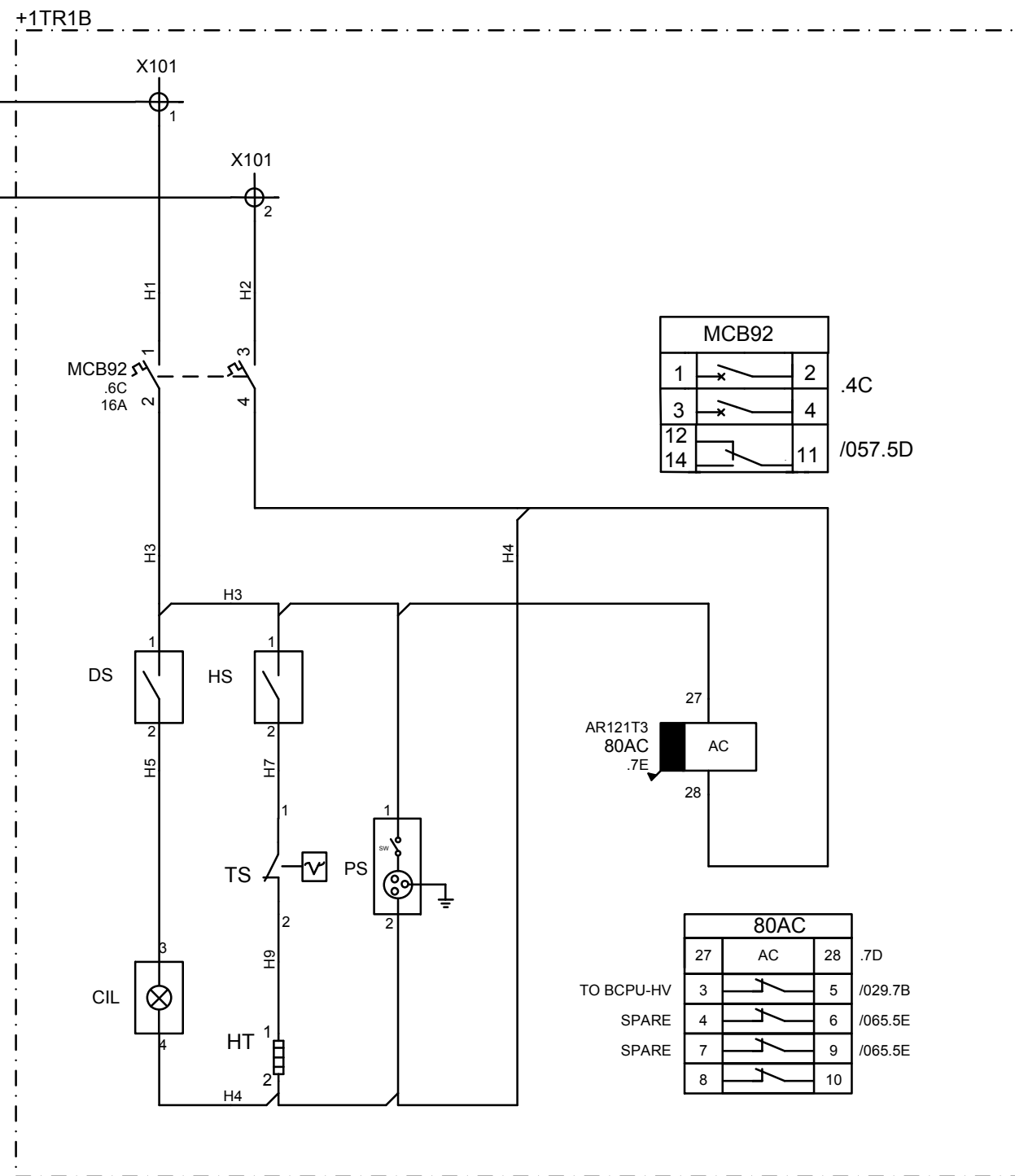
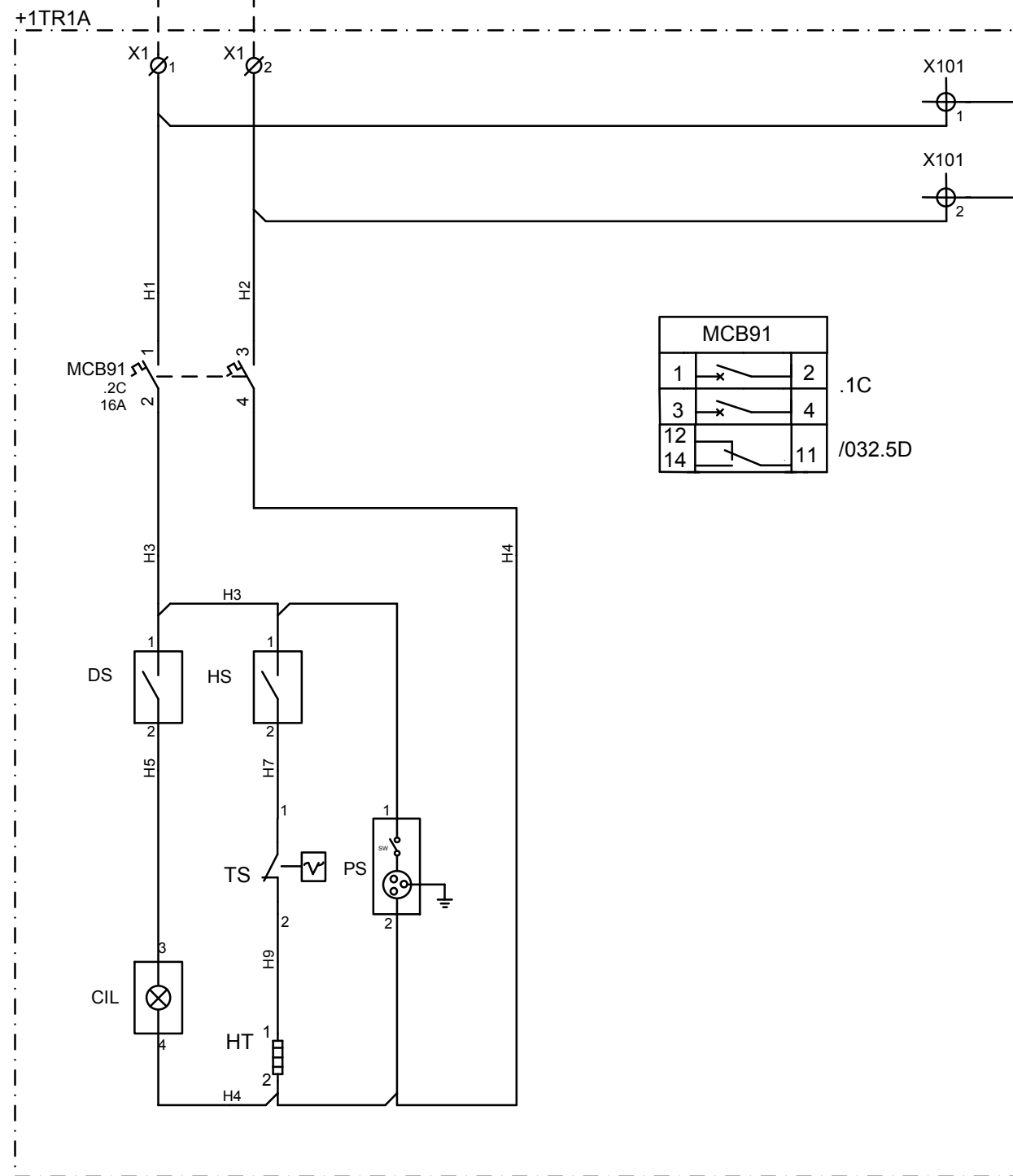
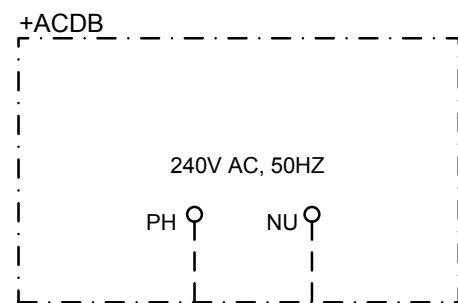


**TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
TRIP LOGIC**

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD	REVISION: Z	SHT :003
REVIEWED : THY	DATE: 09-02-2015	CONT:004
APPROVED : APS	DRG. NO.: 3269PP621-S-07	

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS



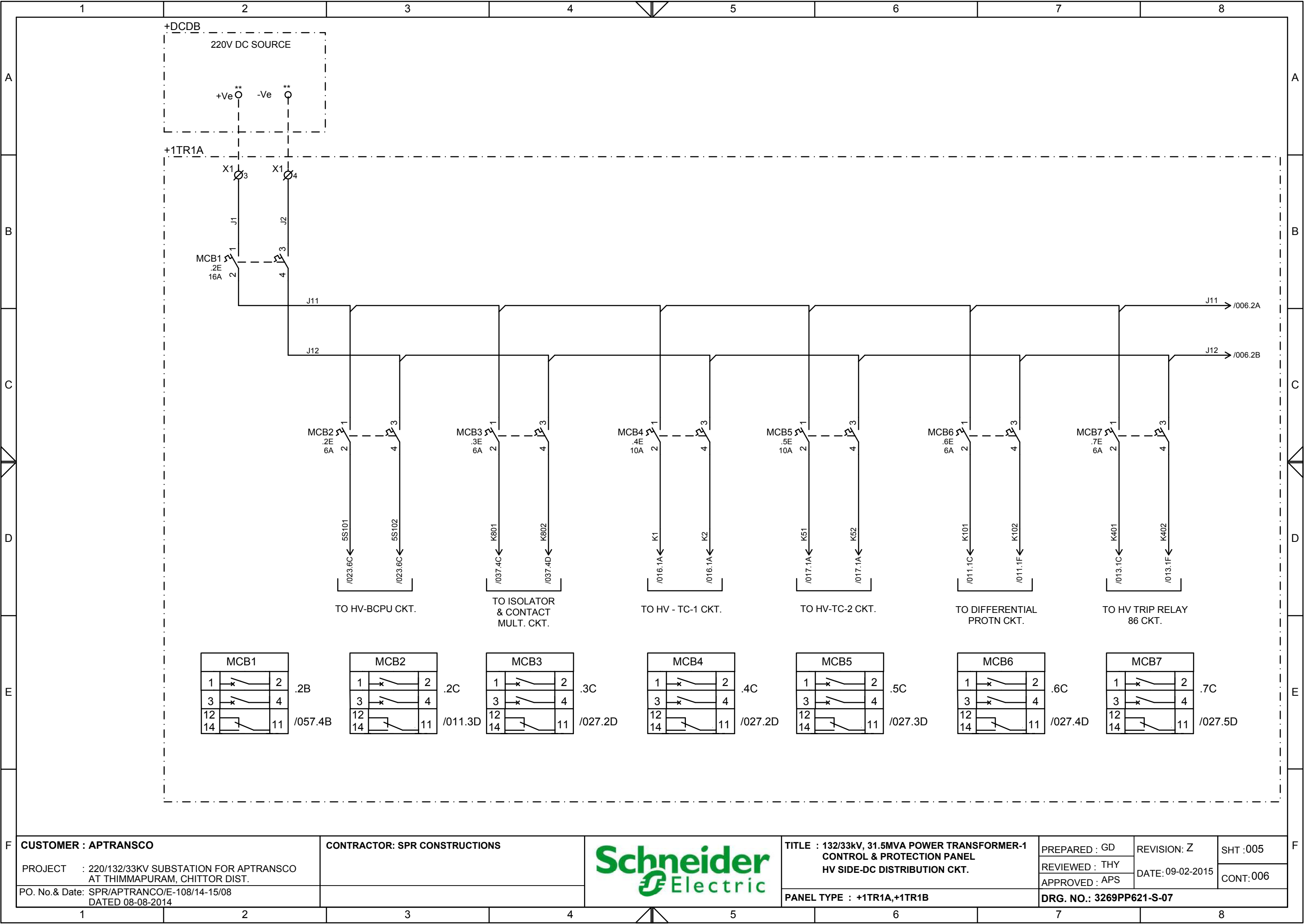
**TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
AC DISTRIBUTION**

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD	REVISION: Z	SHT :004
REVIEWED : THY	DATE: 09-02-2015	CONT:005
APPROVED : APS		

DRG. NO.: 3269PP621-S-07

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO

CONTRACTOR: SPR CONSTRUCTIONS



TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
HV SIDE-DC DISTRIBUTION CKT.

PREPARED : GD

REVISION: Z

SHT :005

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

REVIEWED : THY

DATE: 09-02-2015

CONT:006

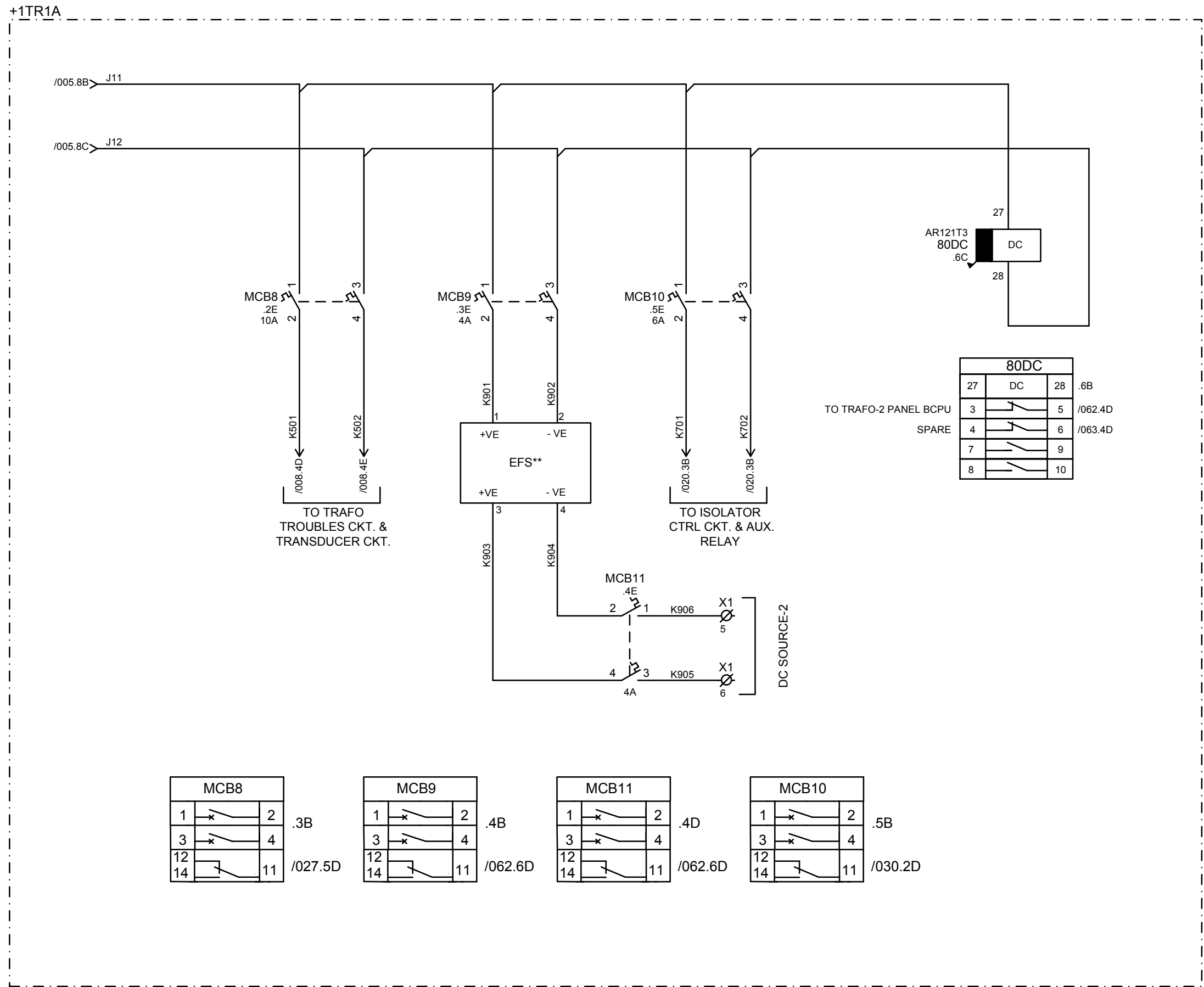
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

APPROVED : APS

PANEL TYPE : +1TR1A,+1TR1B

DRG. NO.: 3269PP621-S-07

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



F

CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS



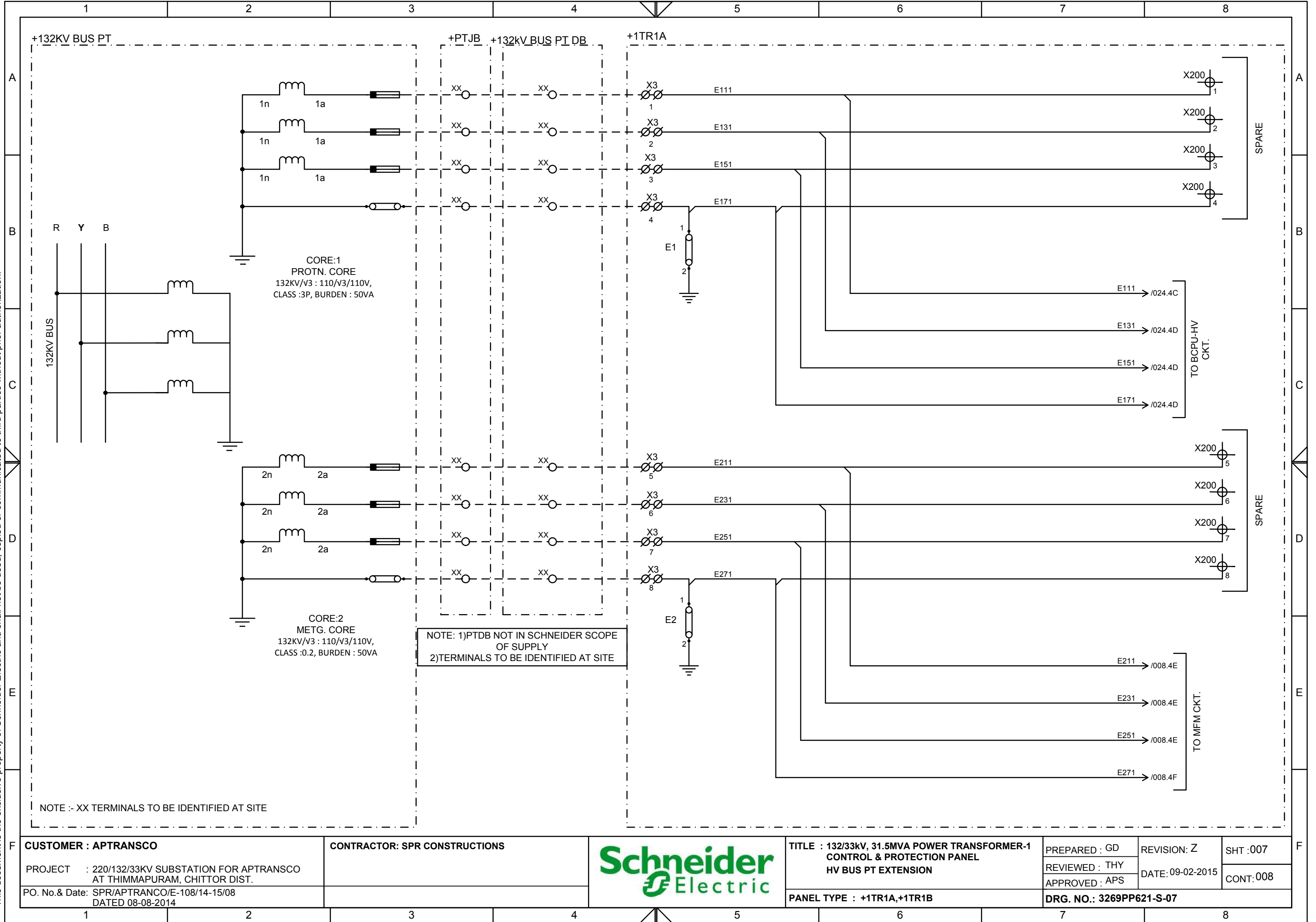
**TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
HV SIDE-DC DISTRIBUTION CKT.**

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD	REVISION: Z	SHT :006
REVIEWED : THY	DATE: 09-02-2015	CONT:007
APPROVED : APS	DRG. NO.: 3269PP621-S-07	

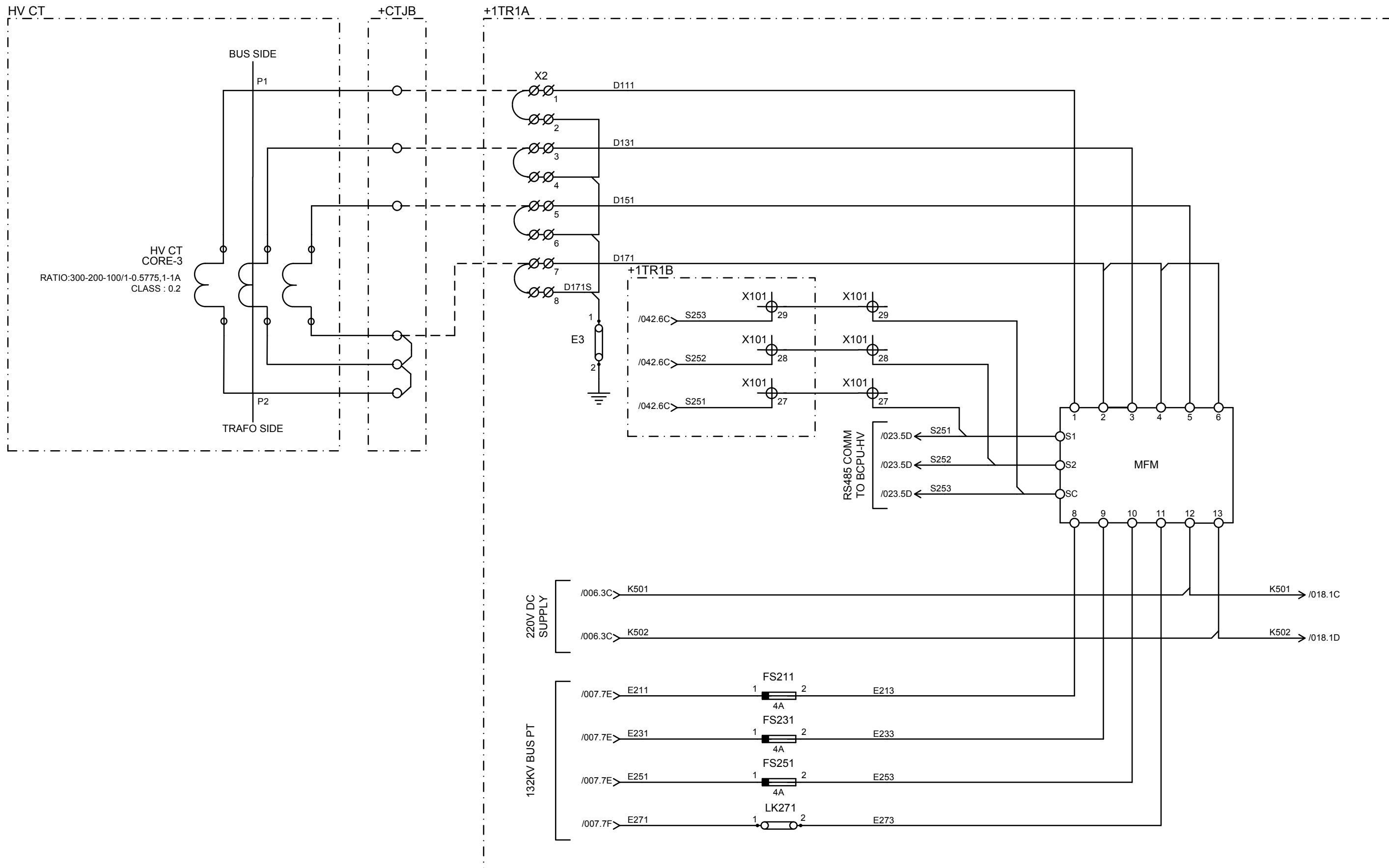
F

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



F	CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL HV BUS PT EXTENSION	PREPARED : GD	REVISION: Z	SHT :007	F	
	PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.	REVIEWED : THY				DATE: 09-02-2015				CONT:008
		APPROVED : APS								
		PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014					PANEL TYPE : +1TR1A,+1TR1B			

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.
PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS

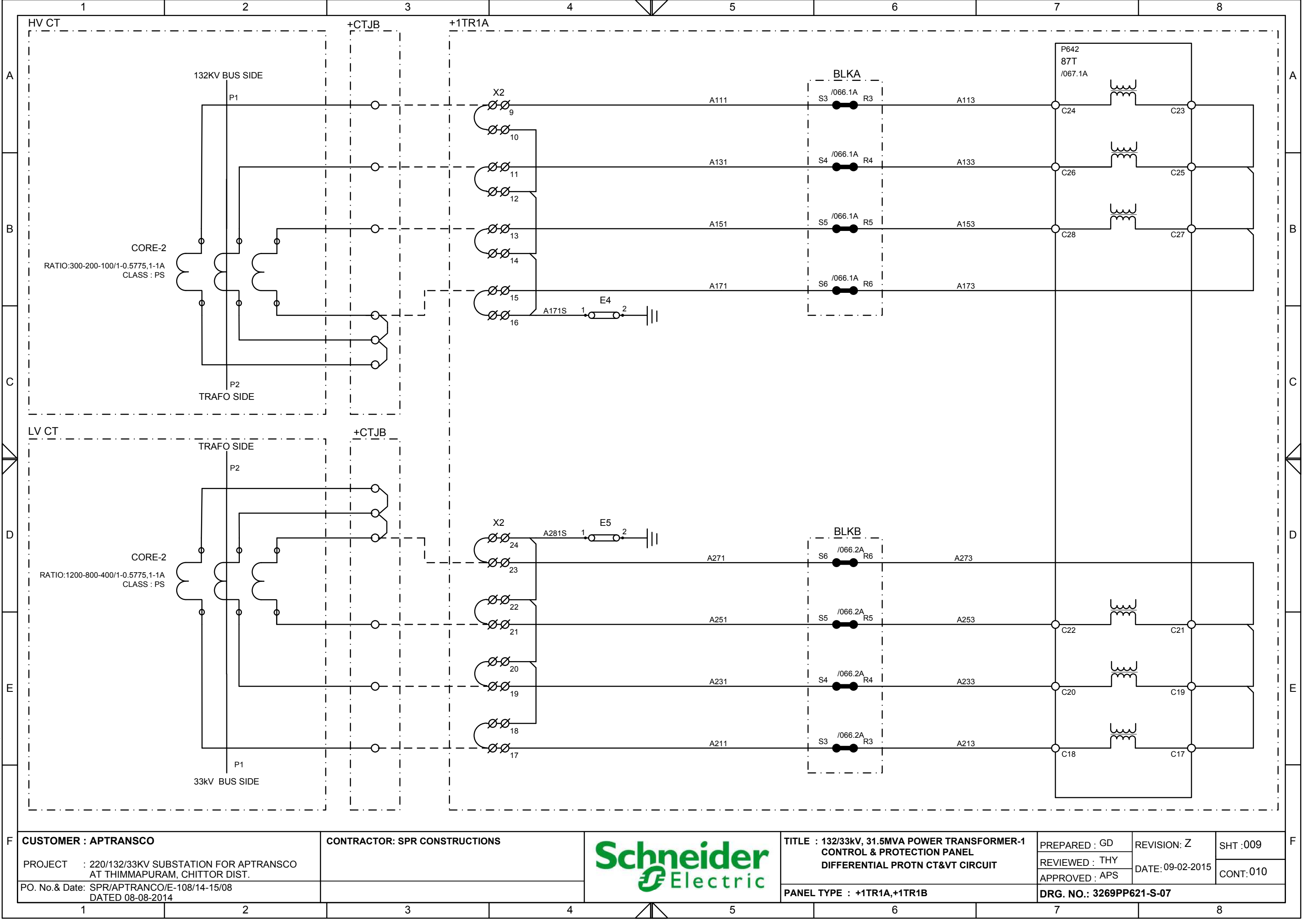


**TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
HV METERING CIRCUIT**
PANEL TYPE : +1TR1A,+1TR1B

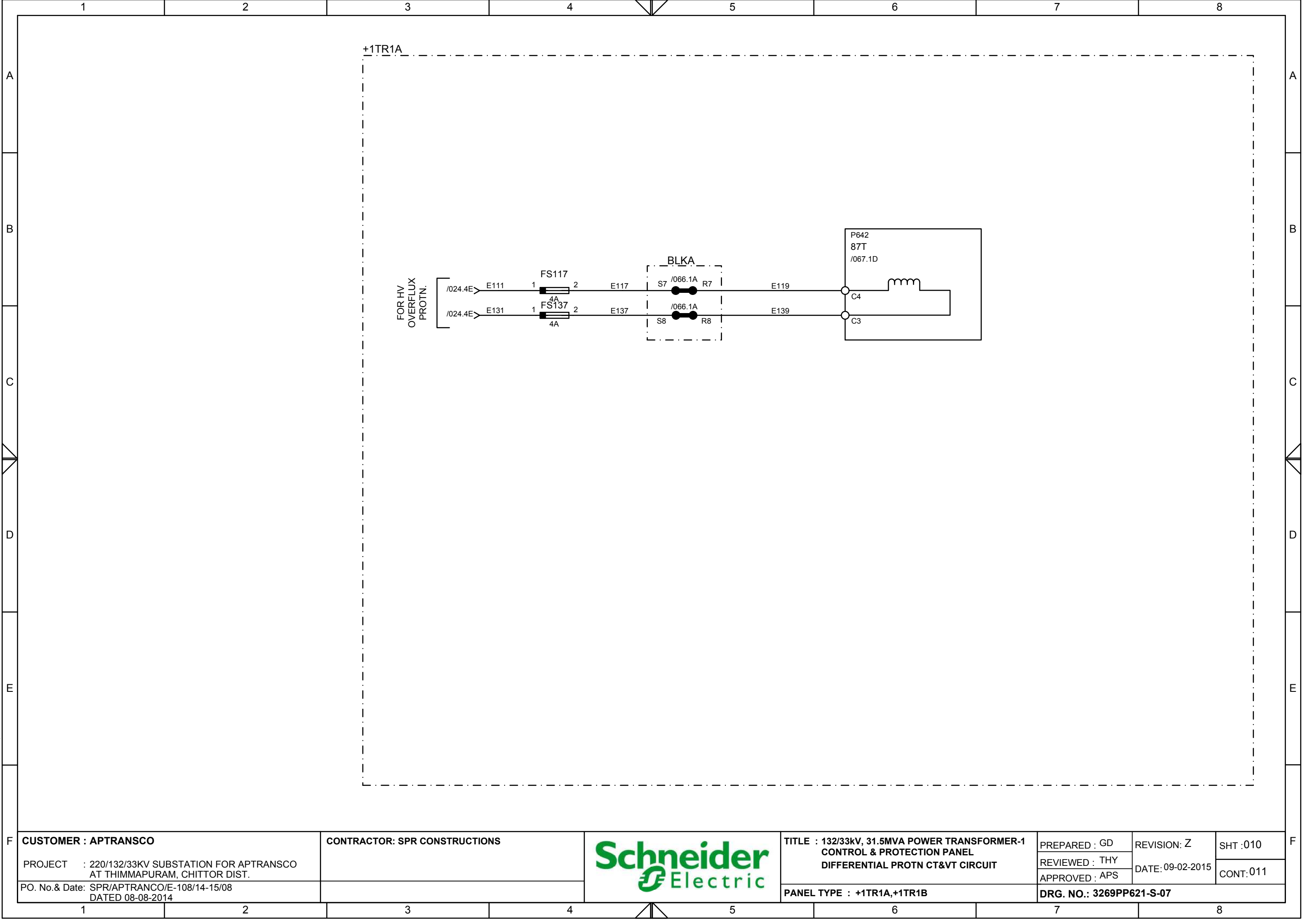
PREPARED : GD	REVISION: Z	SHT :008
REVIEWED : THY	DATE: 09-02-2015	CONT:009
APPROVED : APS	DRG. NO.: 3269PP621-S-07	

1	2	3	4	5	6	7	8
A							A
B							B
C							C
D							D
E							E
F							F

CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL DIFFERENTIAL PROT N CT&VT CIRCUIT		PREPARED : GD	REVISION: Z	SHT :009
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.							REVIEWED : THY	DATE: 09-02-2015	CONT:010
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014							APPROVED : APS		
					PANEL TYPE : +1TR1A,+1TR1B		DRG. NO.: 3269PP621-S-07		
1	2	3	4	5	6	7	8		



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL DIFFERENTIAL PROTN CT&VT CIRCUIT		PREPARED : GD	REVISION: Z	SHT :010
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.							REVIEWED : THY	DATE: 09-02-2015	CONT:011
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014							APPROVED : APS		
					PANEL TYPE : +1TR1A,+1TR1B		DRG. NO.: 3269PP621-S-07		

1

2

3

4

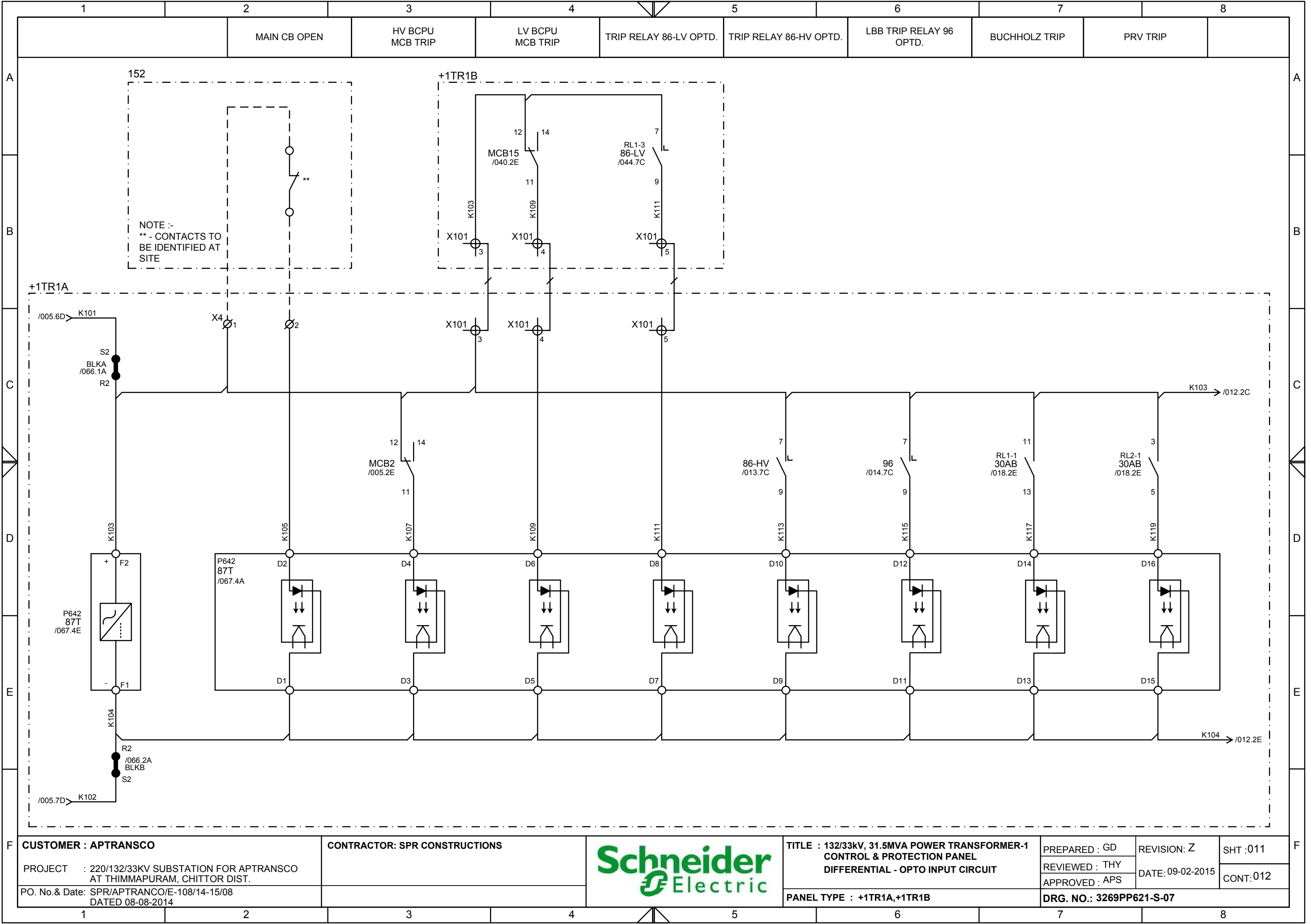
5

6

7

8

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
DIFFERENTIAL - OPTO INPUT CIRCUIT

PREPARED : GD
REVIEWED : THY
APPROVED : APS

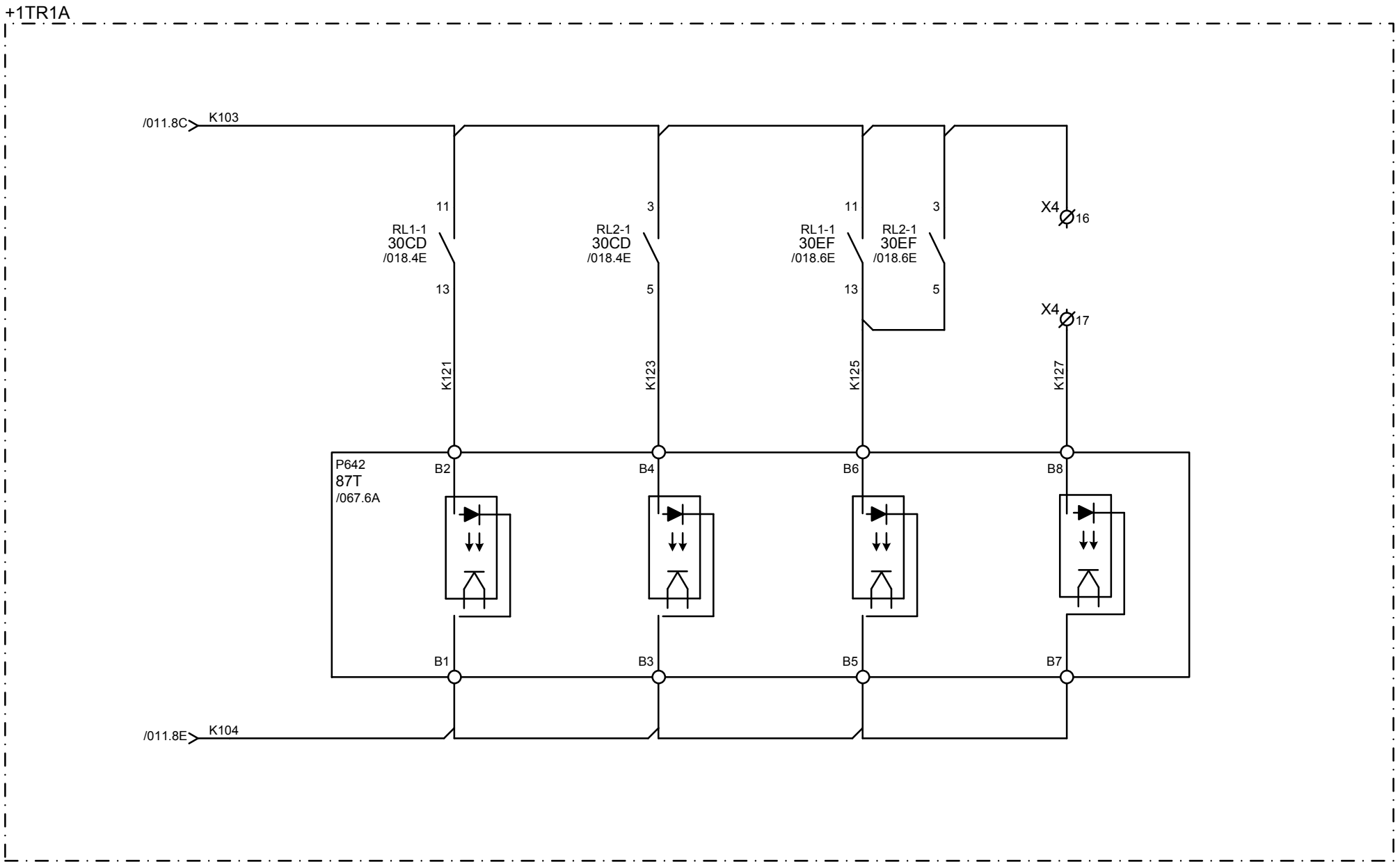
REVISION: Z
DATE: 09-02-2015

SHT :011

CONT:012

PANEL TYPE : +1TR1A,+1TR1B

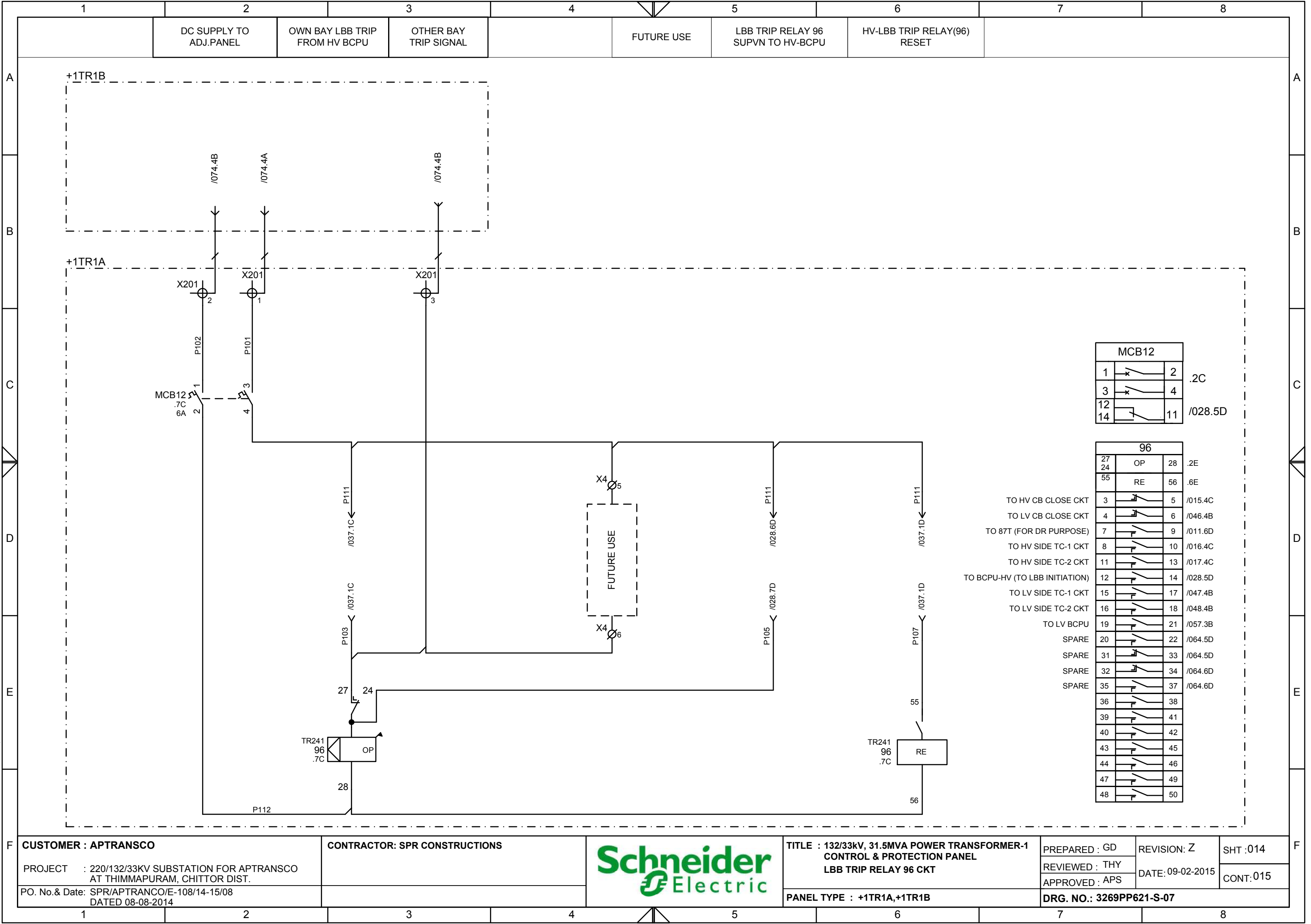
DRG. NO.: 3269PP621-S-07

[illegible]

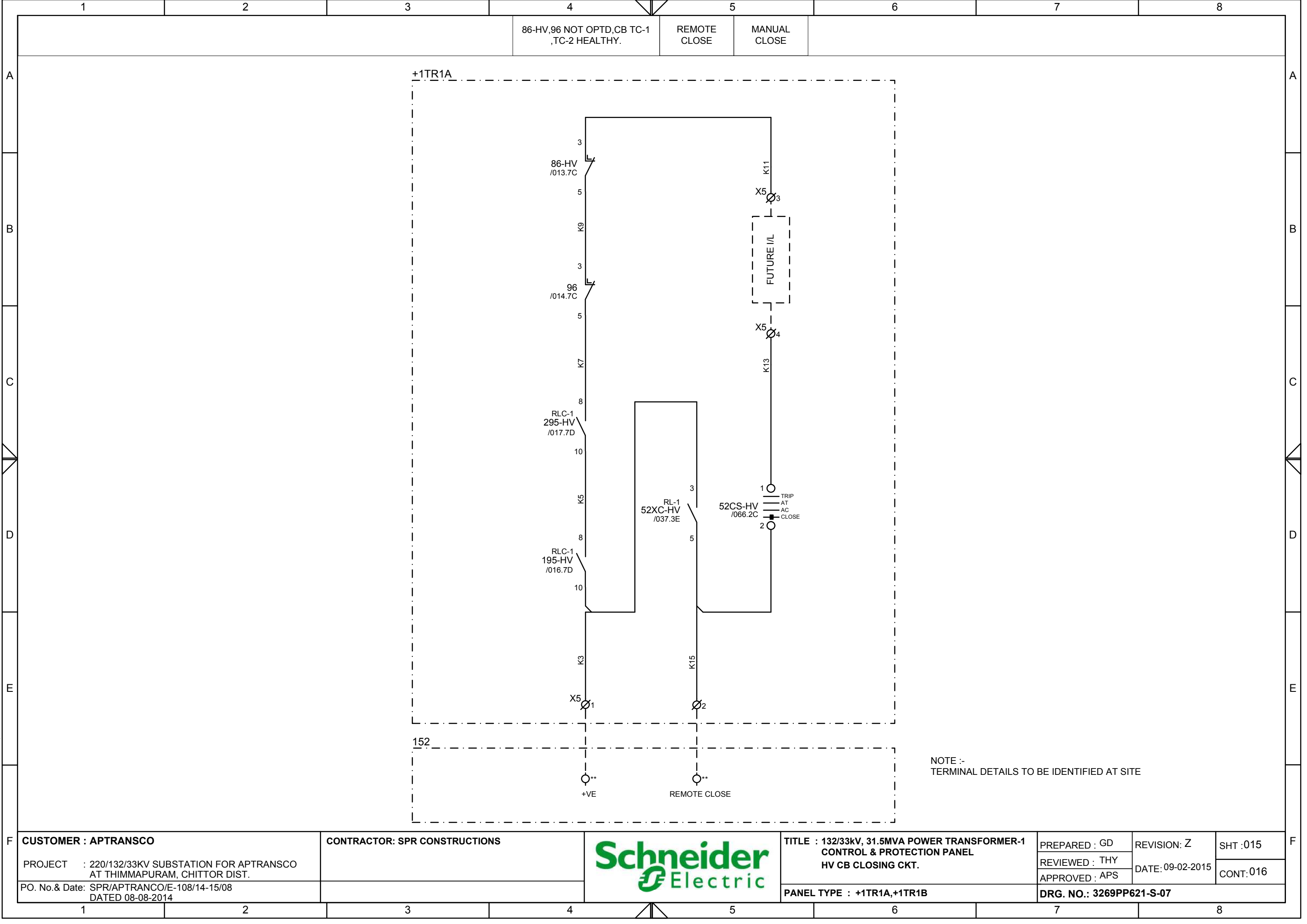
NOTE :-
LV CB STATUS TO BE TAKEN FROM BCPV-LV
THROUGH GOOSE SIGNAL FOR DR PURPOSE

CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL DIFFERENTIAL - OPTO INPUT CIRCUIT	PREPARED : GD	REVISION: Z	SHT :012
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.					REVIEWED : THY	DATE: 09-02-2015	CONT:013
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014					APPROVED : APS		
				PANEL TYPE : +1TR1A,+1TR1B	DRG. NO.: 3269PP621-S-07		

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

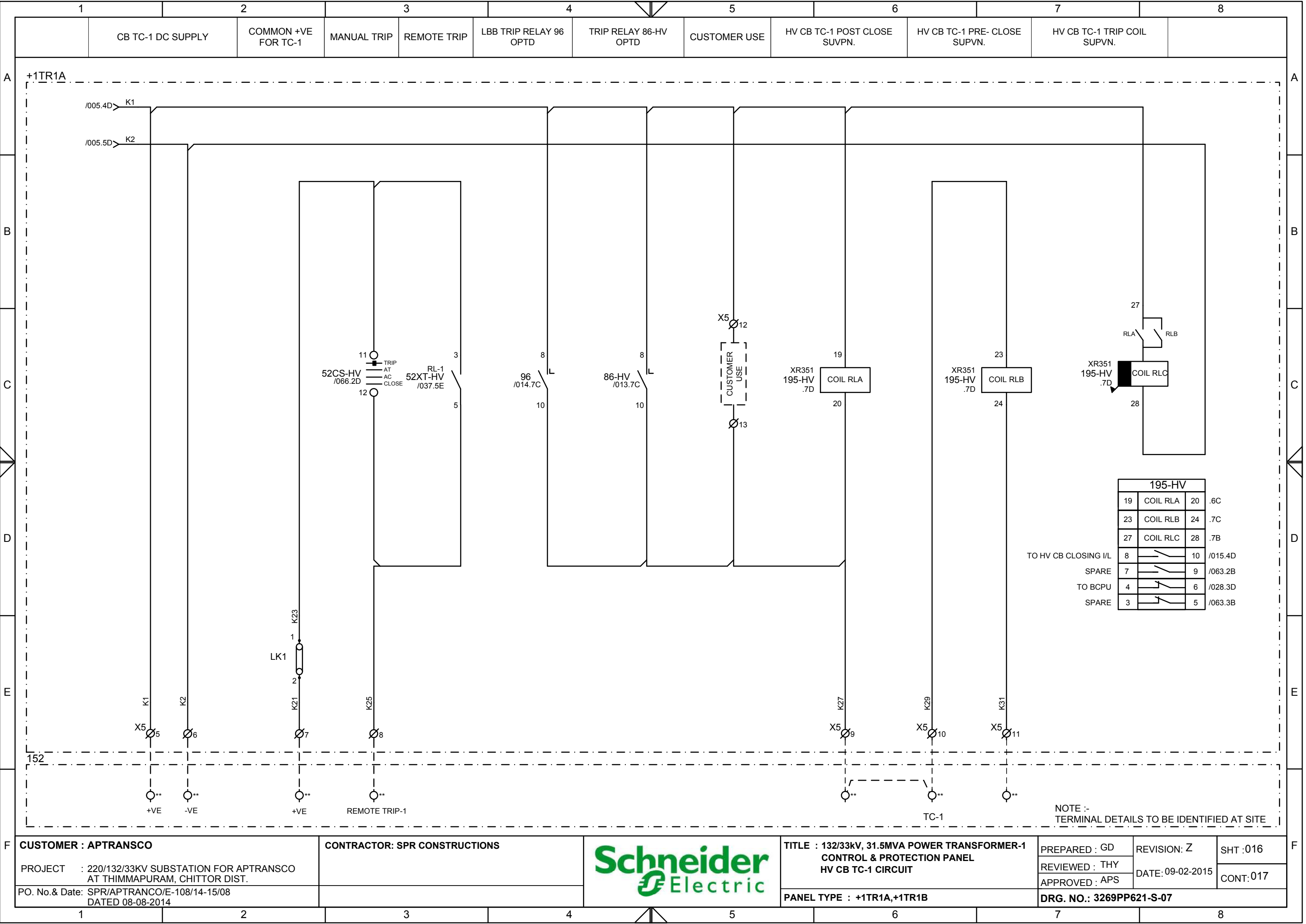


This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

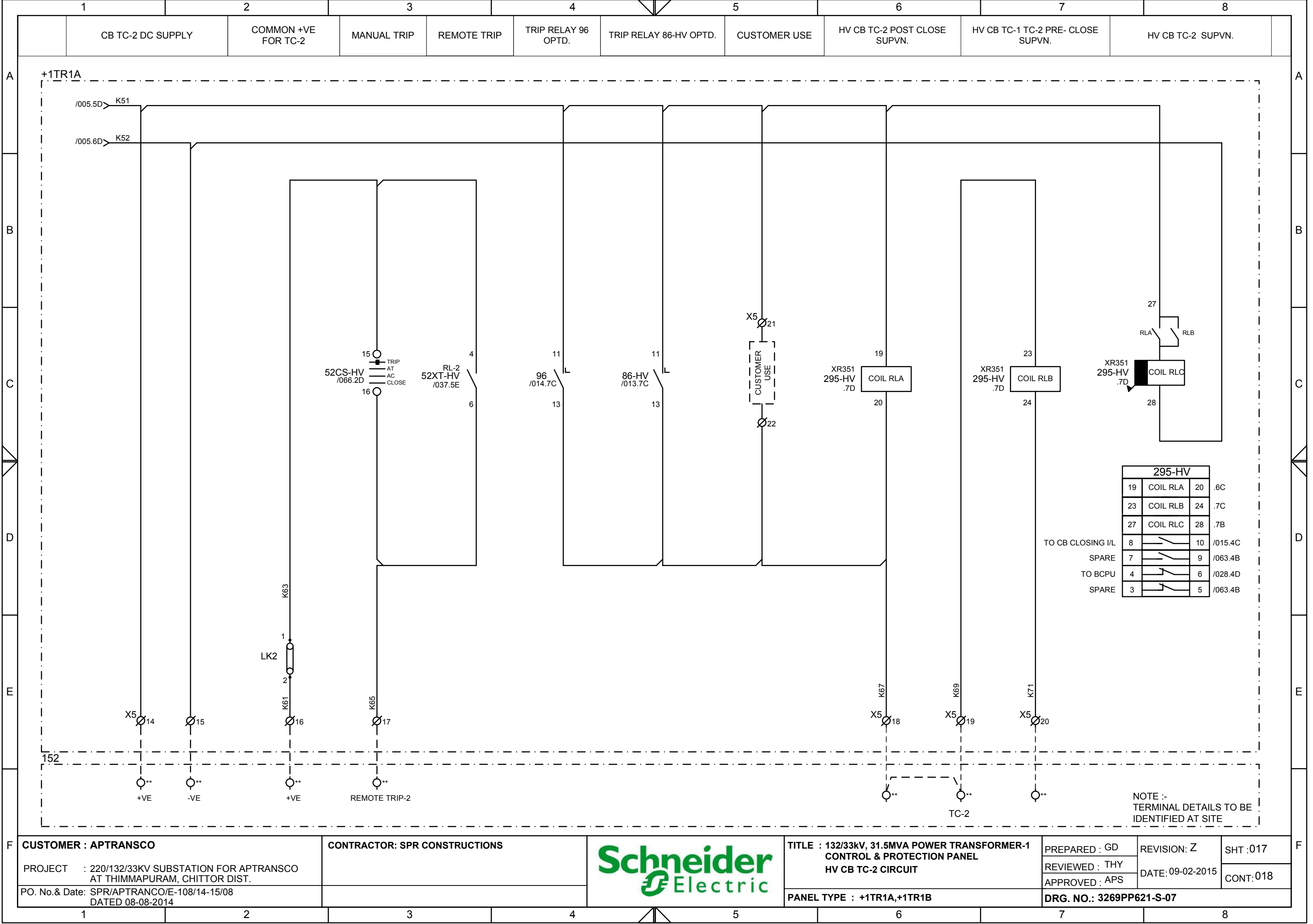
NOTE :-
TERMINAL DETAILS TO BE IDENTIFIED AT SITE

A
B
C
D
E
F

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



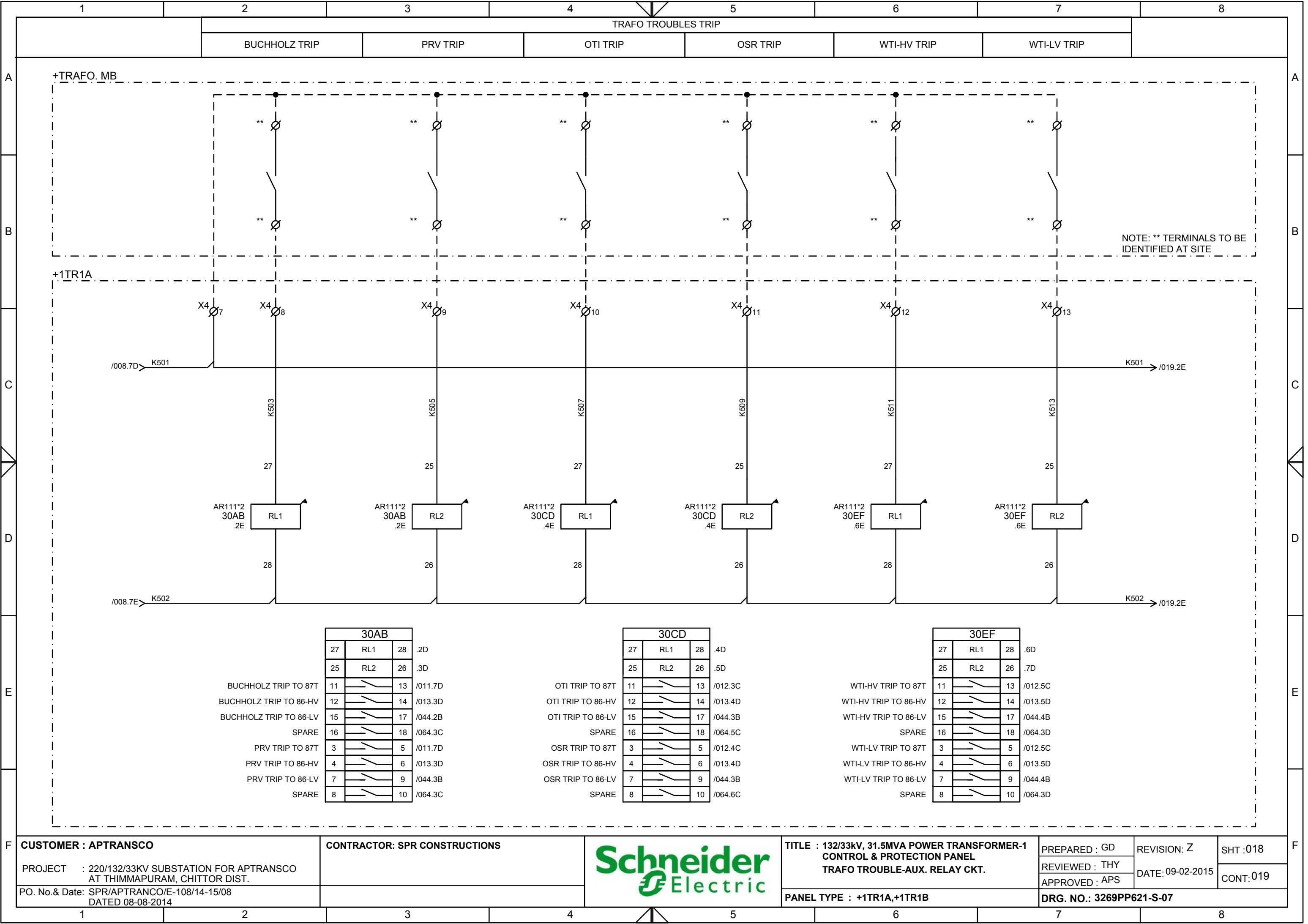
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



F

F

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



F

CUSTOMER : APTRANSCO

CONTRACTOR: SPR CONSTRUCTIONS

Schneider

Electric

TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1

CONTROL & PROTECTION PANEL

TRAFO TROUBLE-AUX. RELAY CKT.

PANEL TYPE : +1TR1A,+1TR1B

DRG. NO.: 3269PP621-S-07

PREPARED : GD

REVIEWED : THY

APPROVED : APS

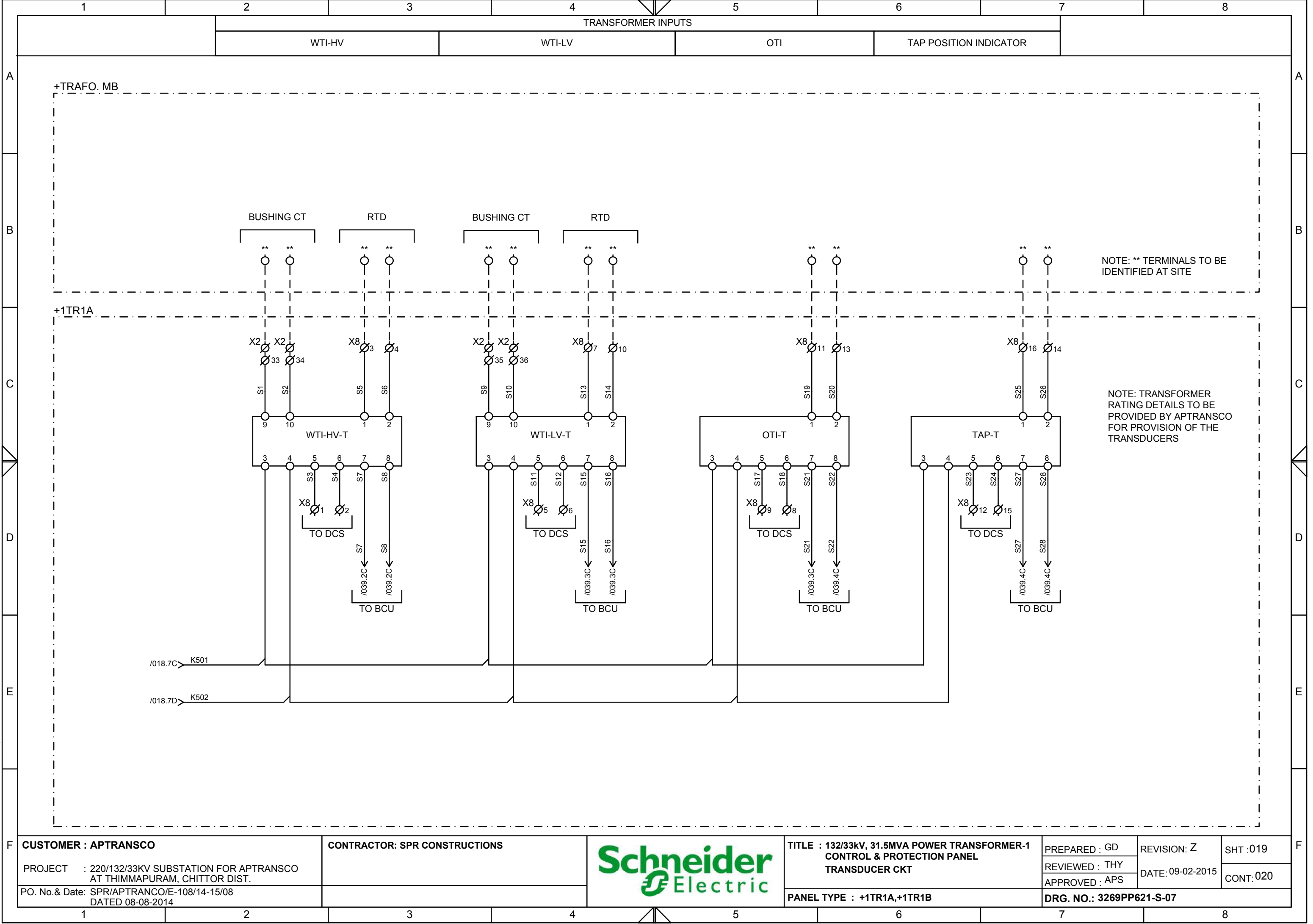
REVISION: Z

DATE: 09-02-2015

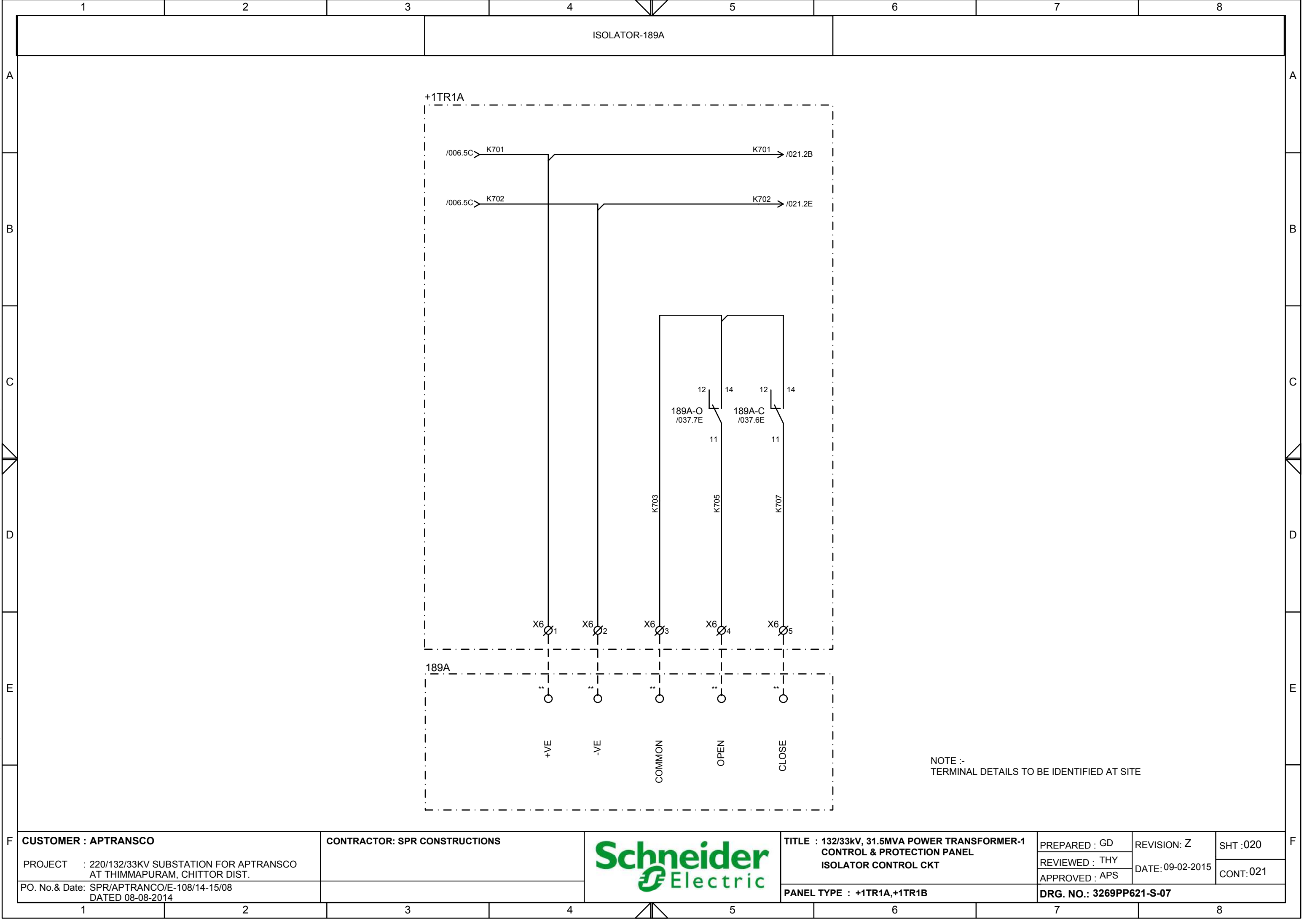
SHT :018

CONT:019

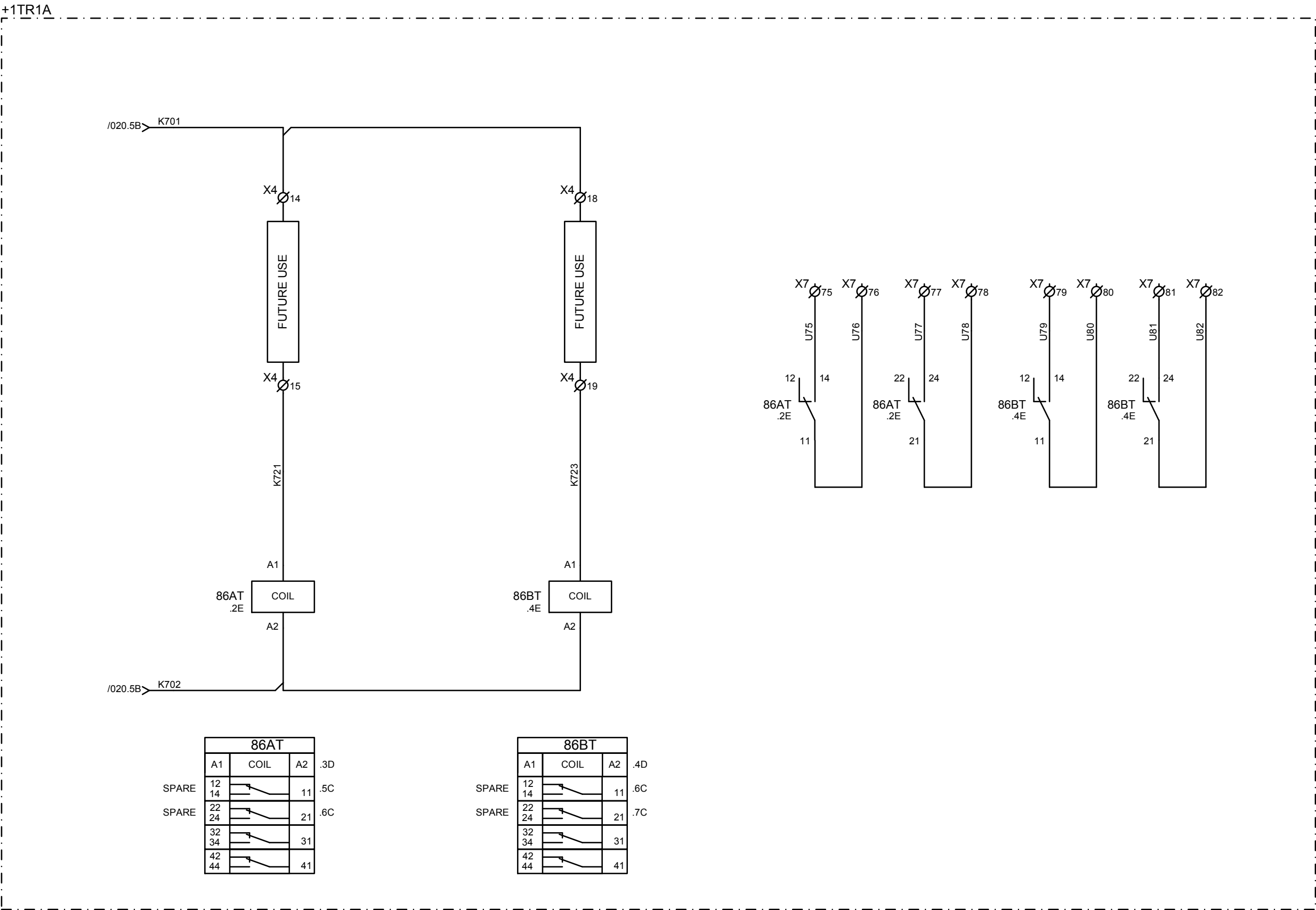
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



NOTE :-
TERMINAL DETAILS TO BE IDENTIFIED AT SITE

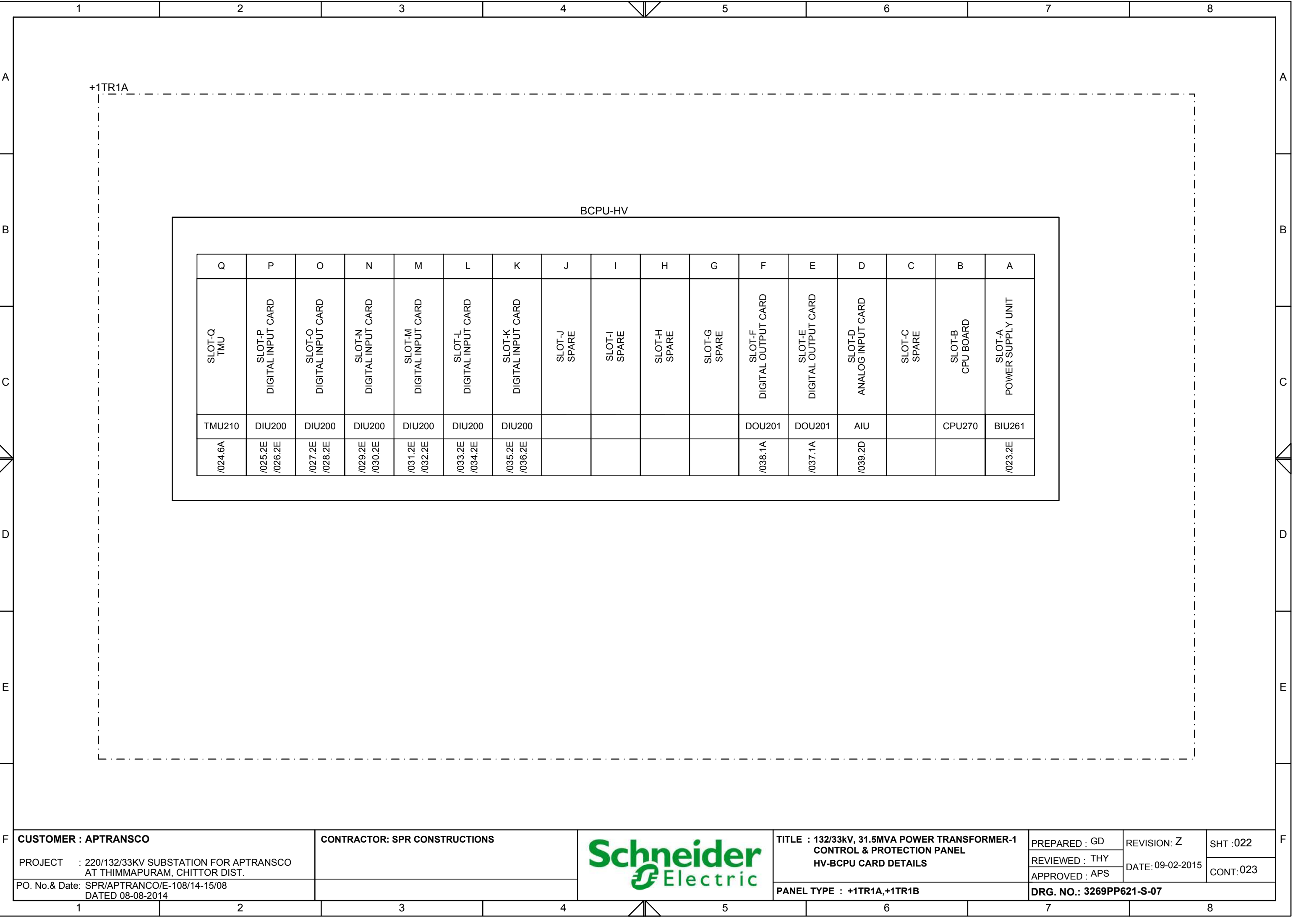


86AT		
A1	COIL	A2
12 14		11
22 24		21
32 34		31
42 44		41

86BT			
A1	COIL	A2	
12 14		11	.4D .6C
22 24		21	.7C
32 34		31	
42 44		41	

CUSTOMER : APTRANSCO	CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL AUXILIARY RELAY CIRCUIT	PREPARED : GD	REVISION: Z	SHT :021
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.				REVIEWED : THY	DATE: 09-02-2015	CONT: 022
PO. No.& Date: SPR/APTRANSCO/E-108/14-15/08 DATED 08-08-2014				APPROVED : APS		
			PANEL TYPE : +1TR1A,+1TR1B	DRG. NO.: 3269PP621-S-07		

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS



TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
HV-BCPU CARD DETAILS

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD

REVIEWED : THY

APPROVED : APS

REVISION: Z

DATE: 09-02-2015

SHT :022

CONT:023

DRG. NO.: 3269PP621-S-07

1

2

3

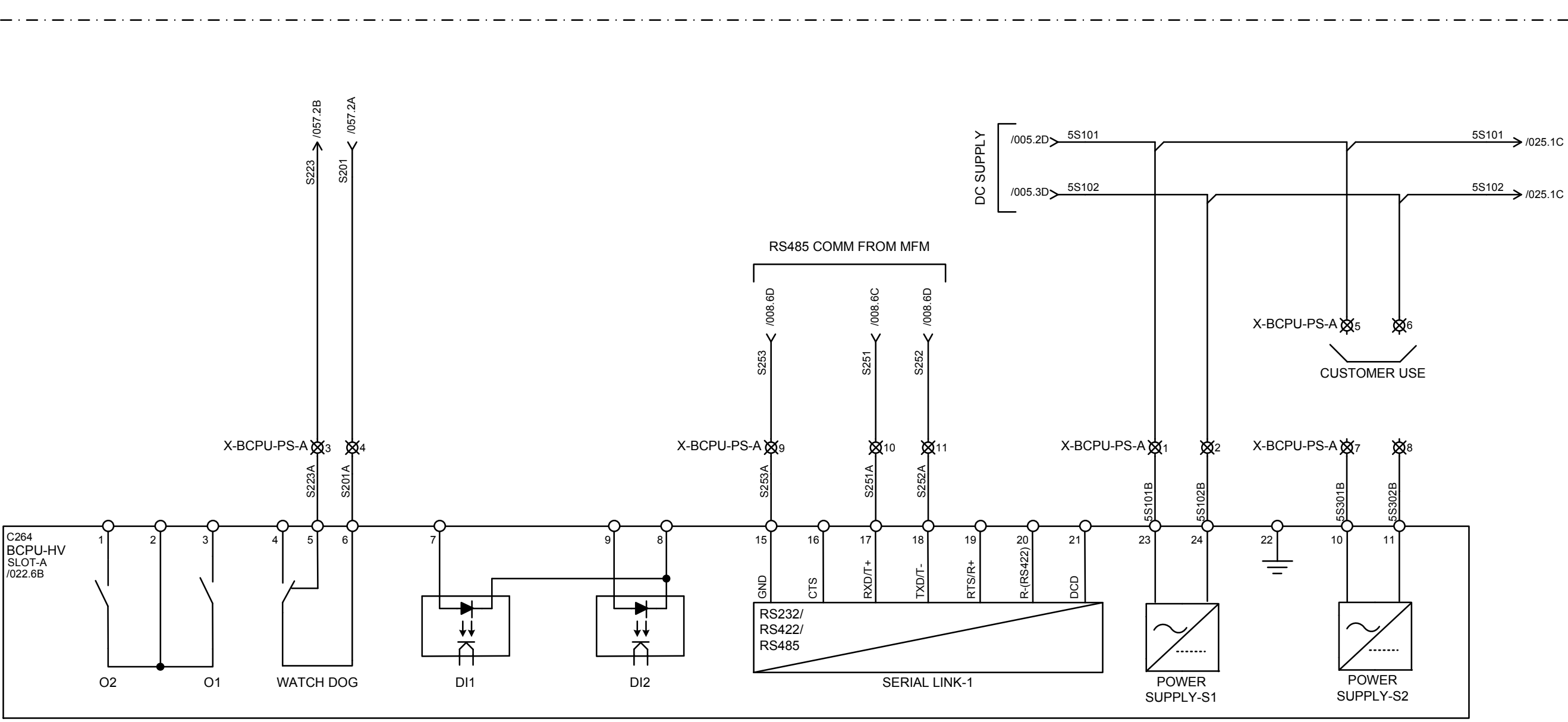
4

5

6

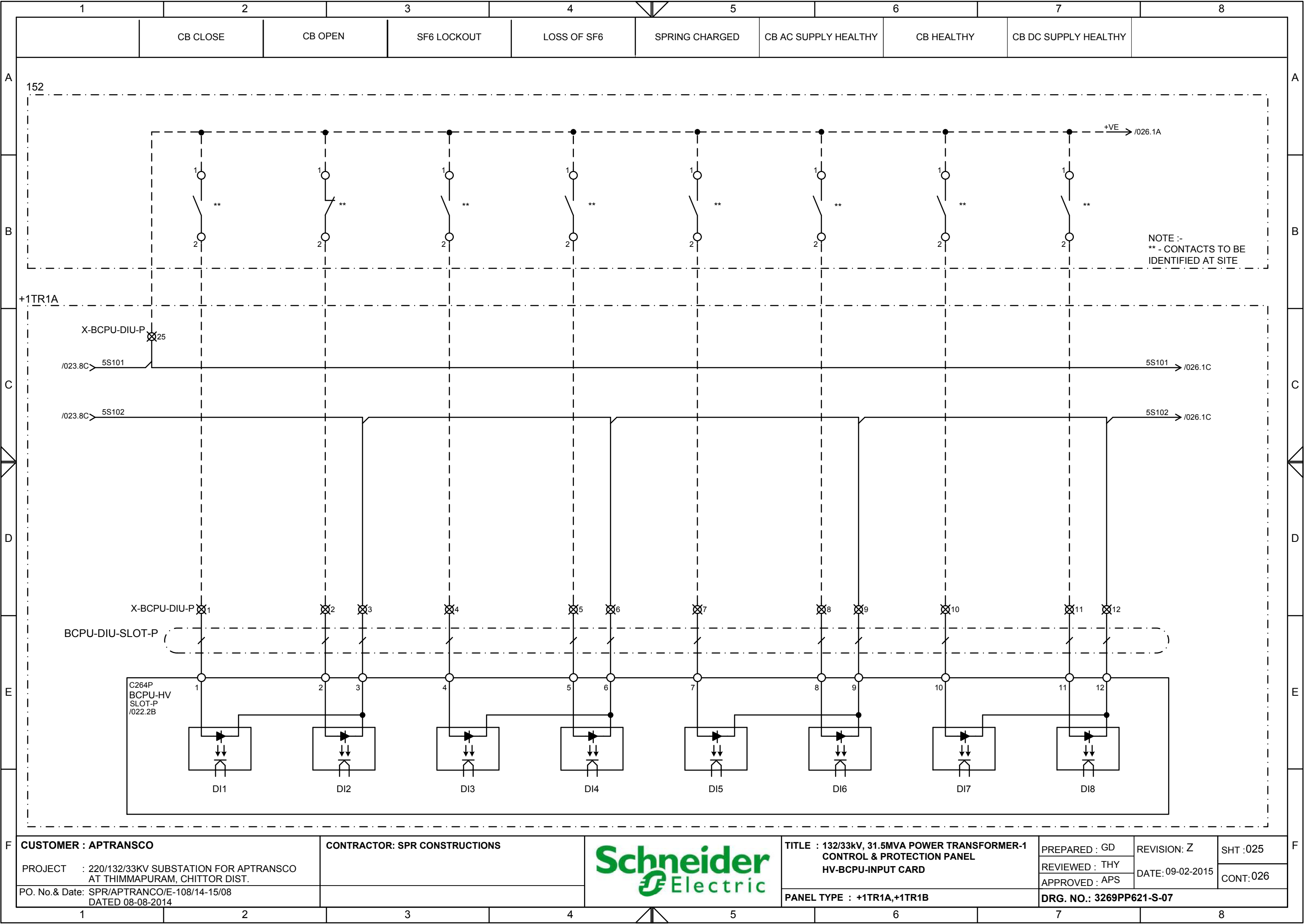
7

8

[illegible]

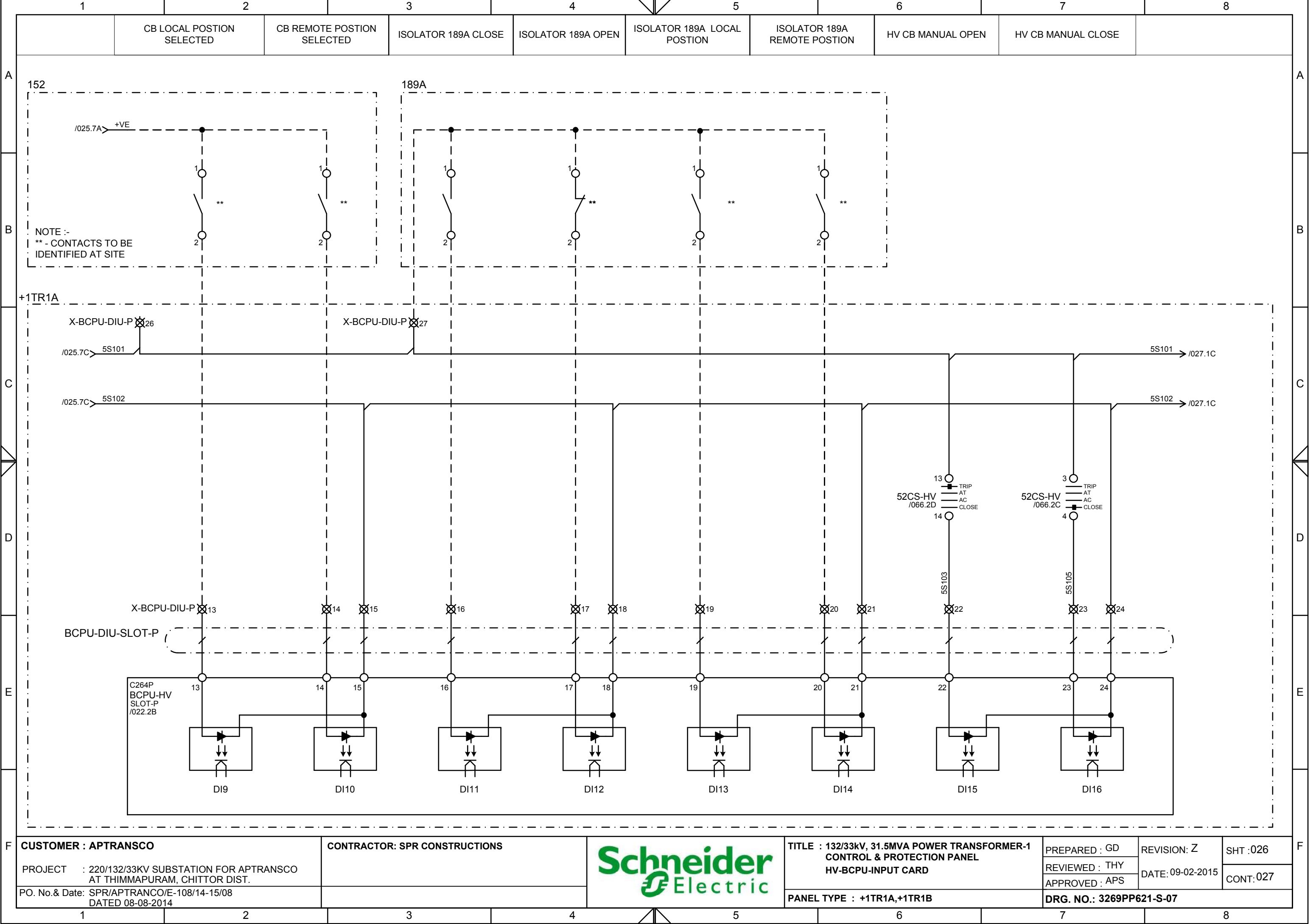
CUSTOMER : APTRANSCO	CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL HV-BCPU POWER SUPPLY UNIT	PREPARED : GD	REVISION: Z	SHT :023
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.				REVIEWED : THY	DATE: 09-02-2015	CONT: 024
PO. No.& Date: SPR/APTRANSCO/E-108/14-15/08 DATED 08-08-2014				APPROVED : APS		
			PANEL TYPE : +1TR1A,+1TR1B	DRG. NO.: 3269PP621-S-07		

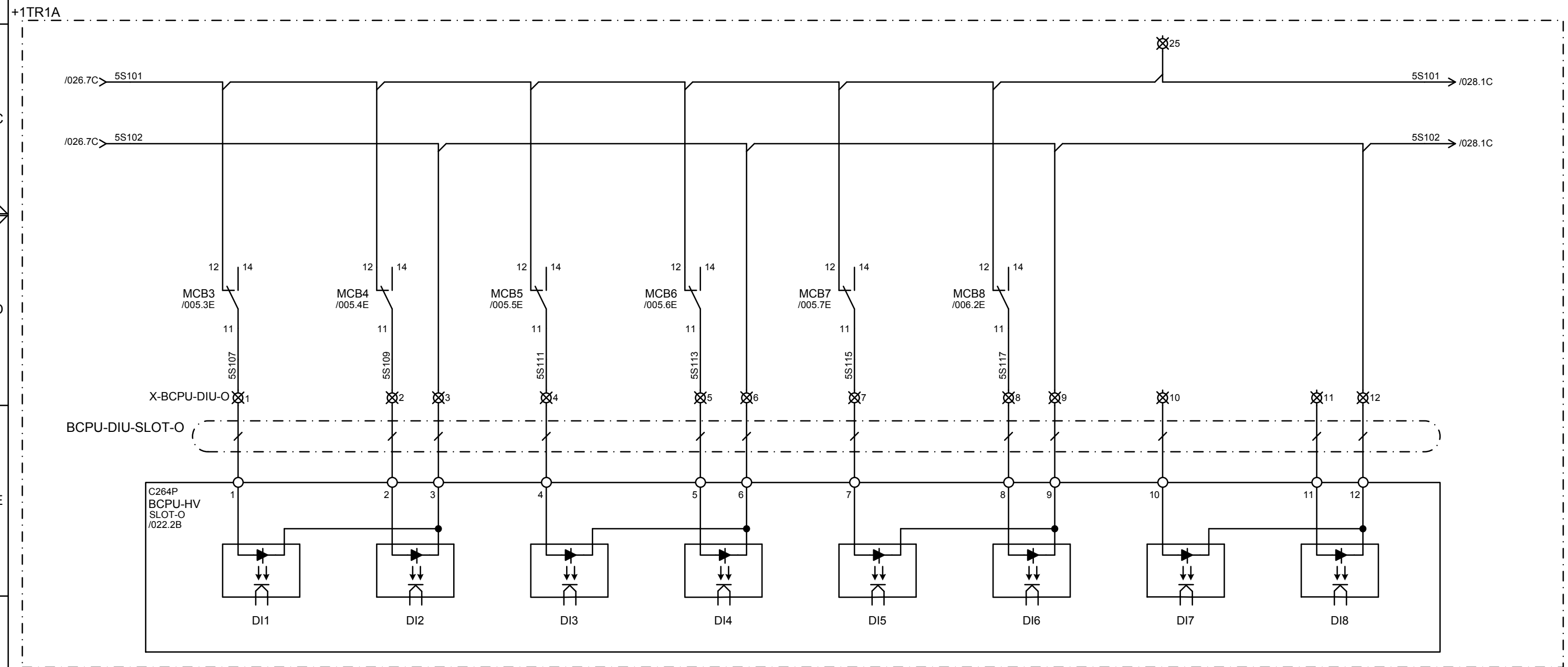
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

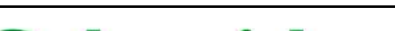


A
B
C
D
E
F

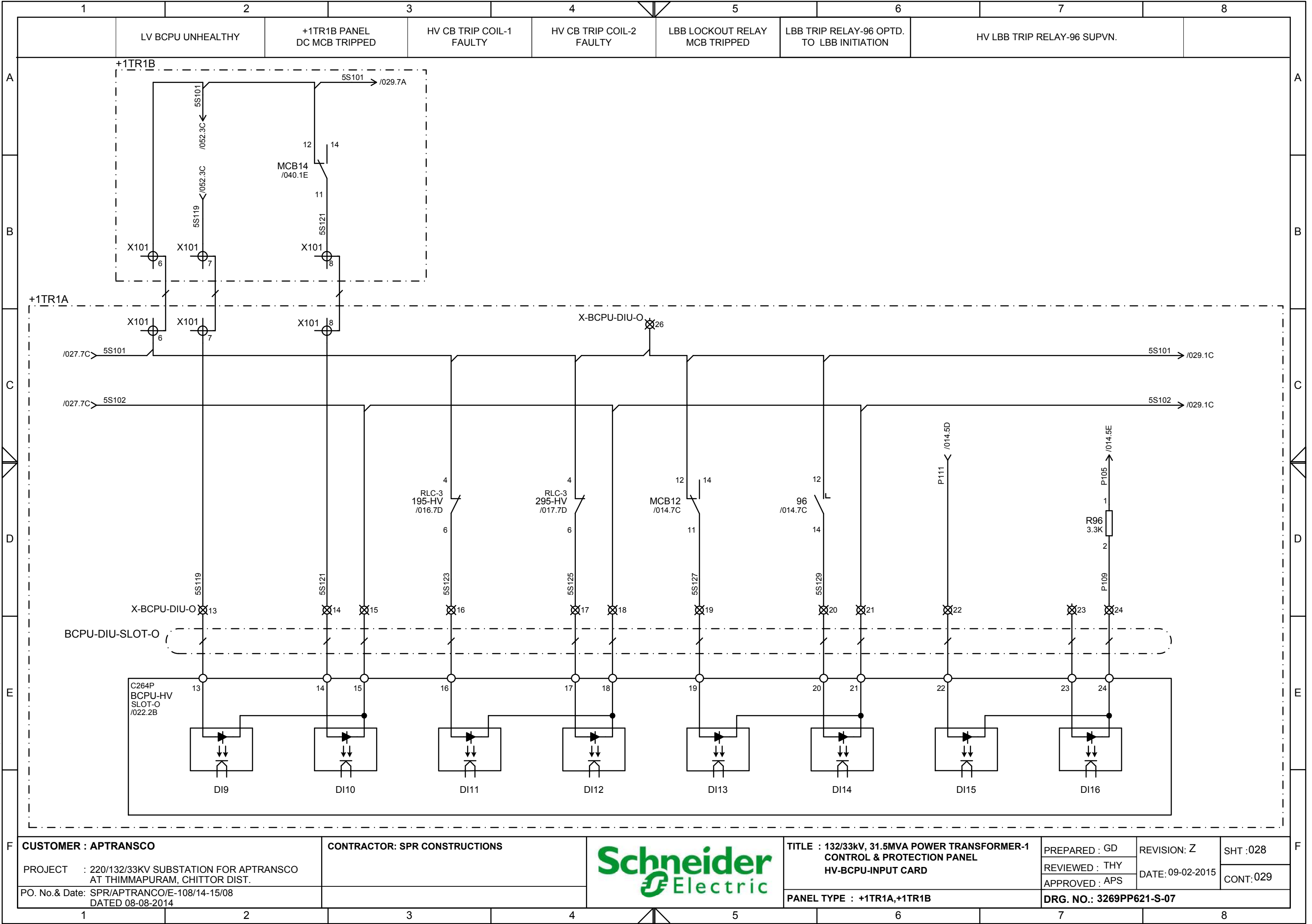
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

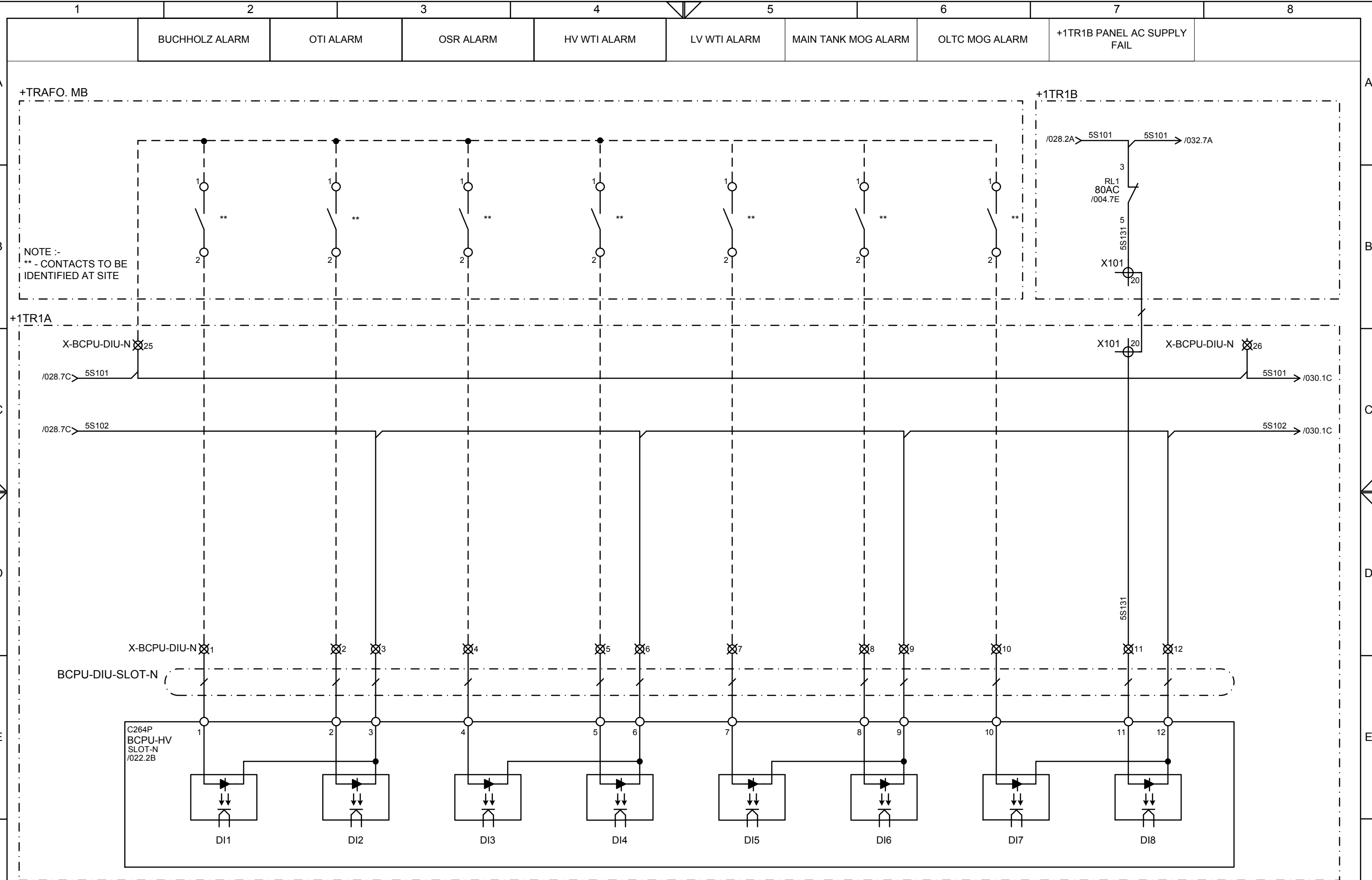




CUSTOMER : APTRANSCO	CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL HV-BCPU-INPUT CARD	PREPARED : GD	REVISION: Z	SHT :027	
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.	REVIEWED : THY			DATE: 09-02-2015			CONT:028
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014	APPROVED : APS						
			PANEL TYPE : +1TR1A,+1TR1B	DRG. NO.: 3269PP621-S-07			

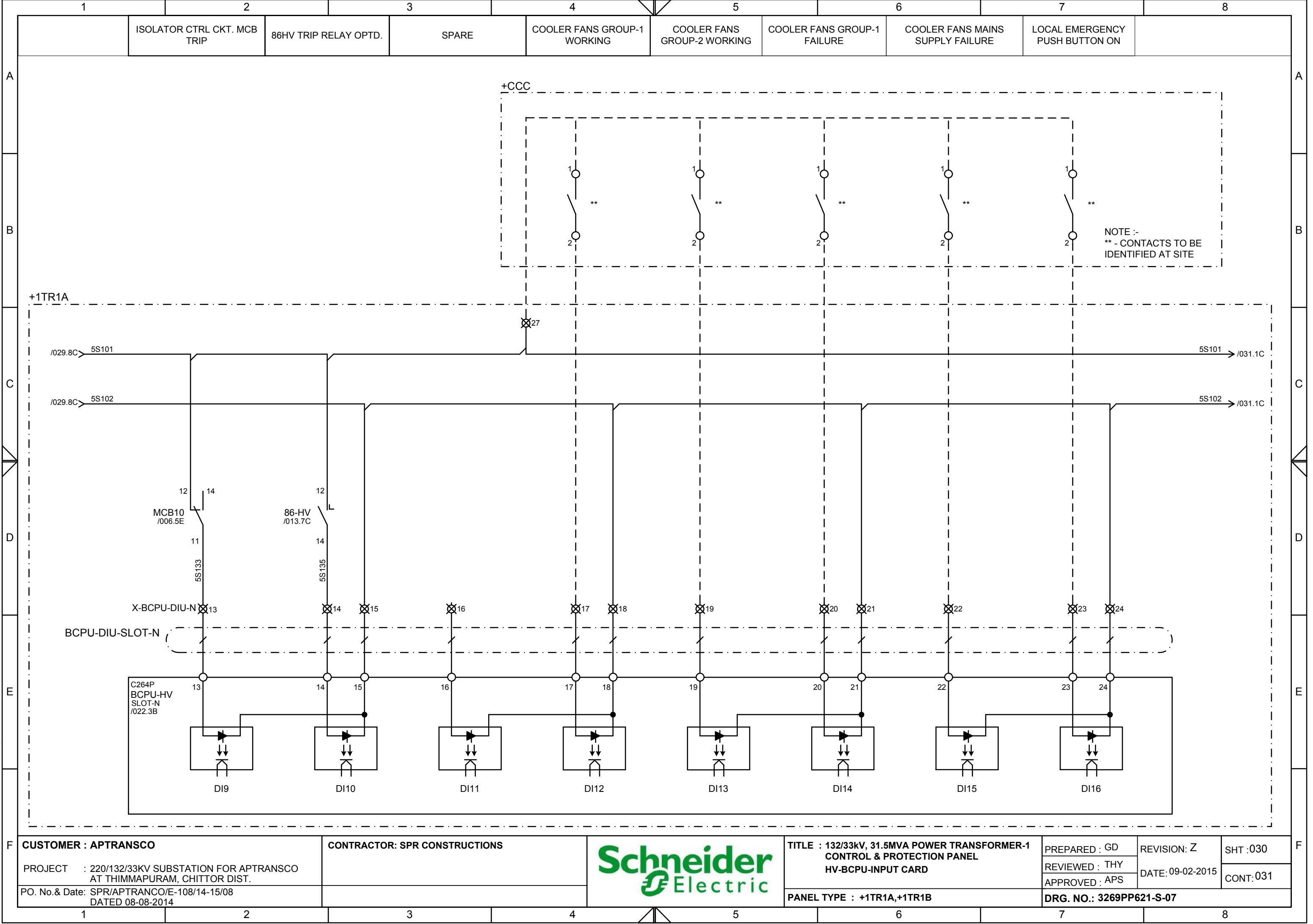
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.





CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL HV-BCPU-INPUT CARD		PREPARED : GD	REVISION: Z	SHT :029
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.		REVIEWED : THY				DATE: 09-02-2015		CONT:030
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014		PANEL TYPE : +1TR1A,+1TR1B		DRG. NO.: 3269PP621-S-07				

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS

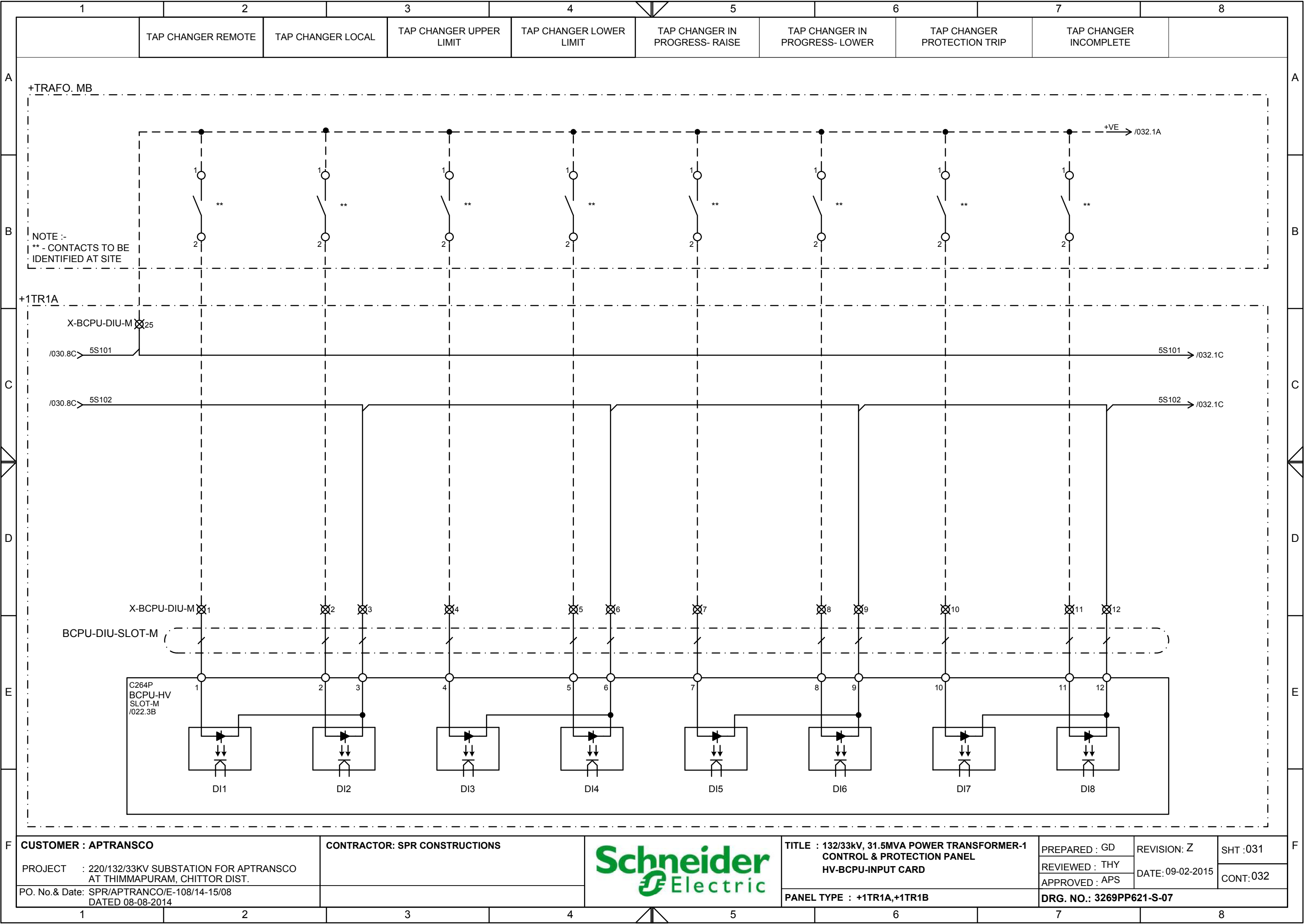


TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL HV-BCPU-INPUT CARD

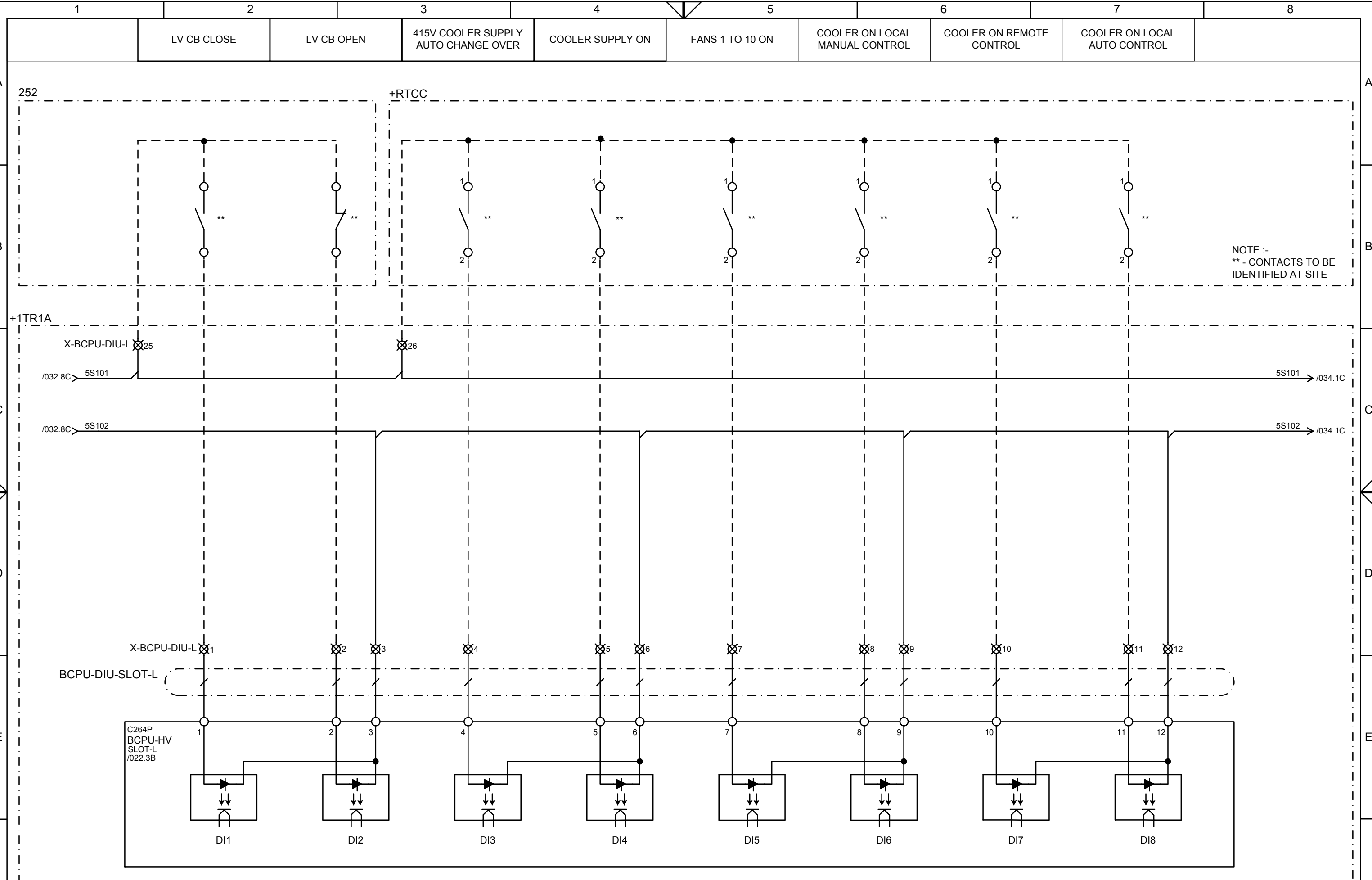
PANEL TYPE : +1TR1A,+1TR1B

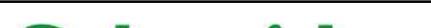
PREPARED : GD	REVISION: Z	SHT :030
REVIEWED : THY	DATE: 09-02-2015	CONT:031
APPROVED : APS	DRG. NO.: 3269PP621-S-07	

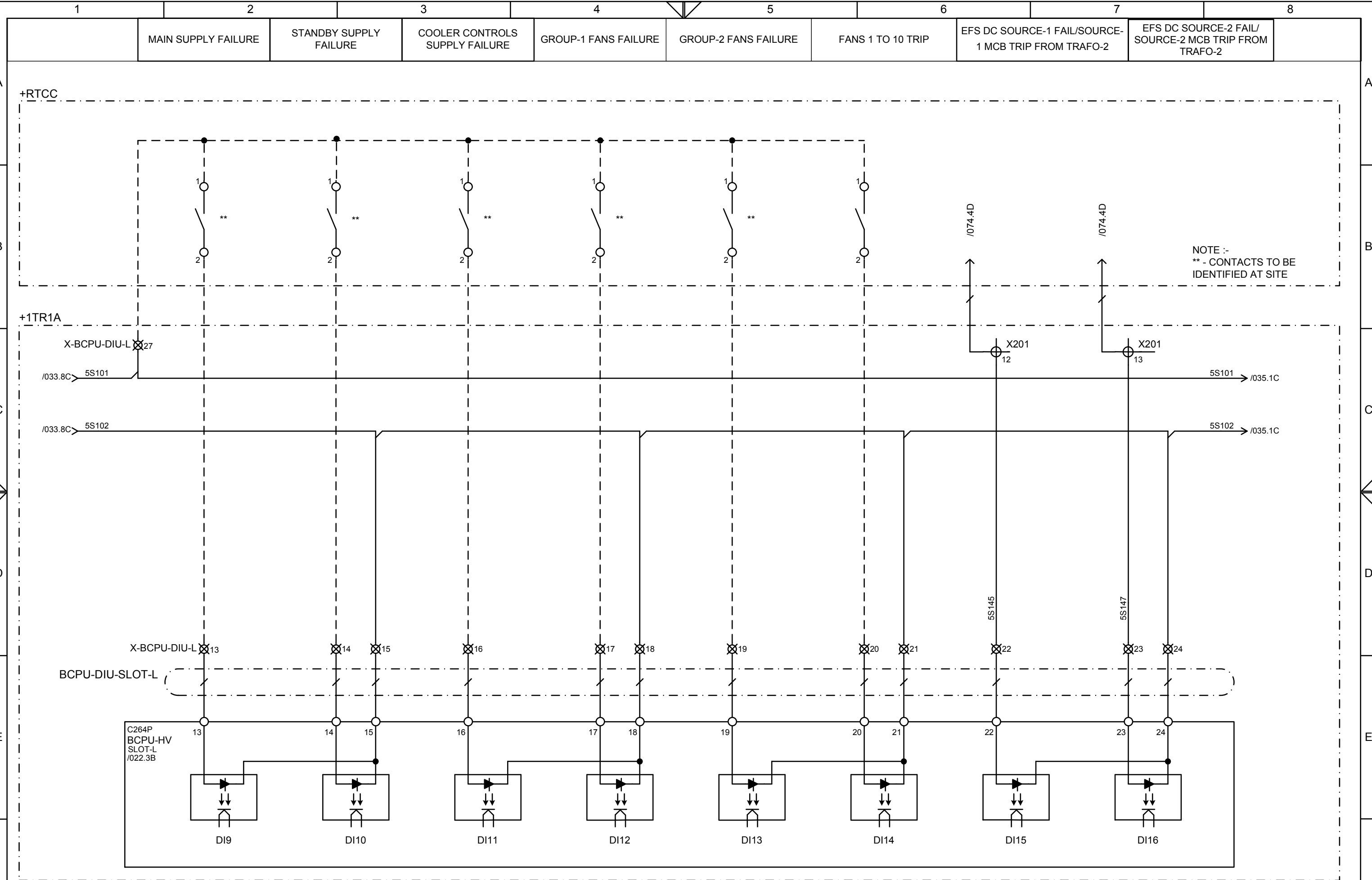
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

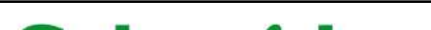


This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

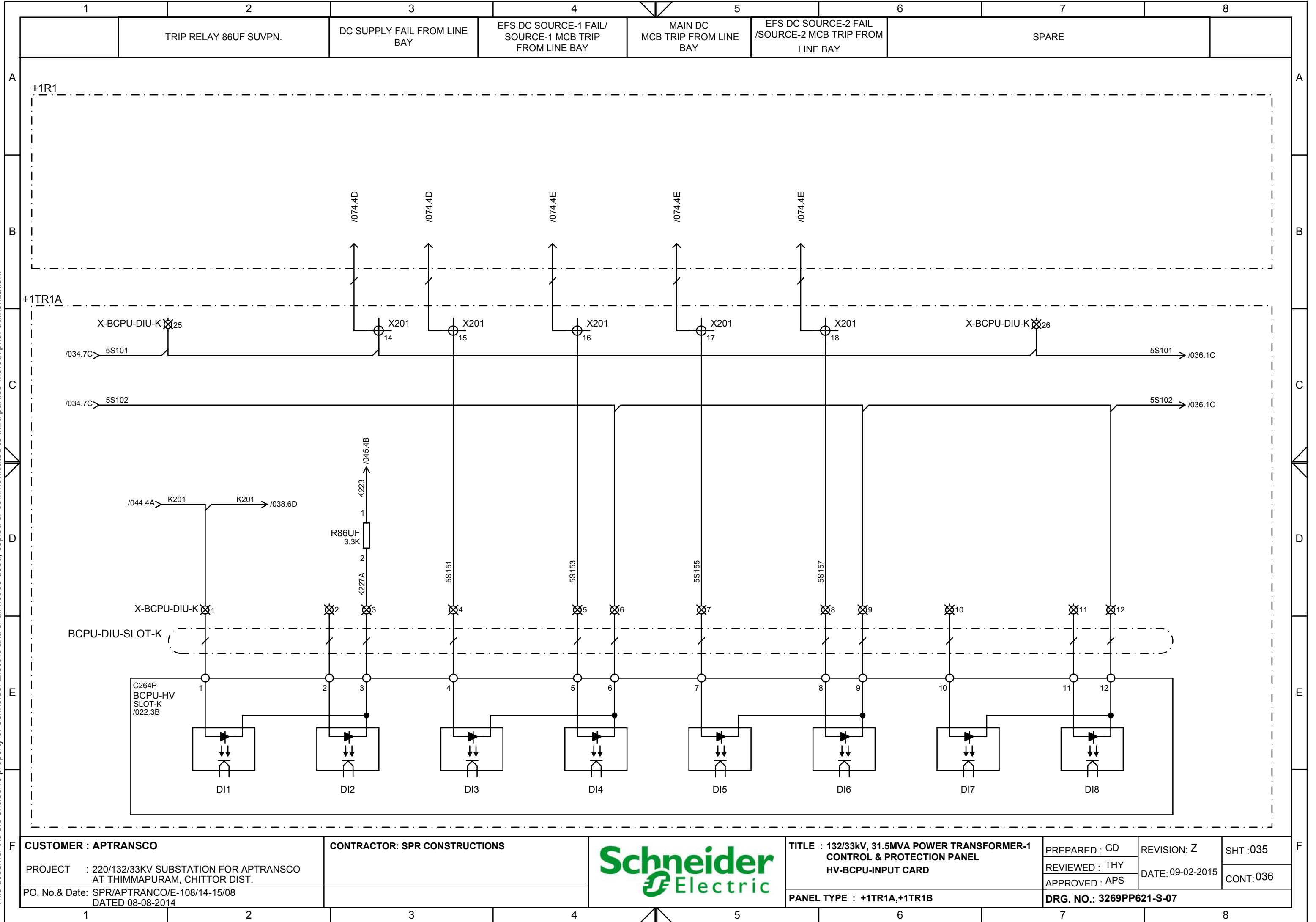


CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL HV-BCPU-INPUT CARD		PREPARED : GD	REVISION: Z	SHT :033
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.		REVIEWED : THY				DATE: 09-02-2015		CONT:034
		APPROVED : APS						
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014				PANEL TYPE : +1TR1A,+1TR1B		DRG. NO.: 3269PP621-S-07		

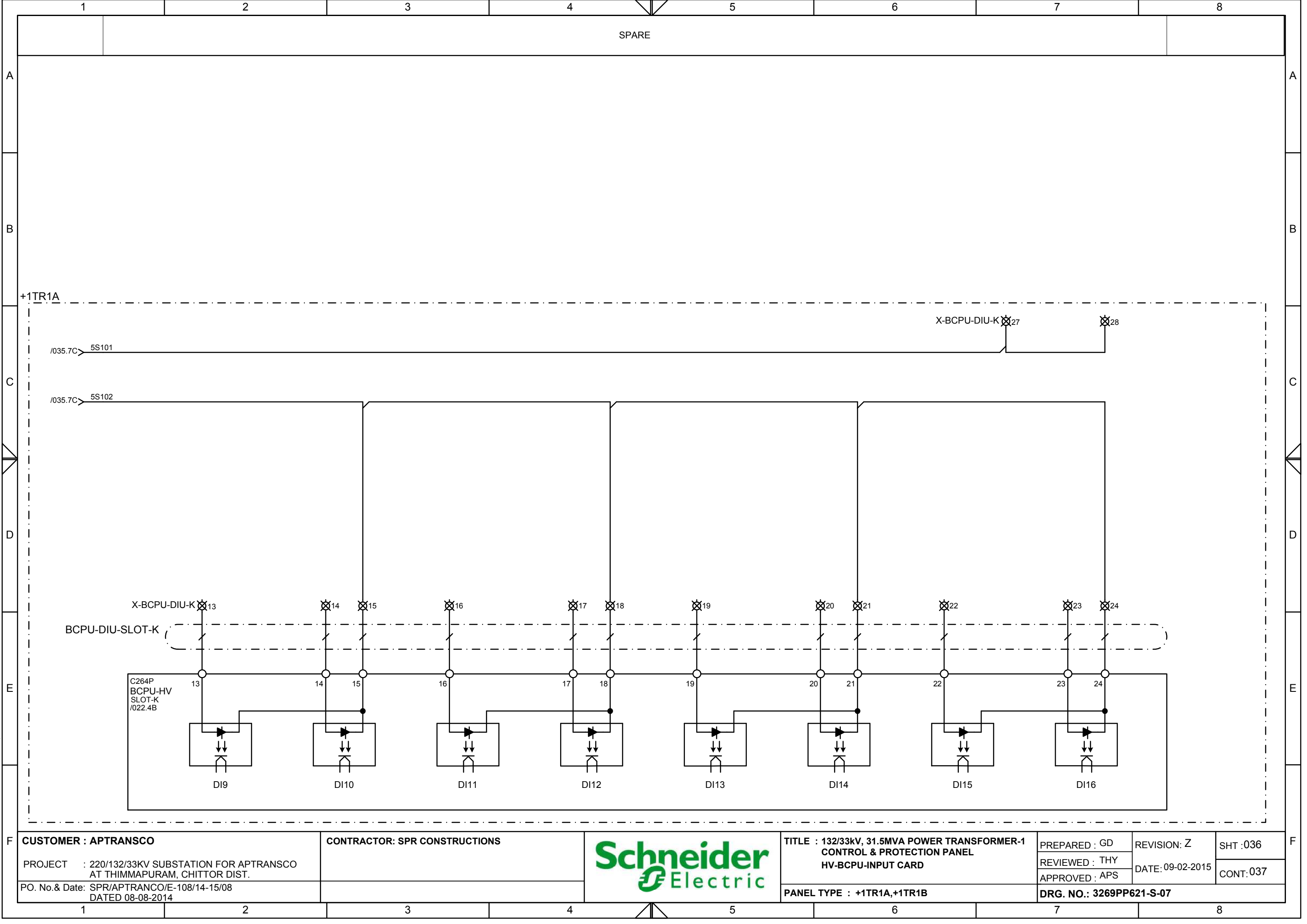


CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL HV-BCPU-INPUT CARD		PREPARED : GD	REVISION: Z	SHT :034
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.		REVIEWED : THY				DATE: 09-02-2015		CONT:035
		APPROVED : APS						
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014				PANEL TYPE : +1TR1A,+1TR1B		DRG. NO.: 3269PP621-S-07		

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

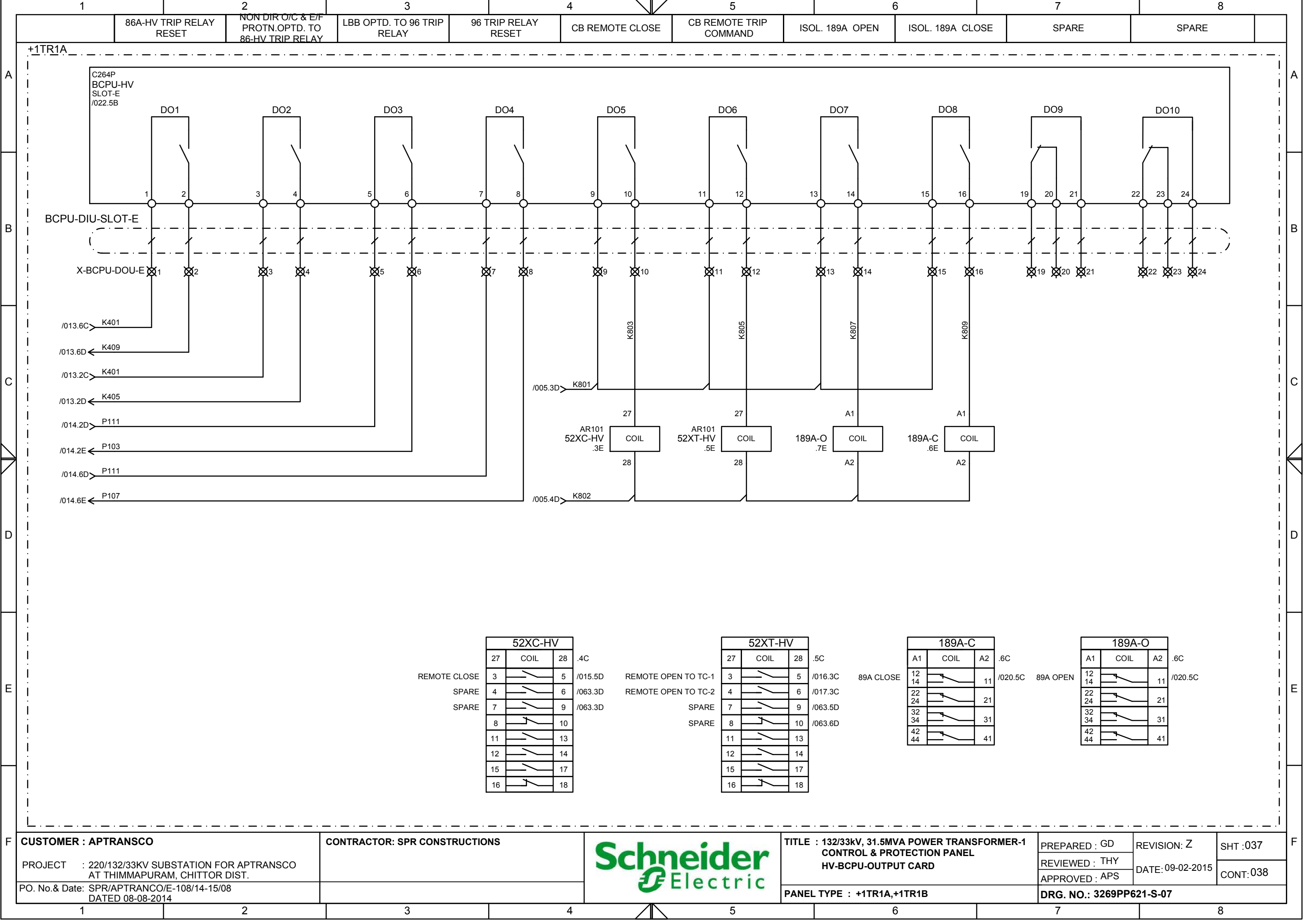


This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



F

1

2

3

4

5

6

7

8

F

CUSTOMER : APTRANSCO

CONTRACTOR: SPR CONSTRUCTIONS

Schneider
Electric

TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
HV-BCPU-OUTPUT CARD

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD

REVIEWED : THY

APPROVED : APS

REVISION: Z

DATE: 09-02-2015

SHT :037

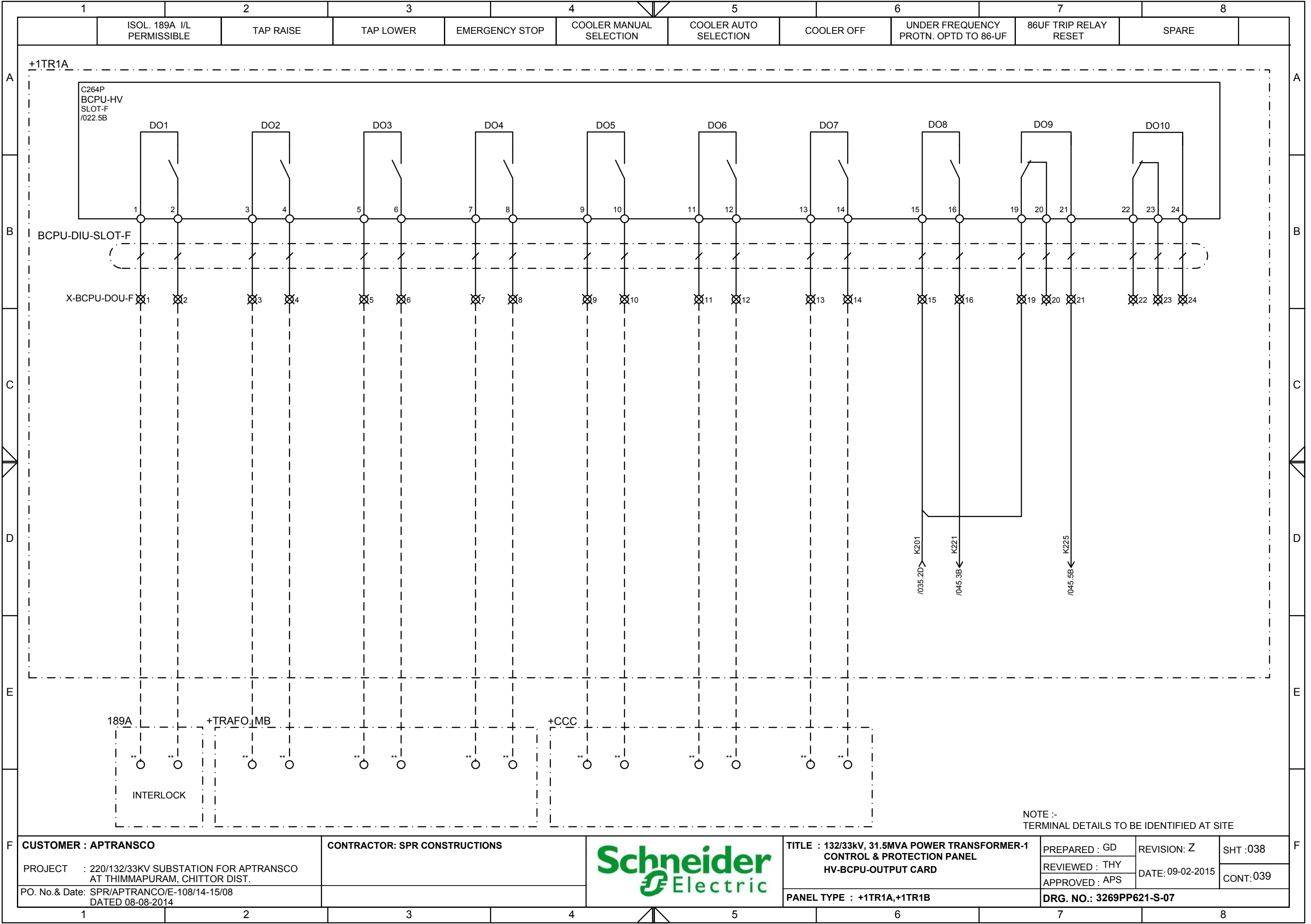
CONT:038

DRG. NO.: 3269PP621-S-07

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No.& Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

DFF

CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS



TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL HV-BCPU-OUTPUT CARD

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD

REVIEWED : THY

APPROVED : APS

REVISION: Z

DATE: 09-02-2015

CONT: 039

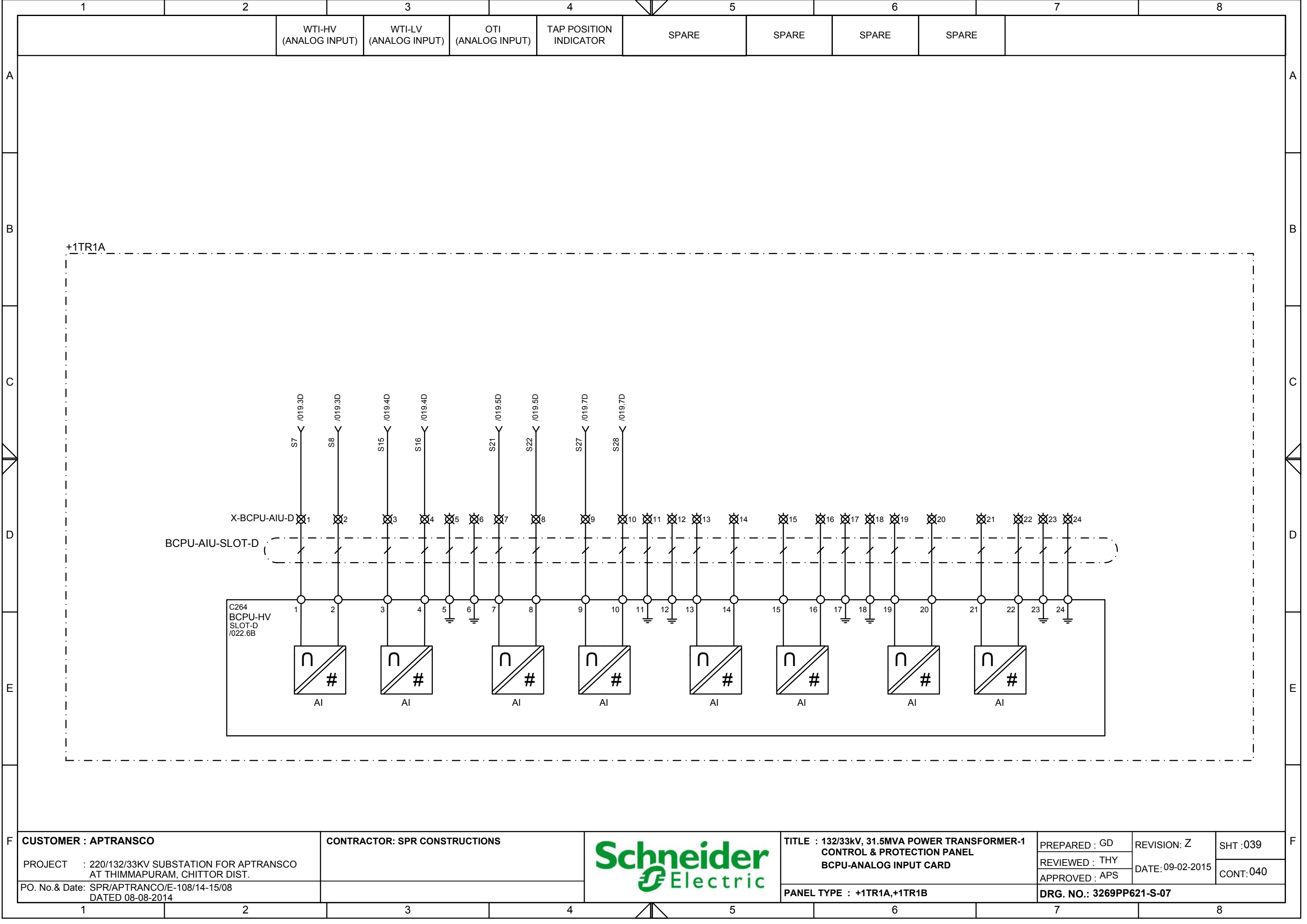
SHT : 038

DRG. NO.: 3269PP621-S-07

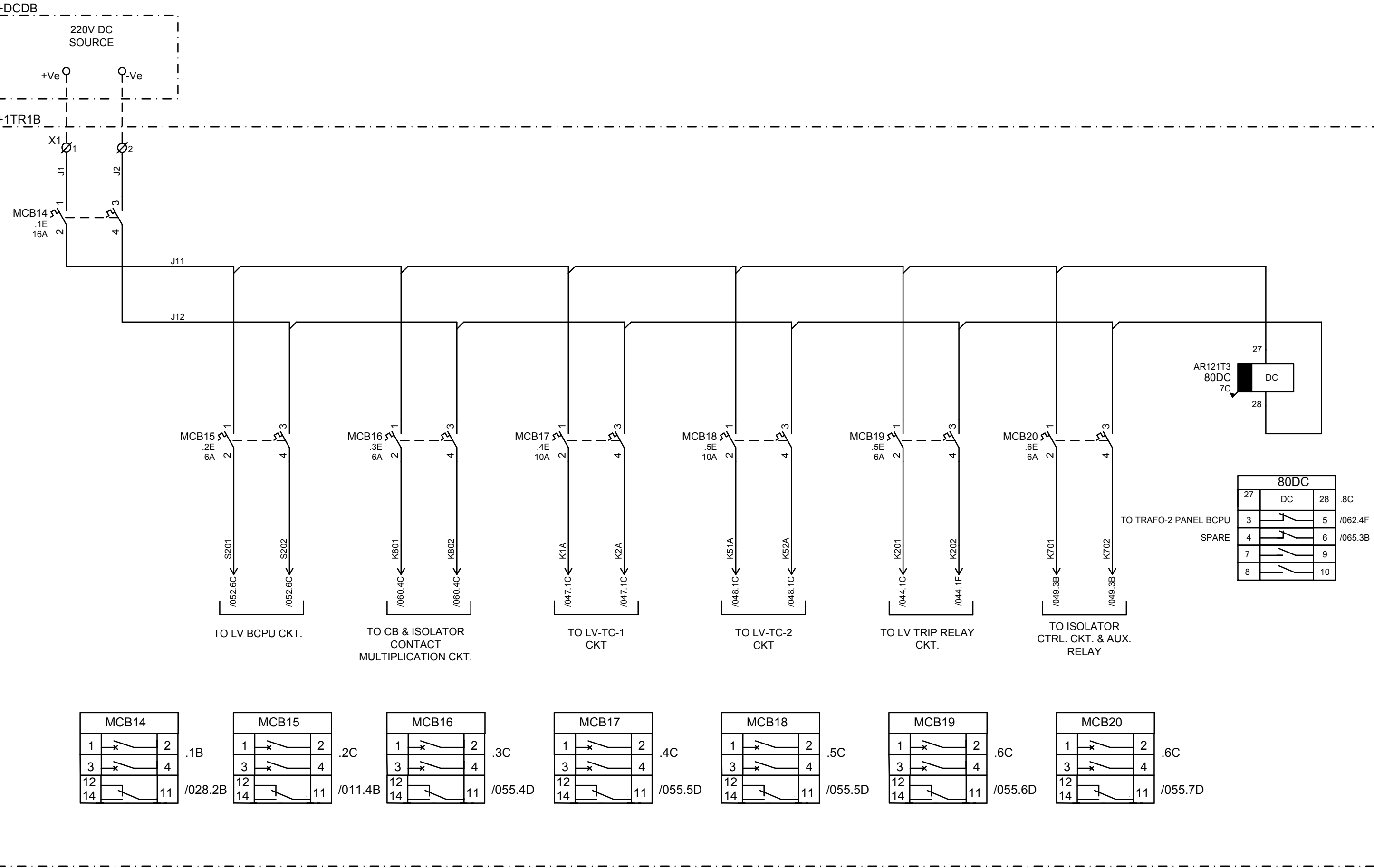
NOTE :-
TERMINAL DETAILS TO BE IDENTIFIED AT SITE

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



80DC			
27	DC	28	.8C
3		5	/O62.4F
4		6	/O65.3B
7		9	
8		10	

MCB14		
1		2
3		4
12		11
14		

MCB15	
1	2
3	4
12	11
14	

MCB16	
1	2
3	4
12	11
14	

MCB17	
1	2
3	4
12	11
14	

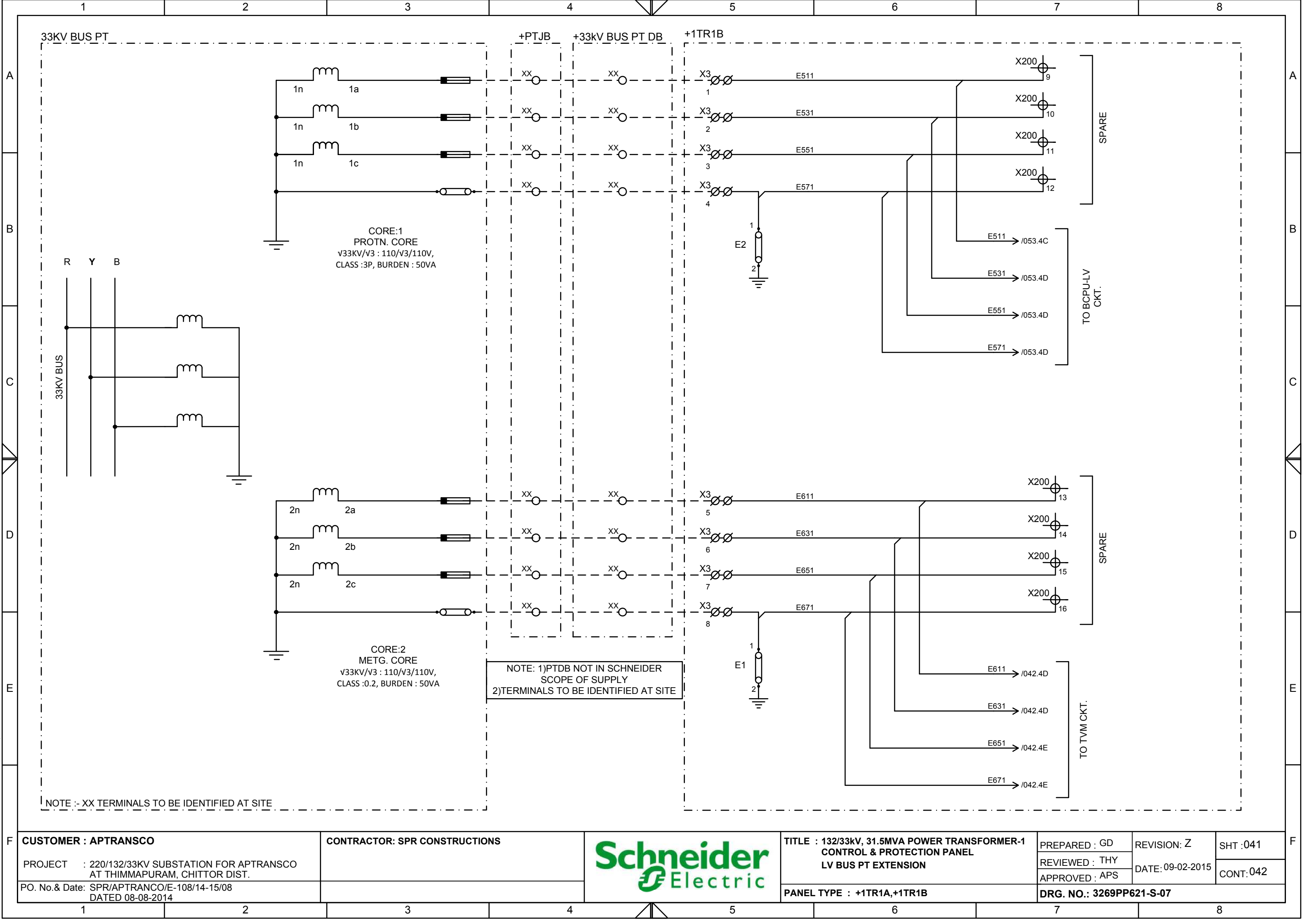
MCB18		
1		2
3		4
12		11
14		

MCB19		
1		2
3		4
12		11
14		

MCB20	
1	2
3	4
12	11
14	

CUSTOMER : APTRANSCO	CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL LV SIDE-DC DISTRIBUTION CKT.	PREPARED : GD	REVISION: Z	SHT :040
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.				REVIEWED : THY	DATE: 09-02-2015	CONT: 041
PO. No.& Date: SPR/APTRANSCO/E-108/14-15/08 DATED 08-08-2014				APPROVED : APS		
			PANEL TYPE : +1TR1A,+1TR1B	DRG. NO.: 3269PP621-S-07		

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



F

CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS



**TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
LV BUS PT EXTENSION**

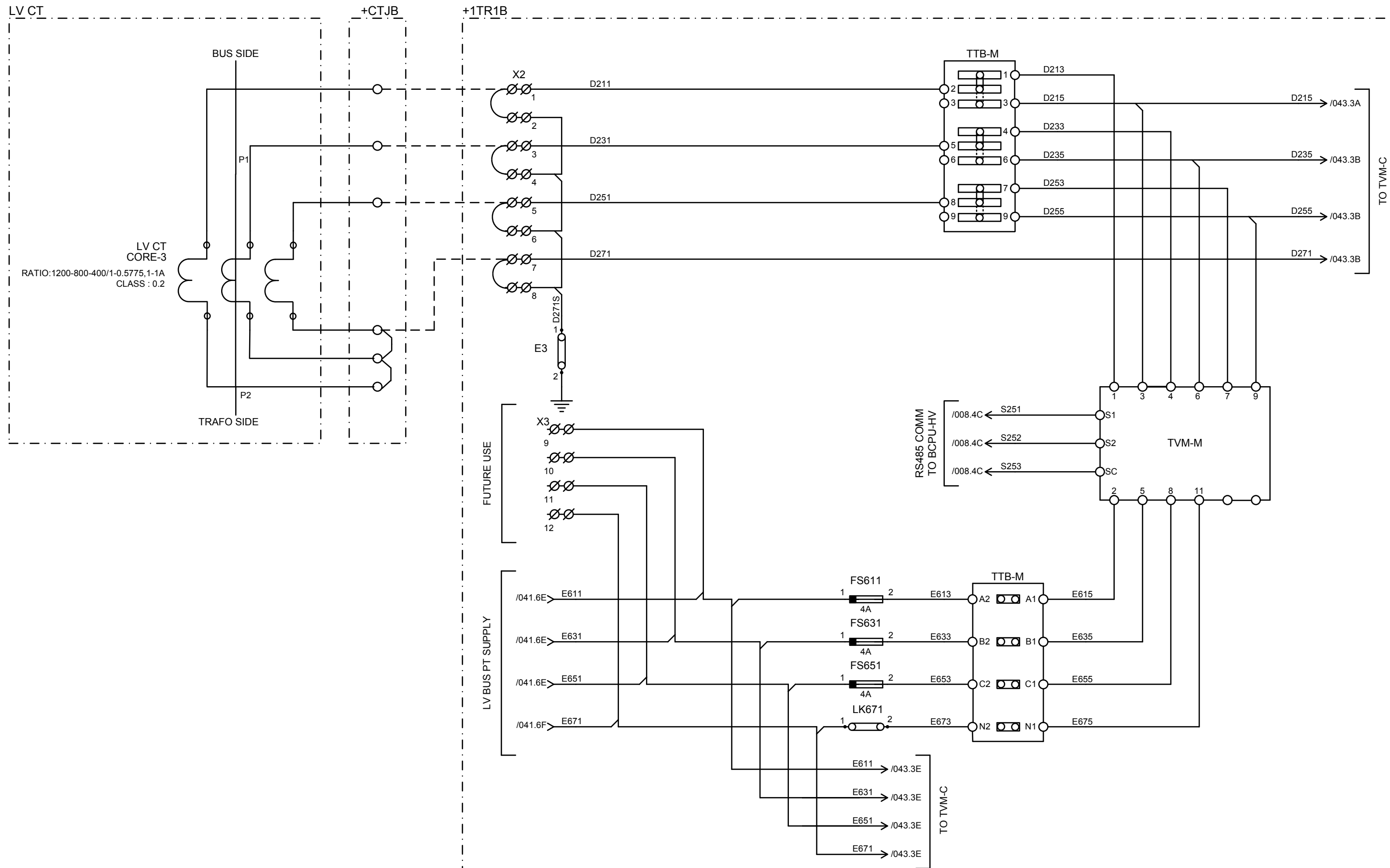
PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD	REVISION: Z	SHT :041
REVIEWED : THY	DATE: 09-02-2015	CONT:042
APPROVED : APS		

DRG. NO.: 3269PP621-S-07

F

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS

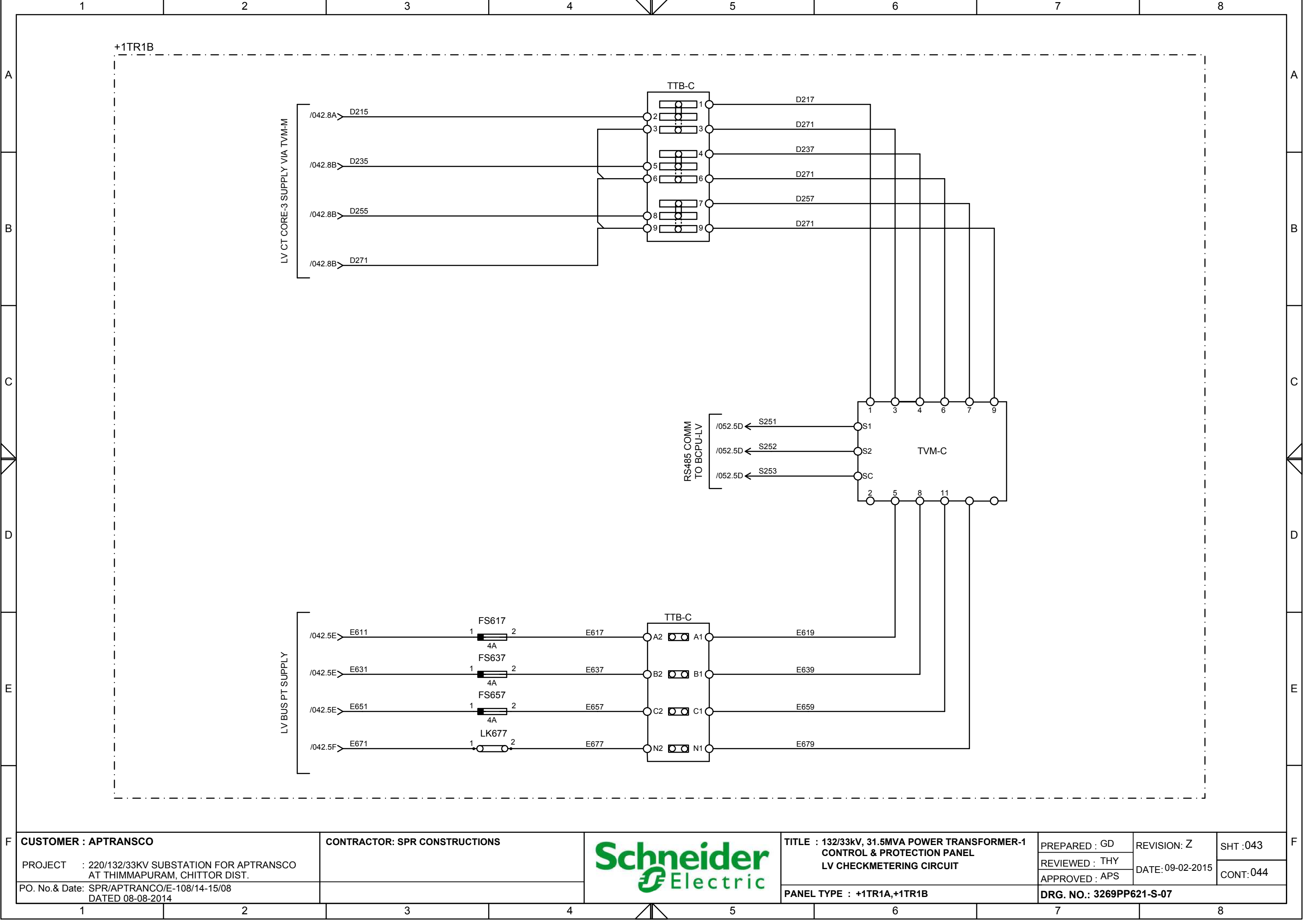


**TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
LV MAIN METERING CIRCUIT**

PANEL TYPE : +1TR1A,+1TR1B

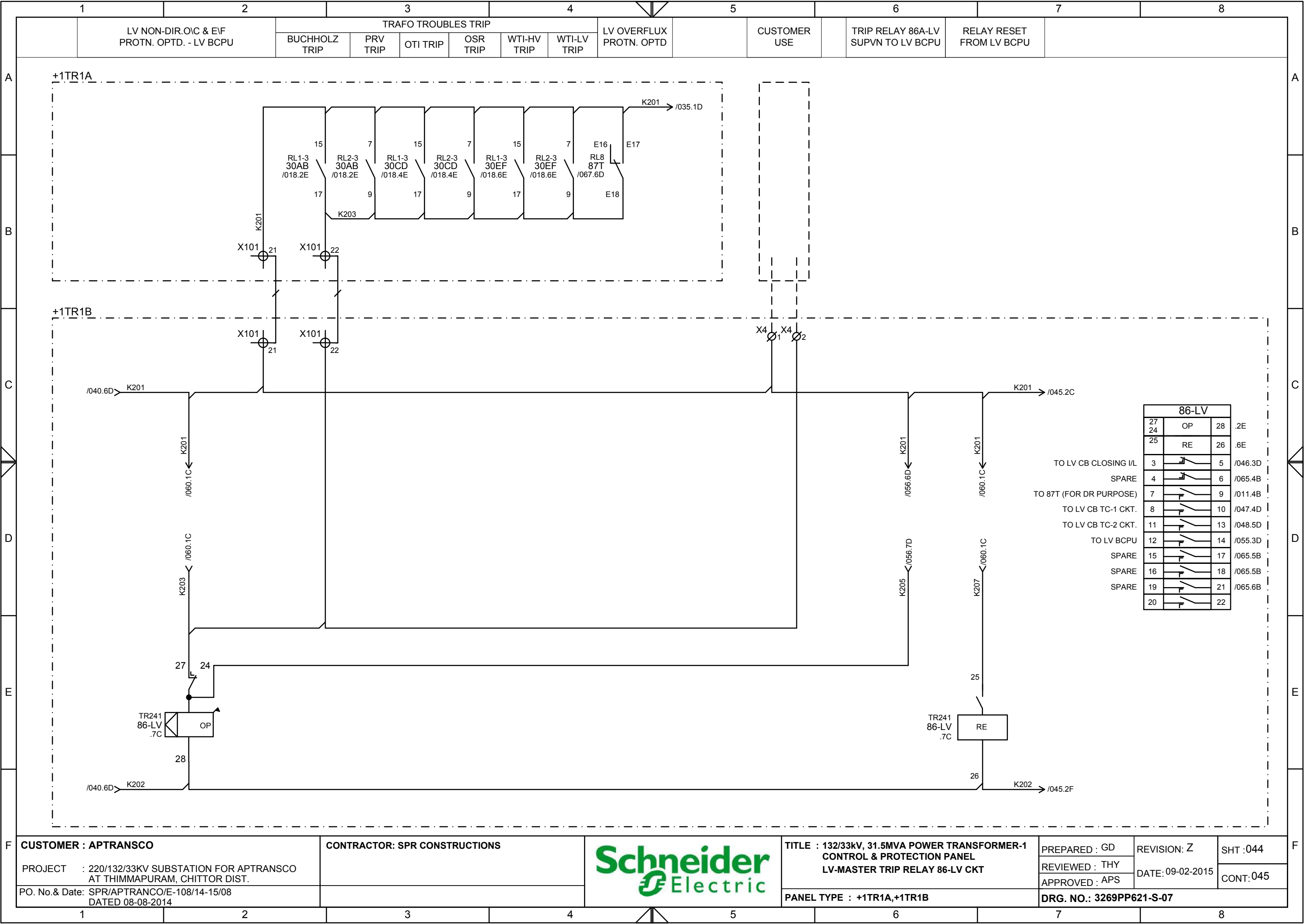
PREPARED : GD	REVISION: Z	SHT :042
REVIEWED : THY	DATE: 09-02-2015	CONT:043
APPROVED : APS		
DRG. NO.: 3269PP621-S-07		

CUSTOMER : APTRANSCO PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST. PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014		CONTRACTOR: SPR CONSTRUCTIONS				TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL LV CHECKMETERING CIRCUIT PANEL TYPE : +1TR1A,+1TR1B		PREPARED : GD REVIEWED : THY APPROVED : APS		REVISION: Z DATE: 09-02-2015		SHT :043 CONT:044	
DRG. NO.: 3269PP621-S-07													



+1TR1B											

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



1 2 3 4 5 6 7 8

UNDER FREQUENCY PROTN. OPTD. - HV BCPU

CUSTOMER USE

U/F TRIP RELAY 86UF SUPVN TO HV BCPU

RELAY RESET FROM HV BCPU

A

B

C

D

E

F

+1TR1A

/038.6D K221

X101

23

+1TR1A

/035.3D K223

X101

24

+1TR1A

/038.7D K225

X101

25

+1TR1B

X101

23

X4

3

X4

4

K221

K223

K225

/044.7C K201

/044.7F K202

TR241 86-UF .7C

OP

27

24

28

TR241 86-UF .7C

RE

55

56

86-UF

27	OP	28	.3E
24			
55	RE	56	.5E
SPARE	3	5	/065.6C
SPARE	4	6	/065.6C
SPARE	7	9	/065.7C
SPARE	8	10	/065.7C
TRIP RELAY OPTD. TO HV BCPU	11	13	/032.7B
SPARE	12	14	/065.1D
SPARE	15	17	/065.2D
SPARE	16	18	/065.2D
SPARE	19	21	/065.3D
SPARE	20	22	/065.3D
SPARE	31	33	/065.4D
SPARE	32	34	/065.4D
SPARE	35	37	/065.5D
SPARE	36	38	/065.5D
SPARE	39	41	/065.6D
SPARE	40	42	/065.6D
SPARE	43	45	/065.7D
SPARE	44	46	/065.8D
SPARE	47	49	/065.3E
SPARE	48	50	/065.3E

CUSTOMER : APTRANSCO

CONTRACTOR: SPR CONSTRUCTIONS

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.

PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014

Schneider Electric

TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL UNDER FREQUENCY TRIP RELAY(86-UF)

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD

REVIEWED : THY

APPROVED : APS

REVISION: Z

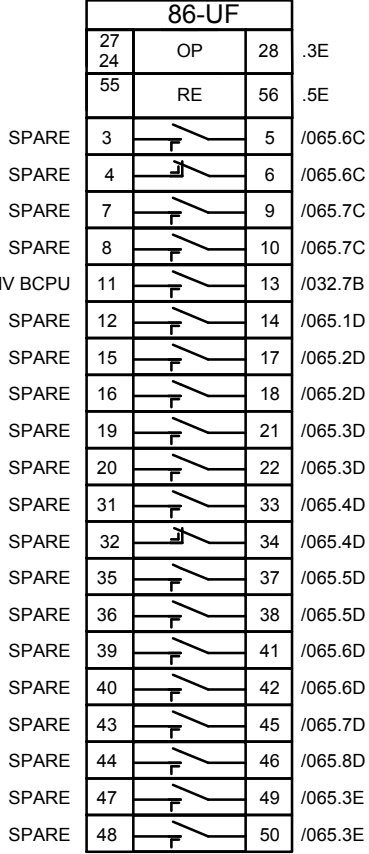
DATE: 09-02-2015

SHT :045

CONT:046

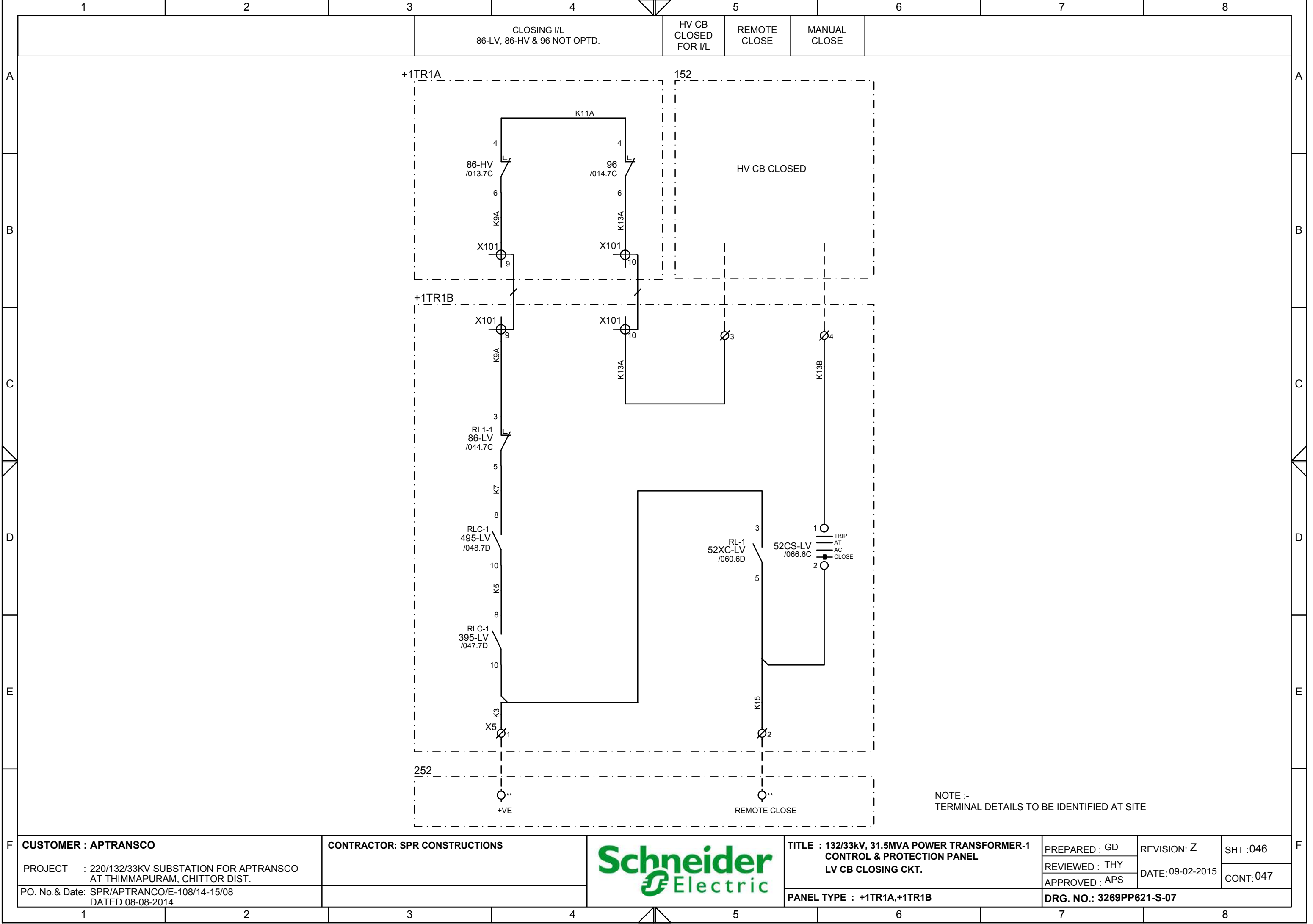
DRG. NO.: 3269PP621-S-07

1 2 3 4 5 6 7 8



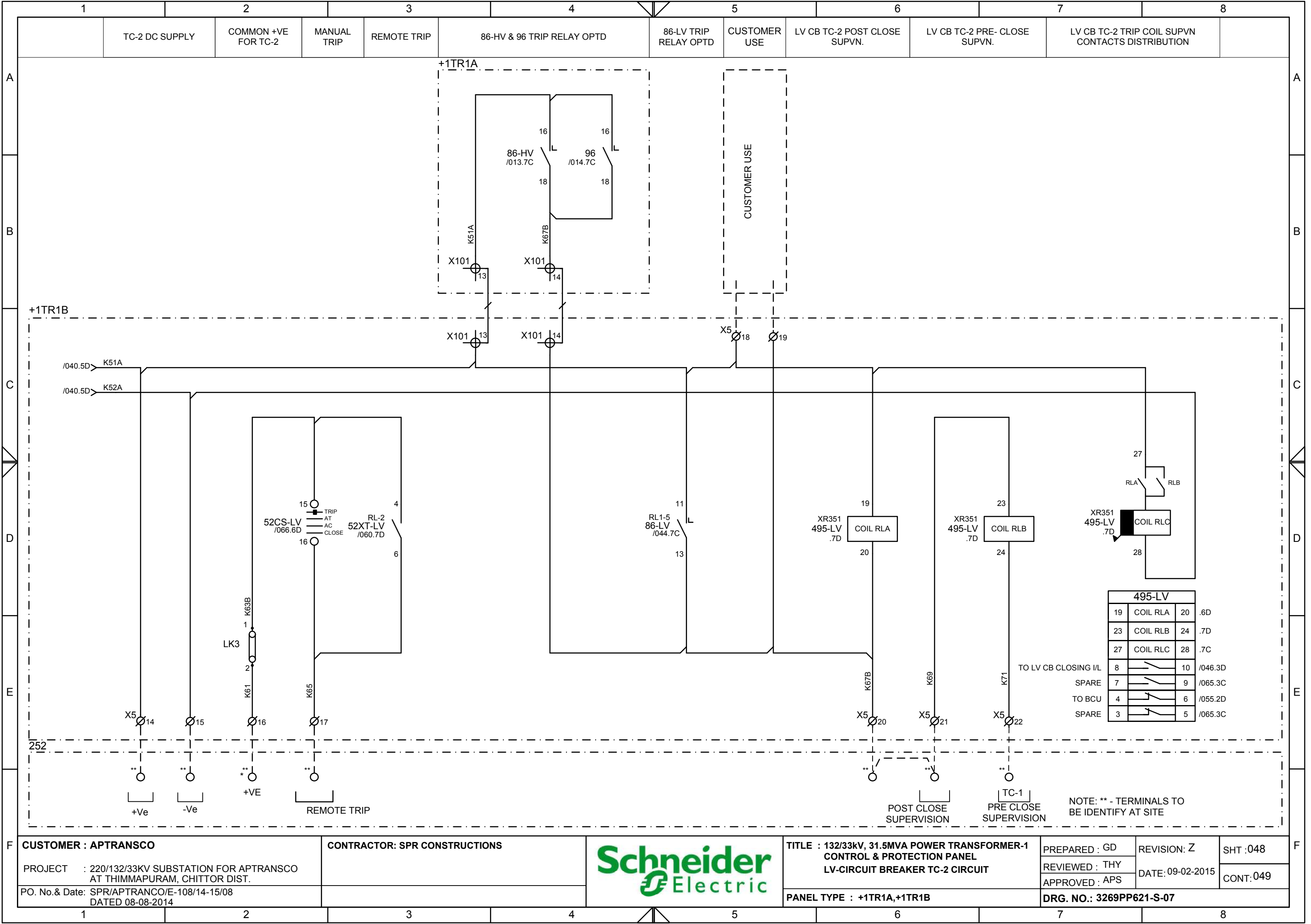
Schneider
Electric

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

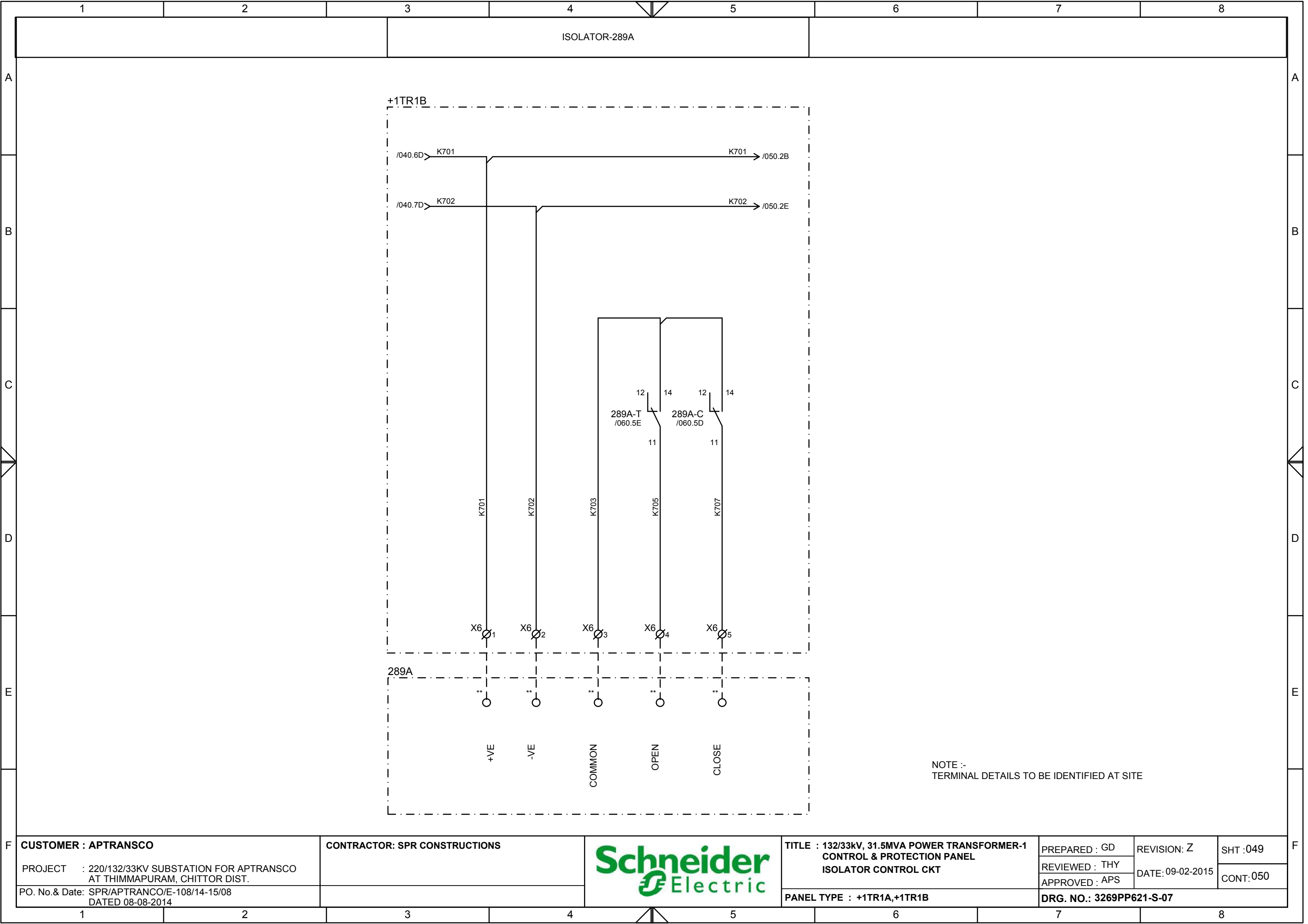


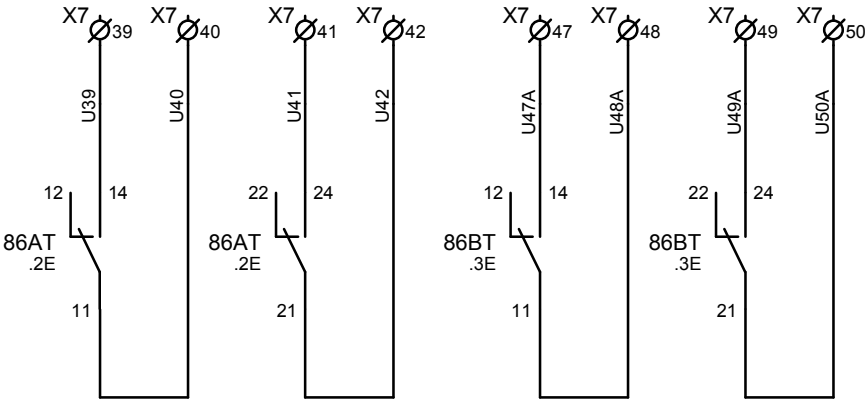
A
B
C
D
E
F

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



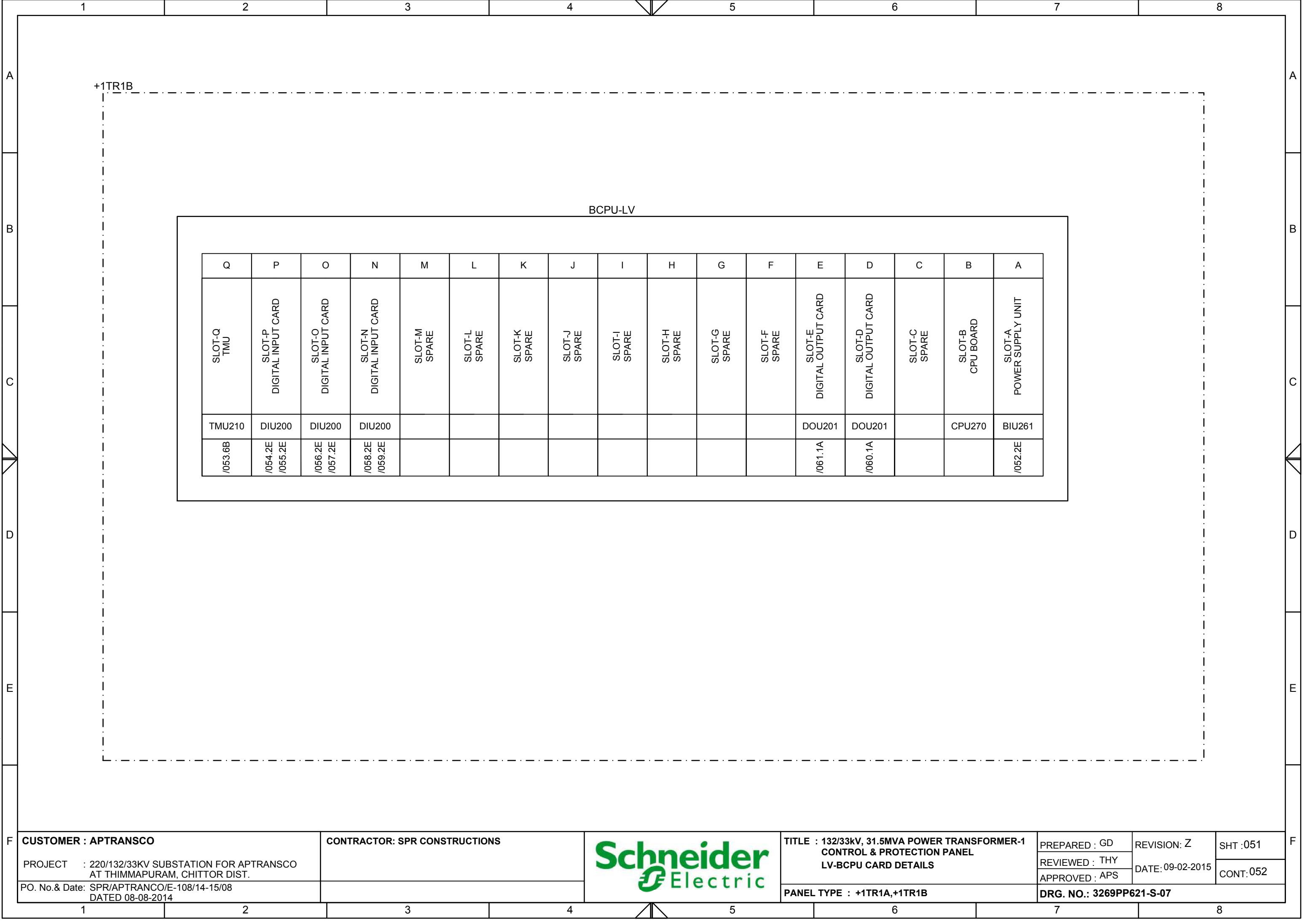
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.





86BT			
A1	COIL	A2	
12 14		11	.4D .6C
22 24		21	.7C
32 34		31	
42 44		41	

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS

Schneider

Electric

TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
LV-BCPU CARD DETAILS

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD

REVIEWED : THY

APPROVED : APS

REVISION: Z

DATE: 09-02-2015

SHT : 051

CONT: 052

DRG. NO.: 3269PP621-S-07

1

2

3

4

5

6

7

8

A

B

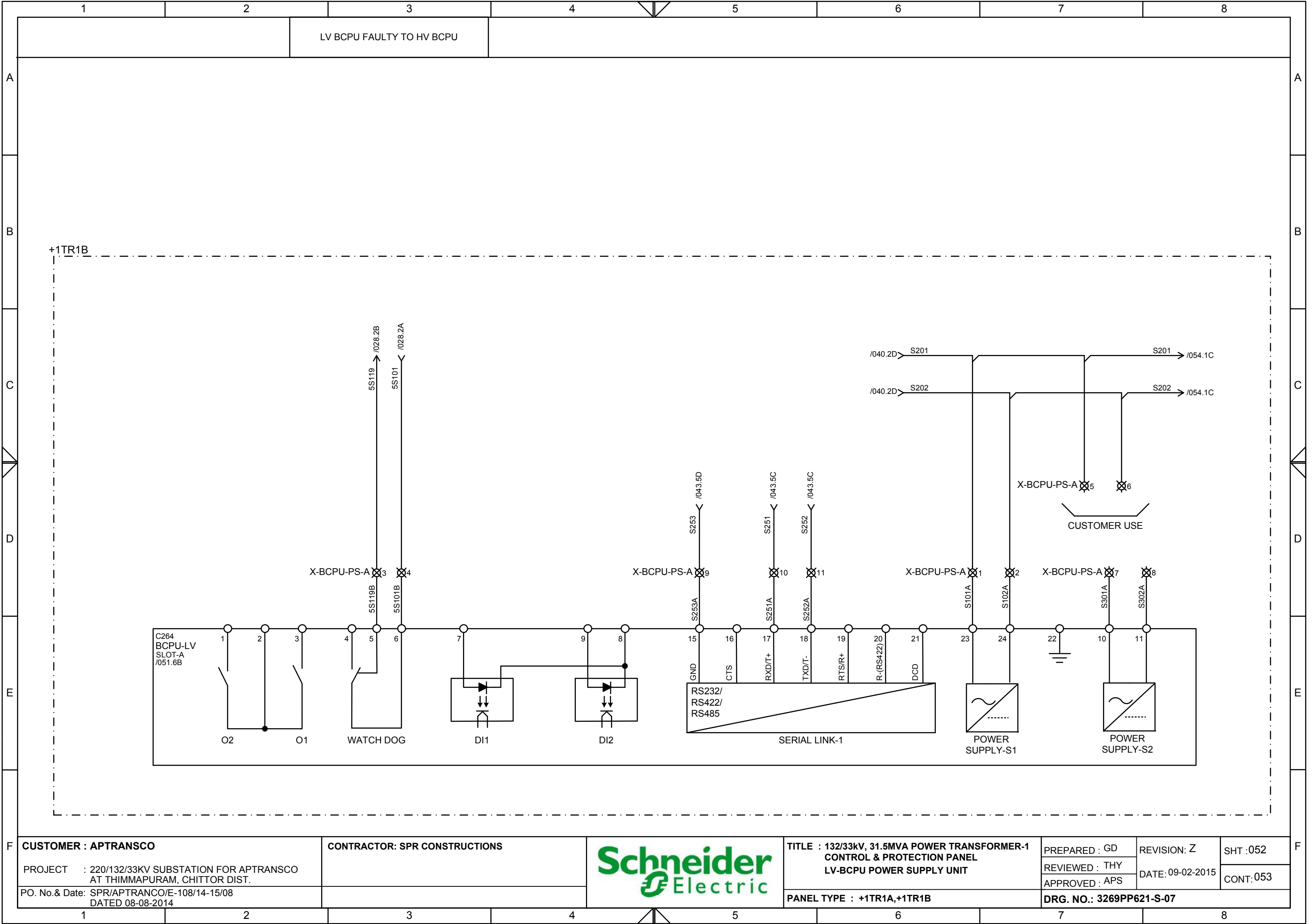
C

D

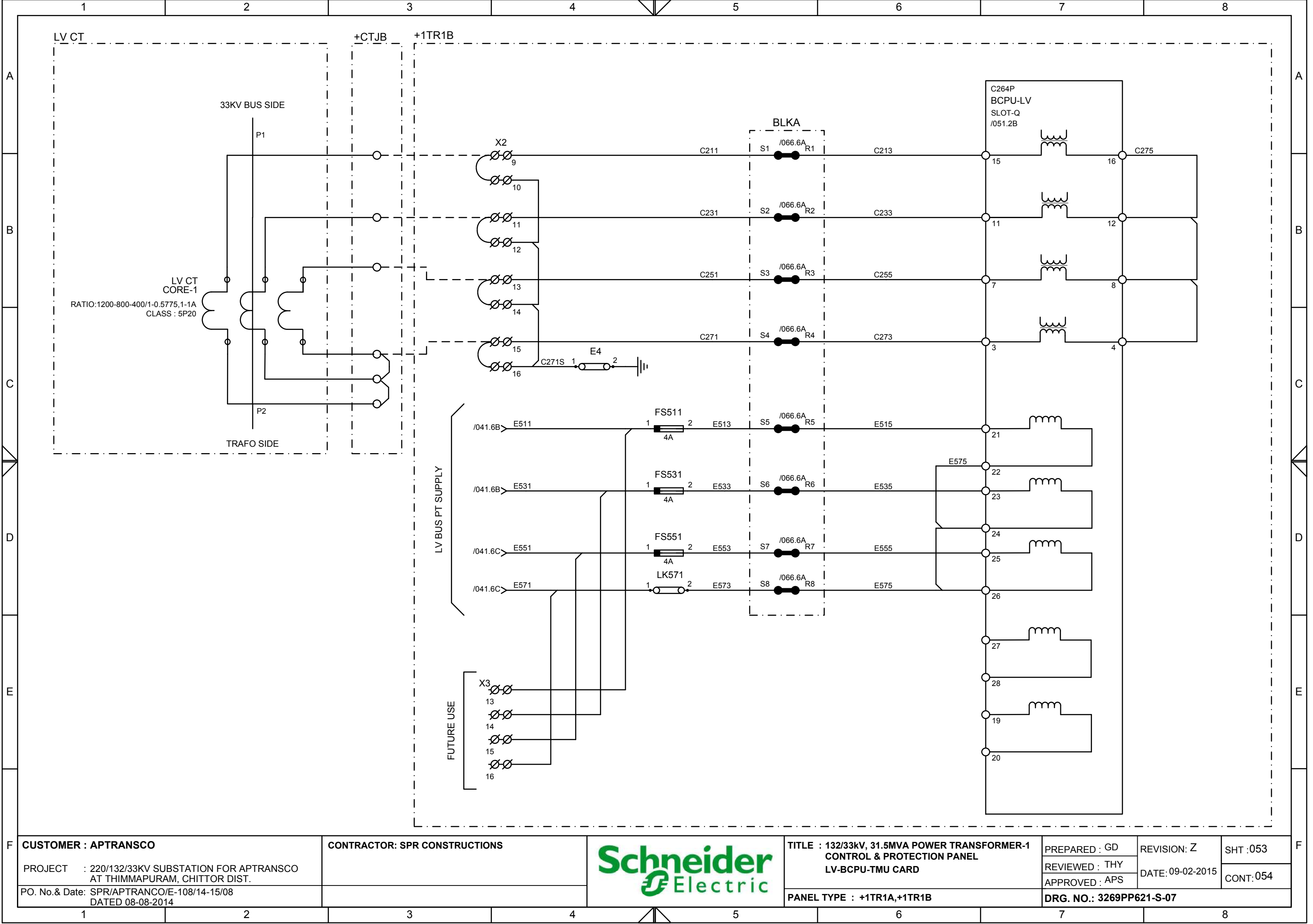
E

F

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



F

CUSTOMER : APTRANSCO	
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.	
PO. No. & Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014	

CONTRACTOR: SPR CONSTRUCTIONS	

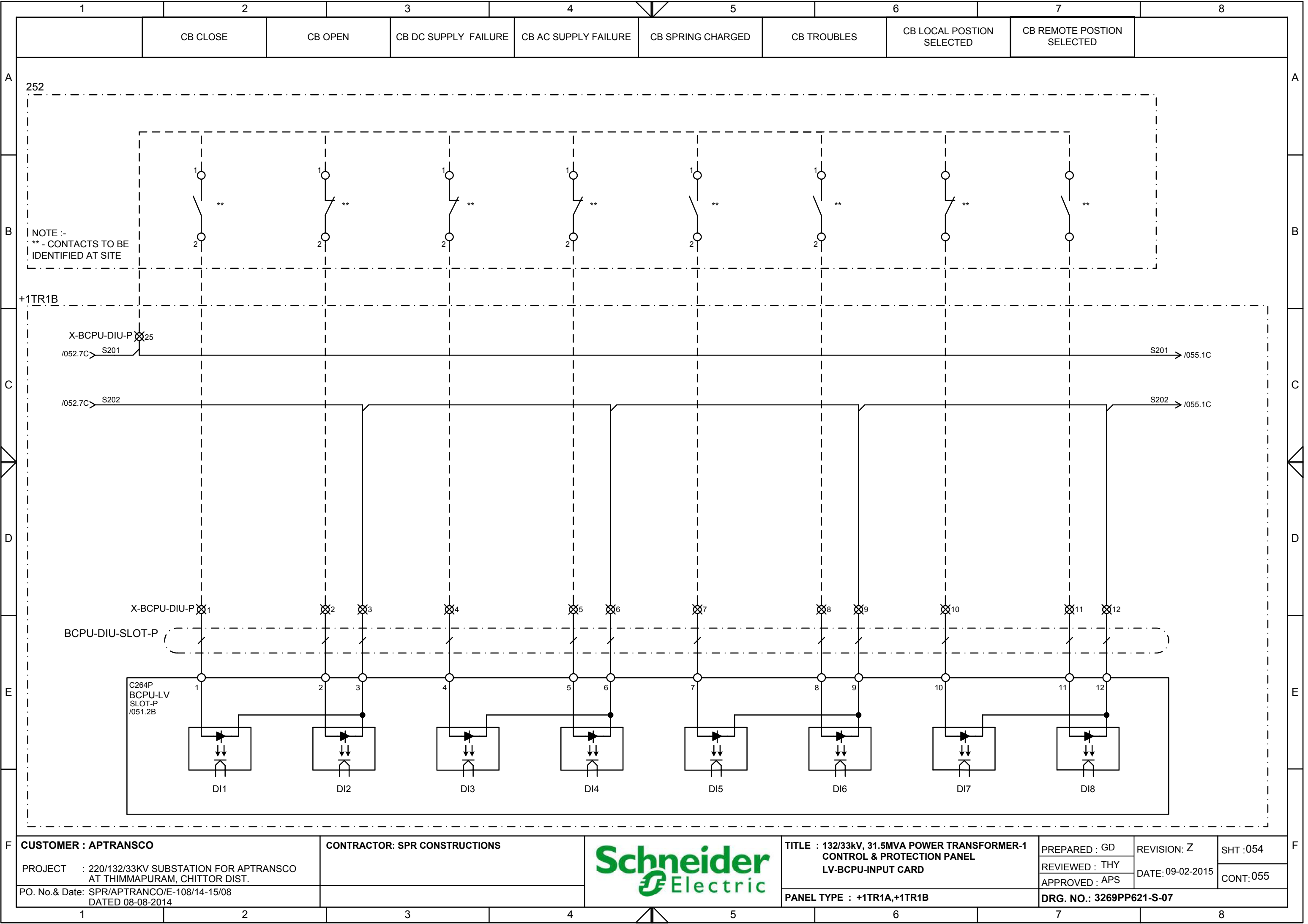


TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL LV-BCPU-TMU CARD	
PANEL TYPE : +1TR1A,+1TR1B	

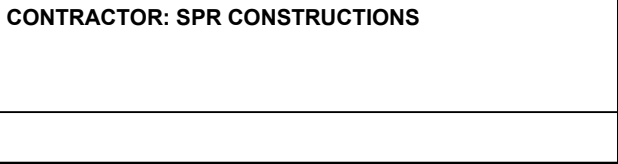
PREPARED : GD	REVISION: Z	SHT :053
REVIEWED : THY	DATE: 09-02-2015	CONT:054
APPROVED : APS	DRG. NO.: 3269PP621-S-07	

F

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



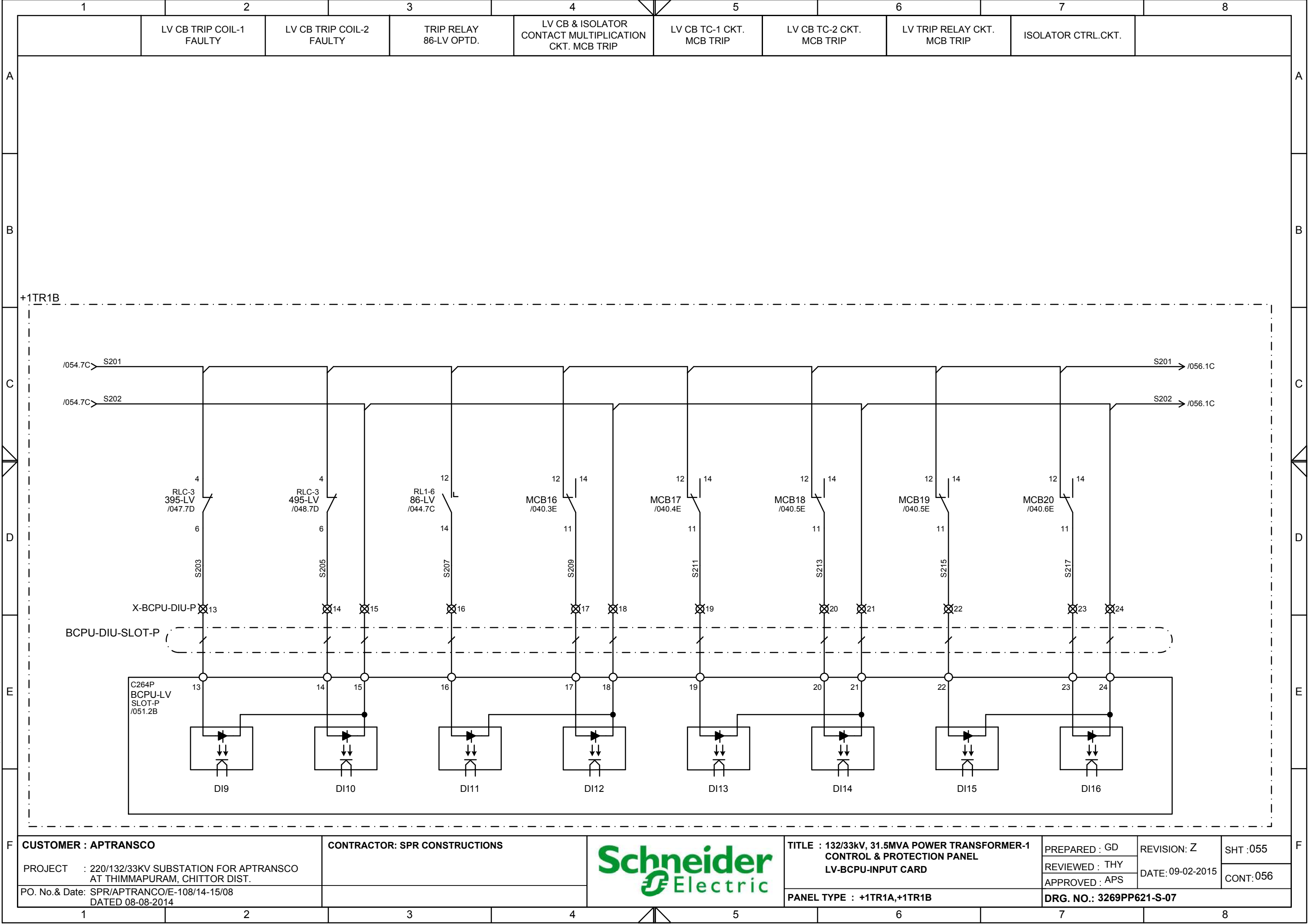
CUSTOMER : APTRANSCO	CONTRACTOR: SPR CONSTRUCTIONS
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.	
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014	



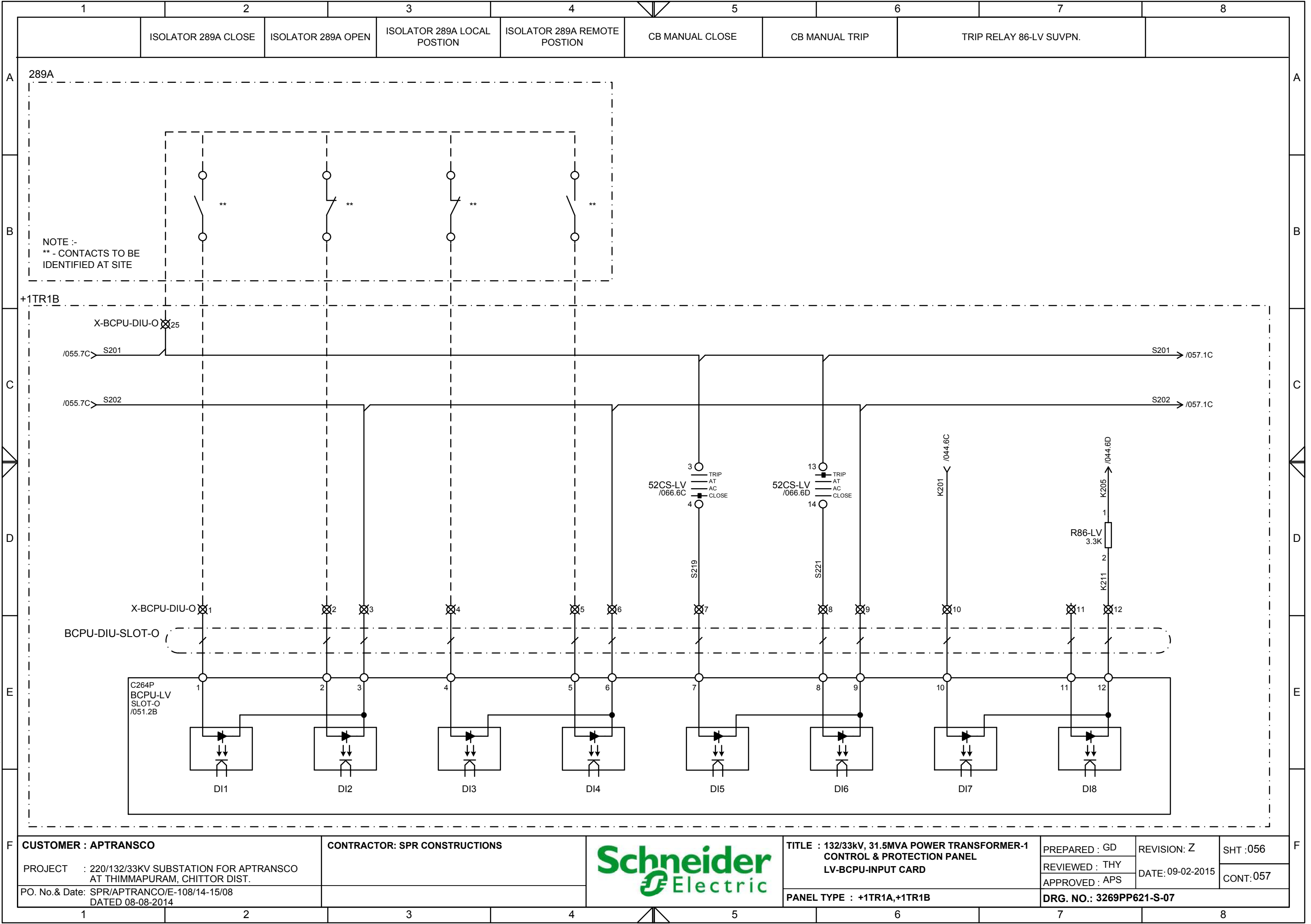
TITLE : 132/33kv, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL LV-BCPU-INPUT CARD	PREPARED : GD REVIEWED : THY APPROVED : APS
PANEL TYPE : +1TR1A,+1TR1B	

REVISION: Z	SHT :054	CONT:055
DATE: 09-02-2015		
DRG. NO.: 3269PP621-S-07		

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

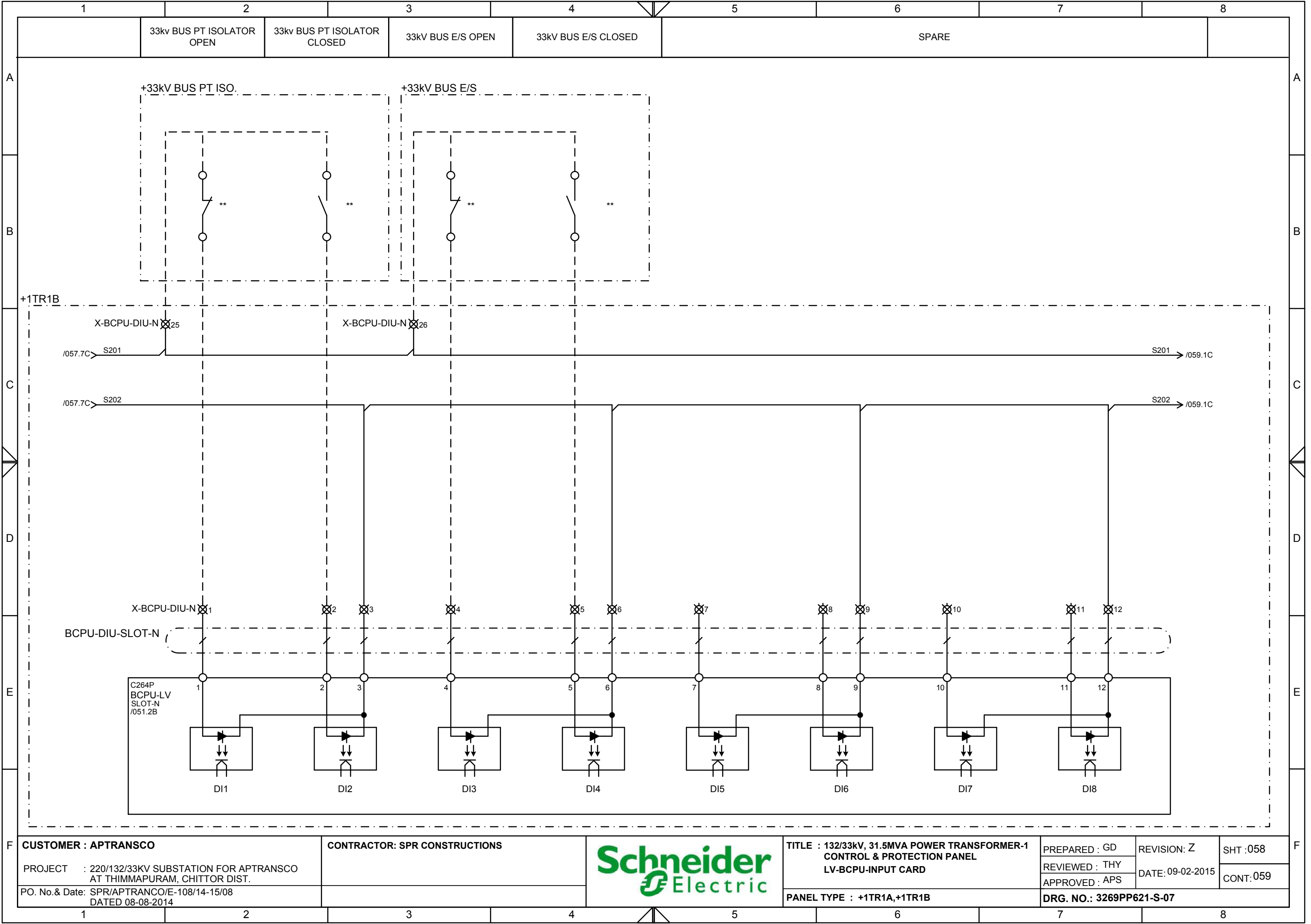


This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

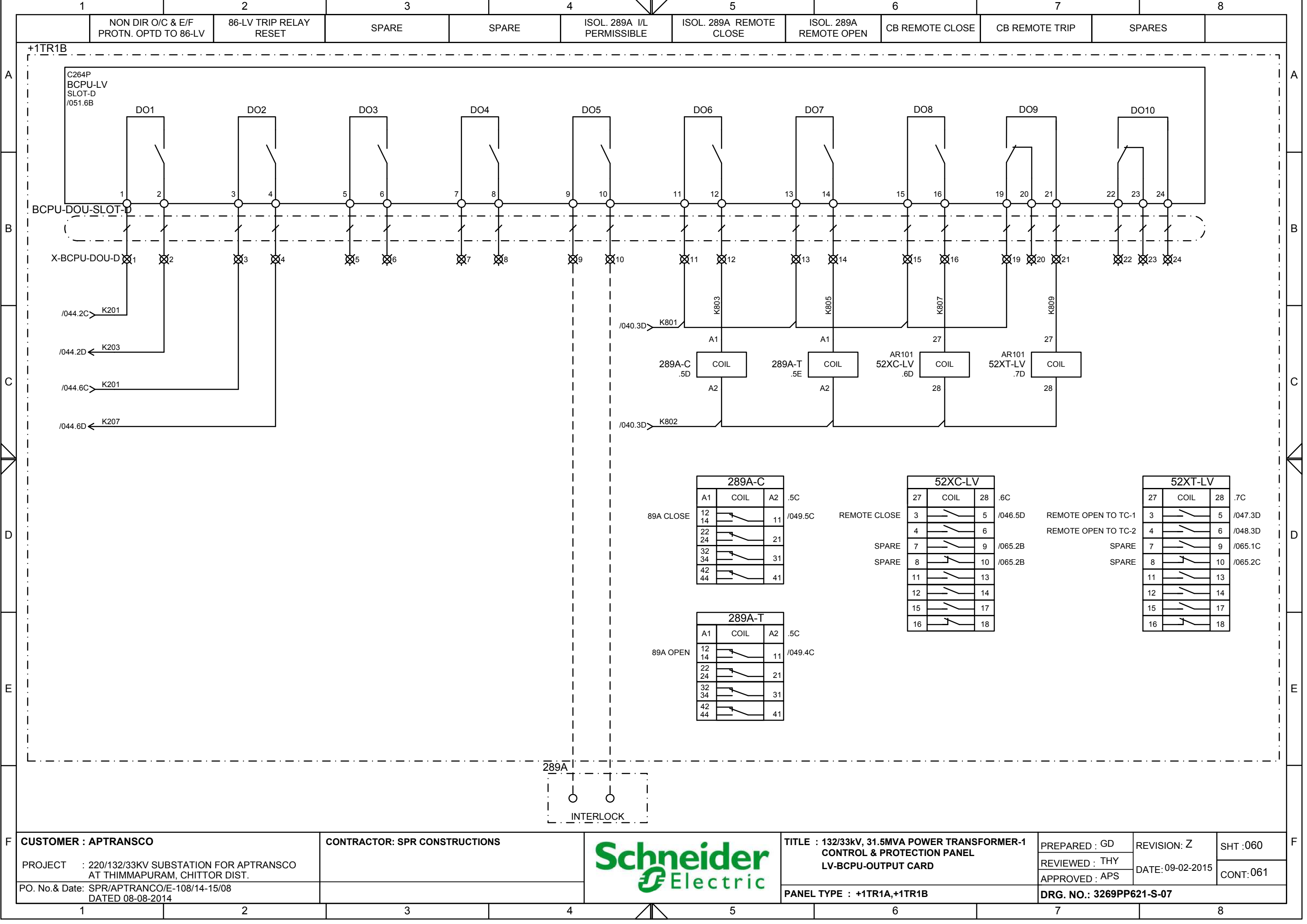


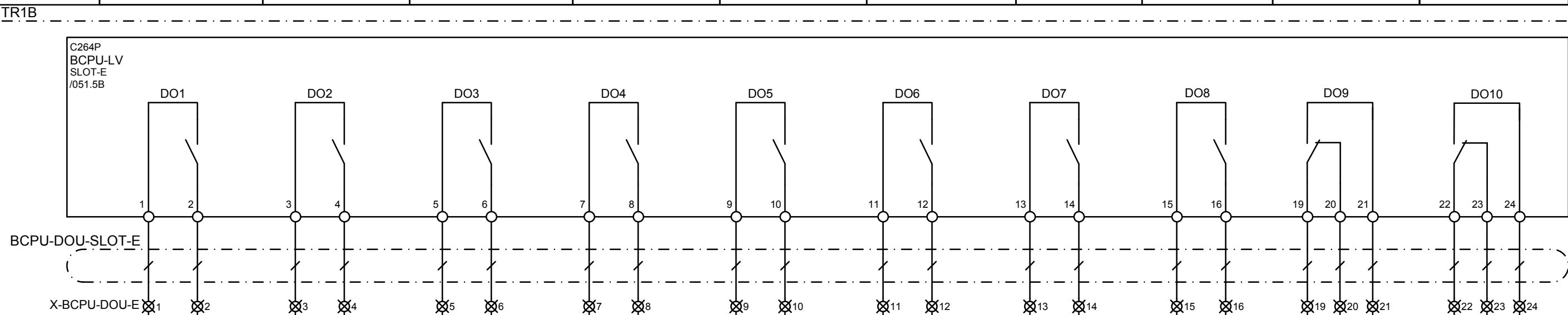
Schneider
Electric

DRG. NO.: 3269PP621-S-07

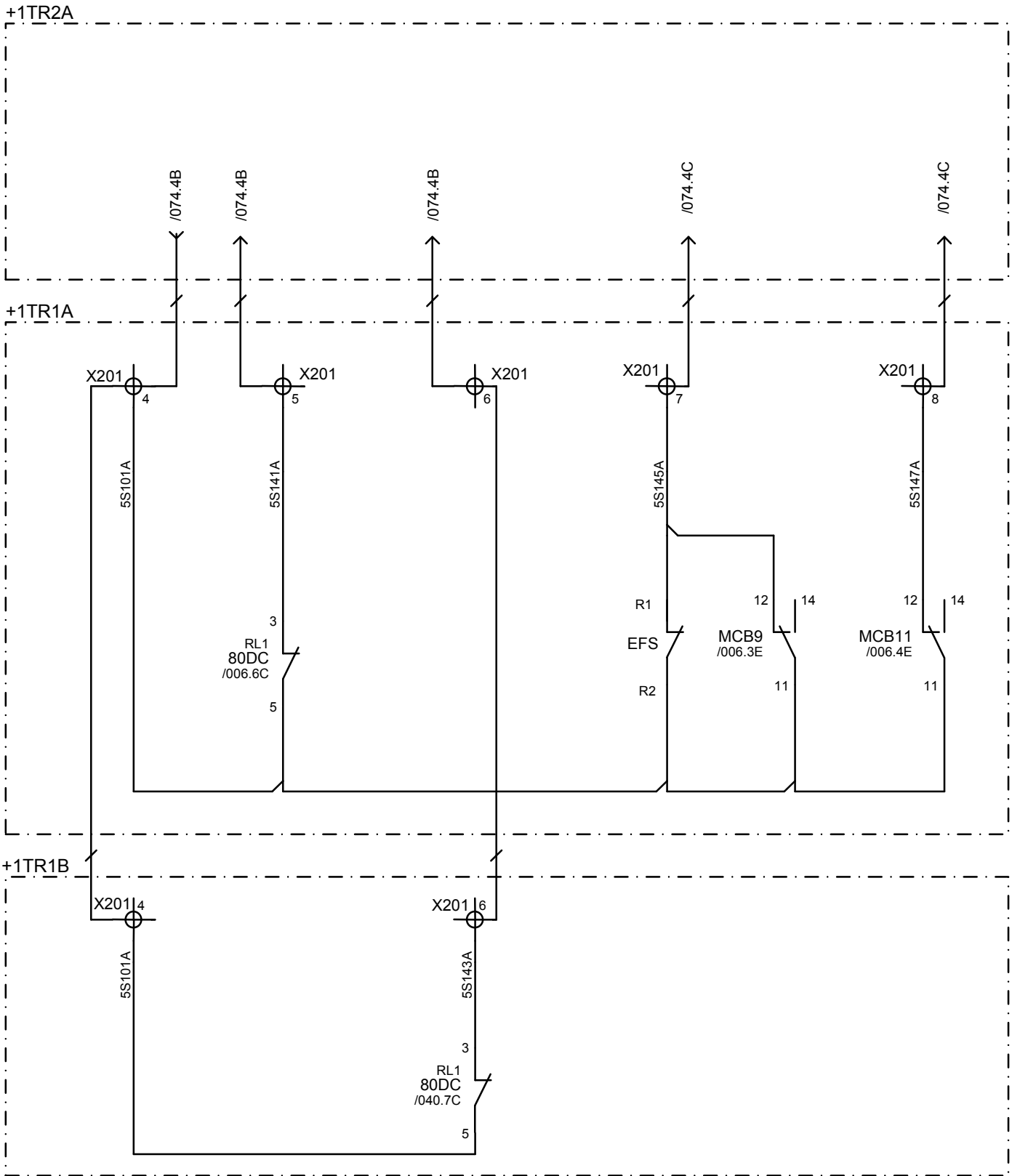
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

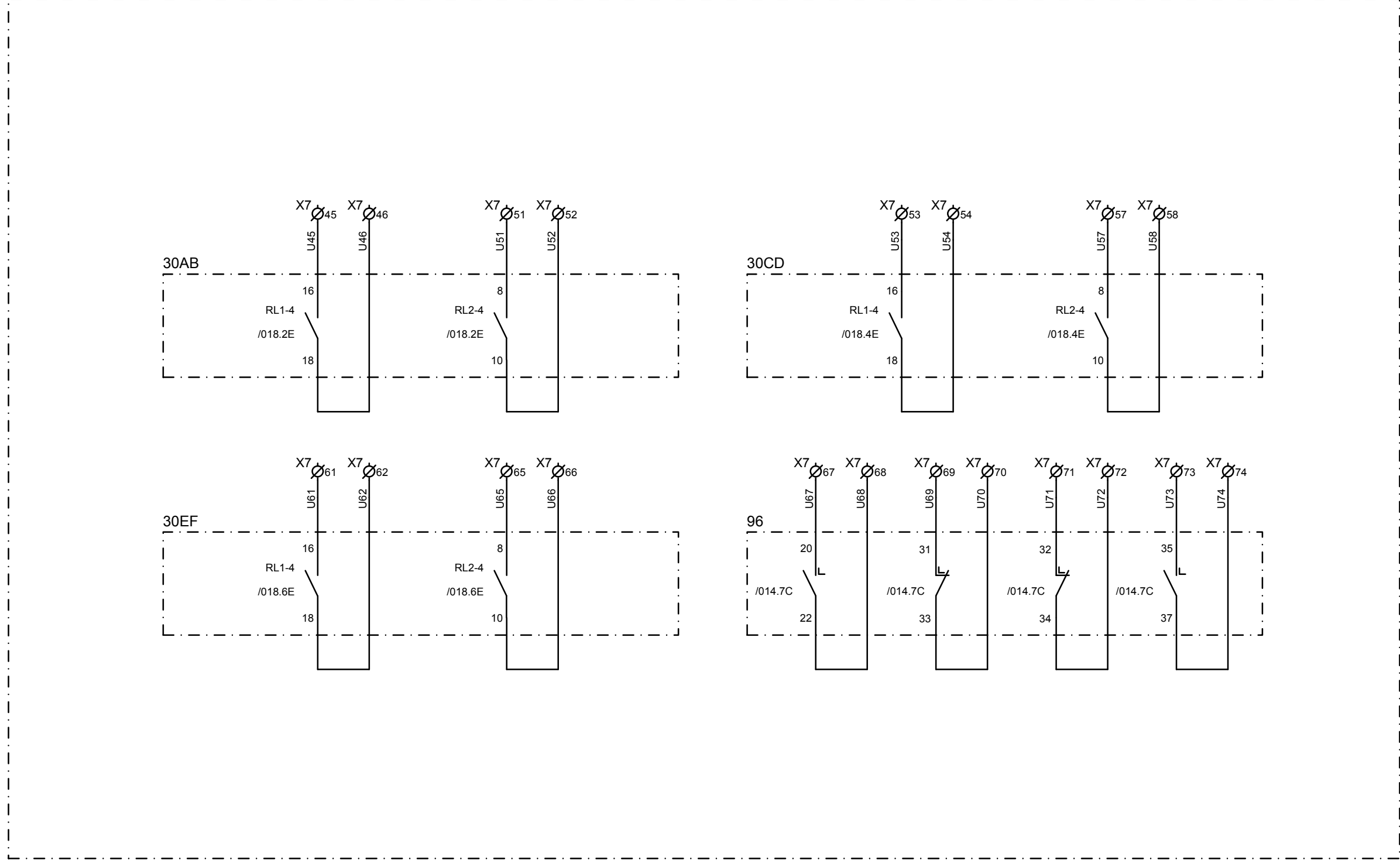
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.





CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS		TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL LV-BCPU-OUTPUT CARD	PREPARED : GD	REVISION: Z	SHT :061
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.					REVIEWED : THY		CONT:062
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014					APPROVED : APS	DATE: 09-02-2015	
				PANEL TYPE : +1TR1A,+1TR1B		DRG. NO.: 3269PP621-S-07	





CUSTOMER : APTRANSCO			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL SPARE CONTACTS DISTRIBUTION	PREPARED : GD	REVISION: Z	SHT :064
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.				REVIEWED : THY		CONT:065
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014				APPROVED : APS	DATE: 09-02-2015	
				PANEL TYPE : +1TR1A,+1TR1B		

1		2		3		4		5		6		7		8																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
+1TR1A BLKA <table><tr><td>S1</td><td></td><td>R1</td><td></td></tr><tr><td>S2</td><td></td><td>R2</td><td>/011.1C</td></tr><tr><td>S3</td><td></td><td>R3</td><td>/009.5A</td></tr><tr><td>S4</td><td></td><td>R4</td><td>/009.5B</td></tr><tr><td>S5</td><td></td><td>R5</td><td>/009.5B</td></tr><tr><td>S6</td><td></td><td>R6</td><td>/009.5B</td></tr><tr><td>S7</td><td></td><td>R7</td><td>/010.4B</td></tr><tr><td>R8</td><td></td><td>S8</td><td>/010.5C</td></tr><tr><td>S9</td><td></td><td>R9</td><td></td></tr><tr><td>S10</td><td></td><td>R10</td><td></td></tr></table> BLKB <table><tr><td>S1</td><td></td><td>R1</td><td>/013.1C</td></tr><tr><td>S2</td><td></td><td>R2</td><td>/011.1F</td></tr><tr><td>S3</td><td></td><td>R3</td><td>/009.5E</td></tr><tr><td>S4</td><td></td><td>R4</td><td>/009.5E</td></tr><tr><td>S5</td><td></td><td>R5</td><td>/009.5E</td></tr><tr><td>S6</td><td></td><td>R6</td><td>/009.5D</td></tr><tr><td>S7</td><td></td><td>R7</td><td></td></tr><tr><td>S8</td><td></td><td>R8</td><td></td></tr><tr><td>S9</td><td></td><td>R9</td><td></td></tr><tr><td>S10</td><td></td><td>R10</td><td></td></tr></table> BLKC <table><tr><td>S1</td><td></td><td>R1</td><td>/024.5A</td></tr><tr><td>S2</td><td></td><td>R2</td><td>/024.5B</td></tr><tr><td>S3</td><td></td><td>R3</td><td>/024.5B</td></tr><tr><td>S4</td><td></td><td>R4</td><td>/024.5C</td></tr><tr><td>S5</td><td></td><td>R5</td><td>/024.5C</td></tr><tr><td>S6</td><td></td><td>R6</td><td>/024.5D</td></tr><tr><td>S7</td><td></td><td>R7</td><td>/024.5D</td></tr><tr><td>S8</td><td></td><td>R8</td><td>/024.5D</td></tr><tr><td>S9</td><td></td><td>R9</td><td></td></tr><tr><td>S10</td><td></td><td>R10</td><td></td></tr></table> +1TR1B BLKA <table><tr><td>S1</td><td></td><td>R1</td><td>/053.5B</td></tr><tr><td>S2</td><td></td><td>R2</td><td>/053.5B</td></tr><tr><td>S3</td><td></td><td>R3</td><td>/053.5B</td></tr><tr><td>S4</td><td></td><td>R4</td><td>/053.5C</td></tr><tr><td>S5</td><td></td><td>R5</td><td>/053.5C</td></tr><tr><td>S6</td><td></td><td>R6</td><td>/053.5D</td></tr><tr><td>S7</td><td></td><td>R7</td><td>/053.5D</td></tr><tr><td>S8</td><td></td><td>R8</td><td>/053.5D</td></tr><tr><td>S9</td><td></td><td>R9</td><td></td></tr><tr><td>S10</td><td></td><td>R10</td><td></td></tr></table> 52CS-HV <table><tr><td></td><td>TRIP</td><td>AT</td><td>AC</td><td>CLOSE</td><td></td></tr><tr><td>TO CB CLOSING CKT</td><td>1</td><td></td><td></td><td></td><td>2</td><td>/015.5D</td></tr><tr><td>TO BCPU-HV</td><td>3</td><td></td><td></td><td></td><td>4</td><td>/026.7D</td></tr><tr><td>SPARE</td><td>5</td><td></td><td></td><td></td><td>6</td><td>/063.5B</td></tr><tr><td></td><td>7</td><td></td><td></td><td></td><td>8</td><td></td></tr><tr><td></td><td>9</td><td></td><td></td><td></td><td>10</td><td></td></tr><tr><td>TO CB TC-1 CKT.</td><td>11</td><td></td><td></td><td></td><td>12</td><td>/016.3C</td></tr><tr><td>TO BCPU-HV</td><td>13</td><td></td><td></td><td></td><td>14</td><td>/026.6D</td></tr><tr><td>TO CB TC-2 CKT.</td><td>15</td><td></td><td></td><td></td><td>16</td><td>/017.3C</td></tr><tr><td>SPARE</td><td>17</td><td></td><td></td><td></td><td>18</td><td>/063.6B</td></tr><tr><td></td><td>19</td><td></td><td></td><td></td><td>20</td><td></td></tr><tr><td></td><td>21</td><td></td><td></td><td></td><td>22</td><td></td></tr><tr><td></td><td>23</td><td></td><td></td><td></td><td>24</td><td></td></tr><tr><td></td><td>25</td><td></td><td></td><td></td><td>26</td><td></td></tr><tr><td></td><td>27</td><td></td><td></td><td></td><td>28</td><td></td></tr><tr><td></td><td>29</td><td></td><td></td><td></td><td>30</td><td></td></tr><tr><td></td><td>31</td><td></td><td></td><td></td><td>32</td><td></td></tr></table> 52CS-LV <table><tr><td></td><td>TRIP</td><td>AT</td><td>AC</td><td>CLOSE</td><td></td></tr><tr><td>TO CB CLOSING CKT</td><td>1</td><td></td><td></td><td></td><td>2</td><td>/046.5D</td></tr><tr><td>TO BCPU-LV</td><td>3</td><td></td><td></td><td></td><td>4</td><td>/056.5D</td></tr><tr><td>SPARE</td><td>5</td><td></td><td></td><td></td><td>6</td><td>/065.4C</td></tr><tr><td></td><td>7</td><td></td><td></td><td></td><td>8</td><td></td></tr><tr><td></td><td>9</td><td></td><td></td><td></td><td>10</td><td></td></tr><tr><td>TO CB TC-1 CKT.</td><td>11</td><td></td><td></td><td></td><td>12</td><td>/047.2D</td></tr><tr><td>TO BCPU-LV</td><td>13</td><td></td><td></td><td></td><td>14</td><td>/056.5D</td></tr><tr><td>TO CB TC-2 CKT.</td><td>15</td><td></td><td></td><td></td><td>16</td><td>/048.2D</td></tr><tr><td>SPARE</td><td>17</td><td></td><td></td><td></td><td>18</td><td>/065.5C</td></tr><tr><td></td><td>19</td><td></td><td></td><td></td><td>20</td><td></td></tr><tr><td></td><td>21</td><td></td><td></td><td></td><td>22</td><td></td></tr><tr><td></td><td>23</td><td></td><td></td><td></td><td>24</td><td></td></tr><tr><td></td><td>25</td><td></td><td></td><td></td><td>26</td><td></td></tr><tr><td></td><td>27</td><td></td><td></td><td></td><td>28</td><td></td></tr><tr><td></td><td>29</td><td></td><td></td><td></td><td>30</td><td></td></tr><tr><td></td><td>31</td><td></td><td></td><td></td><td>32</td><td></td></tr></table> <table><tr><td colspan="2">F</td><td colspan="2">CUSTOMER : APTRANSCO</td><td colspan="2">CONTRACTOR: SPR CONSTRUCTIONS</td><td colspan="2"></td><td colspan="2">TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL SWITCH CONTACT & TEST BLOCK DISTRIBUTION</td><td colspan="2">PREPARED : GD</td><td colspan="2">REVISION: Z</td><td colspan="2">SHT :066</td><td colspan="2">F</td></tr><tr><td colspan="2"></td><td colspan="2">PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.</td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td><td colspan="2">REVIEWED : THY</td><td colspan="2">DATE: 09-02-2015</td><td colspan="2"></td><td colspan="2">CONT:067</td></tr><tr><td colspan="2"></td><td colspan="2">PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014</td><td colspan="2"></td><td colspan="2"></td><td colspan="2">PANEL TYPE : +1TR1A,+1TR1B</td><td colspan="2">APPROVED : APS</td><td colspan="2"></td><td colspan="2">DRG. NO.: 3269PP62</td></tr></table>																S1		R1		S2		R2	/011.1C	S3		R3	/009.5A	S4		R4	/009.5B	S5		R5	/009.5B	S6		R6	/009.5B	S7		R7	/010.4B	R8		S8	/010.5C	S9		R9		S10		R10		S1		R1	/013.1C	S2		R2	/011.1F	S3		R3	/009.5E	S4		R4	/009.5E	S5		R5	/009.5E	S6		R6	/009.5D	S7		R7		S8		R8		S9		R9		S10		R10		S1		R1	/024.5A	S2		R2	/024.5B	S3		R3	/024.5B	S4		R4	/024.5C	S5		R5	/024.5C	S6		R6	/024.5D	S7		R7	/024.5D	S8		R8	/024.5D	S9		R9		S10		R10		S1		R1	/053.5B	S2		R2	/053.5B	S3		R3	/053.5B	S4		R4	/053.5C	S5		R5	/053.5C	S6		R6	/053.5D	S7		R7	/053.5D	S8		R8	/053.5D	S9		R9		S10		R10			TRIP	AT	AC	CLOSE		TO CB CLOSING CKT	1				2	/015.5D	TO BCPU-HV	3				4	/026.7D	SPARE	5				6	/063.5B		7				8			9				10		TO CB TC-1 CKT.	11				12	/016.3C	TO BCPU-HV	13				14	/026.6D	TO CB TC-2 CKT.	15				16	/017.3C	SPARE	17				18	/063.6B		19				20			21				22			23				24			25				26			27				28			29				30			31				32			TRIP	AT	AC	CLOSE		TO CB CLOSING CKT	1				2	/046.5D	TO BCPU-LV	3				4	/056.5D	SPARE	5				6	/065.4C		7				8			9				10		TO CB TC-1 CKT.	11				12	/047.2D	TO BCPU-LV	13				14	/056.5D	TO CB TC-2 CKT.	15				16	/048.2D	SPARE	17				18	/065.5C		19				20			21				22			23				24			25				26			27				28			29				30			31				32		F		CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS				TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL SWITCH CONTACT & TEST BLOCK DISTRIBUTION		PREPARED : GD		REVISION: Z		SHT :066		F				PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.								REVIEWED : THY		DATE: 09-02-2015				CONT:067				PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014						PANEL TYPE : +1TR1A,+1TR1B		APPROVED : APS				DRG. NO.: 3269PP62	
S1		R1																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S2		R2	/011.1C																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S3		R3	/009.5A																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S4		R4	/009.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S5		R5	/009.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S6		R6	/009.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S7		R7	/010.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
R8		S8	/010.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S9		R9																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S10		R10																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S1		R1	/013.1C																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S2		R2	/011.1F																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S3		R3	/009.5E																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S4		R4	/009.5E																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S5		R5	/009.5E																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S6		R6	/009.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S7		R7																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S8		R8																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S9		R9																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S10		R10																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S1		R1	/024.5A																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S2		R2	/024.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S3		R3	/024.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S4		R4	/024.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S5		R5	/024.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S6		R6	/024.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S7		R7	/024.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S8		R8	/024.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S9		R9																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S10		R10																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S1		R1	/053.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S2		R2	/053.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S3		R3	/053.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S4		R4	/053.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S5		R5	/053.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S6		R6	/053.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S7		R7	/053.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S8		R8	/053.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
S9		R9																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
S10		R10																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	TRIP	AT	AC	CLOSE																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
TO CB CLOSING CKT	1				2	/015.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
TO BCPU-HV	3				4	/026.7D																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
SPARE	5				6	/063.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	7				8																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	9				10																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
TO CB TC-1 CKT.	11				12	/016.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
TO BCPU-HV	13				14	/026.6D																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
TO CB TC-2 CKT.	15				16	/017.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
SPARE	17				18	/063.6B																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	19				20																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	21				22																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	23				24																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	25				26																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	27				28																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	29				30																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	31				32																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	TRIP	AT	AC	CLOSE																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
TO CB CLOSING CKT	1				2	/046.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
TO BCPU-LV	3				4	/056.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
SPARE	5				6	/065.4C																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	7				8																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	9				10																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
TO CB TC-1 CKT.	11				12	/047.2D																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
TO BCPU-LV	13				14	/056.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
TO CB TC-2 CKT.	15				16	/048.2D																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
SPARE	17				18	/065.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	19				20																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	21				22																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	23				24																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	25				26																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	27				28																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	29				30																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	31				32																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
F		CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS				TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL SWITCH CONTACT & TEST BLOCK DISTRIBUTION		PREPARED : GD		REVISION: Z		SHT :066		F																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.								REVIEWED : THY		DATE: 09-02-2015				CONT:067																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014						PANEL TYPE : +1TR1A,+1TR1B		APPROVED : APS				DRG. NO.: 3269PP62																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

CUSTOMER : APTRANSCO	
PROJECT :	220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.
PO. No. & Date:	SPR/APTRANSCO/E-108/14-15/08 DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS



TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL SWITCH CONTACT & TEST BLOCK DISTRIBUTION	PREPARED : GD	REVISION: Z	SHT :066
	REVIEWED : THY	DATE: 09-02-2015	CONT:067
	APPROVED : APS		
PANEL TYPE : +1TR1A,+1TR1B	DRG. NO.: 3269PP621-S-07		

Diagram illustrating the control and protection panel for a 132/33kV, 31.5MVA Power Transformer, showing the internal wiring and components.

The diagram is divided into two main sections, each labeled 87T, representing the control and protection logic for the transformer.

Left Section (87T):

- Contains two sets of current transformers (CT4 and CT8) connected to relays.
- Relays are labeled C1 through C28.
- Relays C1, C2, C3, and C4 are connected to a common bus labeled /010.6B.
- Relays C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, and C28 are connected to a common bus labeled /009.7A.

Right Section (87T):

- Contains two sets of relays (D1-D16 and B1-B8) connected to a common bus labeled /011.2D.
- Relays D1-D16 are connected to a common bus labeled /011.2D.
- Relays B1-B8 are connected to a common bus labeled /012.3D.
- Relays E1-E18 are connected to a common bus labeled /013.1D.
- Relays F1-F14 are connected to a common bus labeled /011.1D.
- Relays F11-F14 are connected to a common bus labeled /057.5B.
- Relays F1 and F2 are connected to a common bus labeled /011.1D.

Legend:

- MICOM P642 LED CONFIGURATION (DEDICATED LED's):
- TRIP
- ALARM
- OUT OF SERVICE
- HEALTHY

MICOM P642 LED CONFIGURATION (USER PROGRAMMABLE LED's):

- DIFFERENTIAL PROTN. OPTD.
- HV OVER FLUXING PROTN. OPTD.
- BUCHHOLZ TRIP
- PRV TRIP
- OTI TRIP
- WTI TRIP
- OSR TRIP
- R-PH DIFFERENTIAL PROTN OPTD
- Y-PH DIFFERENTIAL PROTN OPTD
- B-PH DIFFERENTIAL PROTN OPTD
- DIFFERENTIAL HIGH SET
- LV OVER FLUXING PROTN. OPTD.

Customer Information:

CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014

Contractor Information:

CONTRACTOR: SPR CONSTRUCTIONS

Panel Information:

TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL

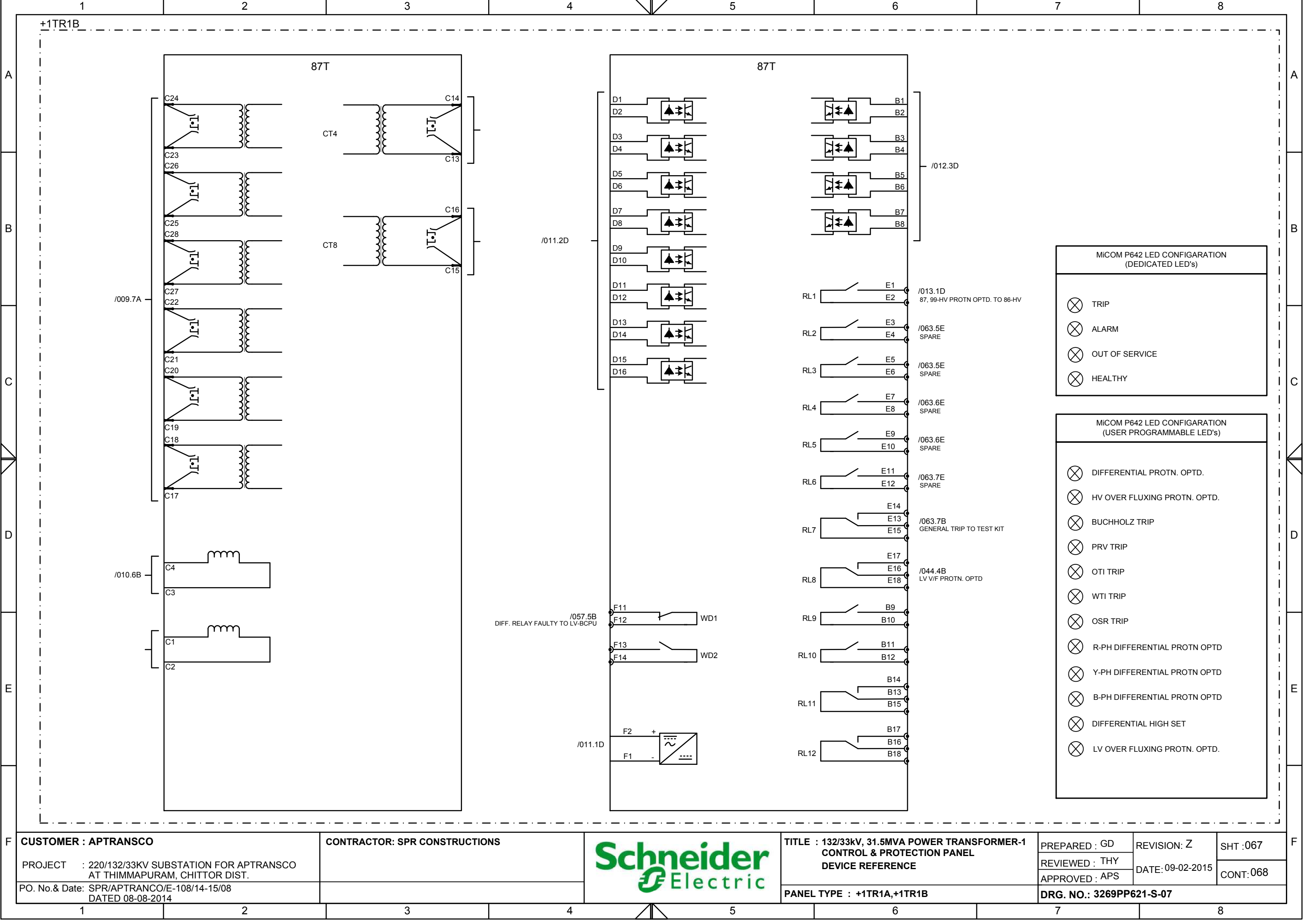
DRG. NO.: 3269PP621-S-07

Legend:

- TRIP
- ALARM
- OUT OF SERVICE
- HEALTHY

Panel Type: +1TR1A, +1TR1B

Panel Dimensions: 1000mm x 1000mm



This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

1	2	3	4	5	6	7	8																																																																																																																																																																																																																																																																																																																																																																																																																																																														
+1TR1A <table><tr><th>TAG</th><th>REF</th></tr><tr><td>X1:1</td><td>/004.1B</td></tr><tr><td>X1:2</td><td>/004.2B</td></tr><tr><td>X1:3</td><td>/005.2B</td></tr><tr><td>X1:4</td><td>/005.2B</td></tr><tr><td>X1:5</td><td>/006.5D</td></tr><tr><td>X1:6</td><td>/006.5D</td></tr><tr><td>X1:7</td><td>SPARE</td></tr><tr><td>X1:8</td><td>SPARE</td></tr></table><table><tr><th>TAG</th><th>REF</th></tr><tr><td>X2:1</td><td>/008.3A</td></tr><tr><td>X2:2</td><td>/008.3B</td></tr><tr><td>X2:3</td><td>/008.3B</td></tr><tr><td>X2:4</td><td>/008.3B</td></tr><tr><td>X2:5</td><td>/008.3B</td></tr><tr><td>X2:6</td><td>/008.3B</td></tr><tr><td>X2:7</td><td>/008.3B</td></tr><tr><td>X2:8</td><td>/008.3C</td></tr><tr><td>X2:9</td><td>/009.3A</td></tr><tr><td>X2:10</td><td>/009.3A</td></tr><tr><td>X2:11</td><td>/009.3B</td></tr><tr><td>X2:12</td><td>/009.3B</td></tr><tr><td>X2:13</td><td>/009.3B</td></tr><tr><td>X2:14</td><td>/009.3B</td></tr><tr><td>X2:15</td><td>/009.3B</td></tr><tr><td>X2:16</td><td>/009.3C</td></tr><tr><td>X2:17</td><td>/009.3E</td></tr><tr><td>X2:18</td><td>/009.3E</td></tr><tr><td>X2:19</td><td>/009.3E</td></tr><tr><td>X2:20</td><td>/009.3E</td></tr><tr><td>X2:21</td><td>/009.3E</td></tr><tr><td>X2:22</td><td>/009.3D</td></tr><tr><td>X2:23</td><td>/009.3D</td></tr><tr><td>X2:24</td><td>/009.3D</td></tr><tr><td>X2:25</td><td>/024.4A</td></tr><tr><td>X2:26</td><td>/024.4B</td></tr><tr><td>X2:27</td><td>/024.4B</td></tr><tr><td>X2:28</td><td>/024.4B</td></tr><tr><td>X2:29</td><td>/024.4B</td></tr><tr><td>X2:30</td><td>/024.4B</td></tr><tr><td>X2:31</td><td>/024.4C</td></tr><tr><td>X2:32</td><td>/024.4C</td></tr><tr><td>X2:33</td><td>/019.2C</td></tr><tr><td>X2:34</td><td>/019.2C</td></tr><tr><td>X2:35</td><td>/019.3C</td></tr><tr><td>X2:36</td><td>/019.3C</td></tr><tr><td>X2:37</td><td>SPARE</td></tr><tr><td>X2:38</td><td>SPARE</td></tr><tr><td>X2:39</td><td>SPARE</td></tr><tr><td>X2:40</td><td>SPARE</td></tr><tr><td>X2:41</td><td>SPARE</td></tr><tr><td>X2:42</td><td>SPARE</td></tr><tr><td>X2:43</td><td>SPARE</td></tr><tr><td>X2:44</td><td>SPARE</td></tr><tr><td>X2:45</td><td>SPARE</td></tr></table><table><tr><th>TAG</th><th>REF</th></tr><tr><td>X3:1</td><td>/007.4A</td></tr><tr><td>X3:2</td><td>/007.4A</td></tr><tr><td>X3:3</td><td>/007.4B</td></tr><tr><td>X3:4</td><td>/007.4B</td></tr><tr><td>X3:5</td><td>/007.4D</td></tr><tr><td>X3:6</td><td>/007.4D</td></tr><tr><td>X3:7</td><td>/007.4D</td></tr><tr><td>X3:8</td><td>/007.4D</td></tr><tr><td>X3:9</td><td>SPARE</td></tr><tr><td>X3:10</td><td>SPARE</td></tr><tr><td>X3:11</td><td>SPARE</td></tr><tr><td>X3:12</td><td>SPARE</td></tr><tr><td>X3:13</td><td>SPARE</td></tr><tr><td>X3:14</td><td>SPARE</td></tr><tr><td>X3:15</td><td>SPARE</td></tr><tr><td>X3:16</td><td>SPARE</td></tr><tr><td>X3:17</td><td>SPARE</td></tr><tr><td>X3:18</td><td>SPARE</td></tr><tr><td>X3:19</td><td>SPARE</td></tr><tr><td>X3:20</td><td>SPARE</td></tr></table><table><tr><th>TAG</th><th>REF</th></tr><tr><td>X4:1</td><td>/011.2C</td></tr><tr><td>X4:2</td><td>/011.2C</td></tr><tr><td>X4:3</td><td>/013.5B</td></tr><tr><td>X4:4</td><td>/013.6B</td></tr><tr><td>X4:5</td><td>/014.4D</td></tr><tr><td>X4:6</td><td>/014.4E</td></tr><tr><td>X4:7</td><td>/018.2B</td></tr><tr><td>X4:8</td><td>/018.2B</td></tr><tr><td>X4:9</td><td>/018.3B</td></tr><tr><td>X4:10</td><td>/018.4B</td></tr><tr><td>X4:11</td><td>/018.5B</td></tr><tr><td>X4:12</td><td>/018.6B</td></tr><tr><td>X4:13</td><td>/018.7B</td></tr><tr><td>X4:14</td><td>/021.3B</td></tr><tr><td>X4:15</td><td>/021.3C</td></tr><tr><td>X4:16</td><td>/012.5C</td></tr><tr><td>X4:17</td><td>/012.5C</td></tr><tr><td>X4:18</td><td>/021.4B</td></tr><tr><td>X4:19</td><td>/021.4C</td></tr><tr><td>X4:20</td><td>SPARE</td></tr><tr><td>X4:21</td><td>SPARE</td></tr><tr><td>X4:22</td><td>SPARE</td></tr><tr><td>X4:23</td><td>SPARE</td></tr><tr><td>X4:24</td><td>SPARE</td></tr></table><table><tr><th>TAG</th><th>REF</th></tr><tr><td>X5:1</td><td>/015.4E</td></tr><tr><td>X5:2</td><td>/015.5E</td></tr><tr><td>X5:3</td><td>/015.5B</td></tr><tr><td>X5:4</td><td>/015.5C</td></tr><tr><td>X5:5</td><td>/016.1E</td></tr><tr><td>X5:6</td><td>/016.2E</td></tr><tr><td>X5:7</td><td>/016.2E</td></tr><tr><td>X5:8</td><td>/016.3E</td></tr><tr><td>X5:9</td><td>/016.6E</td></tr><tr><td>X5:10</td><td>/016.6E</td></tr><tr><td>X5:11</td><td>/016.7E</td></tr><tr><td>X5:12</td><td>/016.5C</td></tr><tr><td>X5:13</td><td>/016.5C</td></tr><tr><td>X5:14</td><td>/017.1E</td></tr><tr><td>X5:15</td><td>/017.2E</td></tr><tr><td>X5:16</td><td>/017.2E</td></tr><tr><td>X5:17</td><td>/017.3E</td></tr><tr><td>X5:18</td><td>/017.6E</td></tr><tr><td>X5:19</td><td>/017.6E</td></tr><tr><td>X5:20</td><td>/017.7E</td></tr><tr><td>X5:21</td><td>/017.5C</td></tr><tr><td>X5:22</td><td>/017.5C</td></tr><tr><td>X5:23</td><td>SPARE</td></tr><tr><td>X5:24</td><td>SPARE</td></tr><tr><td>X5:25</td><td>SPARE</td></tr></table><table><tr><th>TAG</th><th>REF</th></tr><tr><td>X6:1</td><td>/020.4E</td></tr><tr><td>X6:2</td><td>/020.4E</td></tr><tr><td>X6:3</td><td>/020.4E</td></tr><tr><td>X6:4</td><td>/020.5E</td></tr><tr><td>X6:5</td><td>/020.5E</td></tr><tr><td>X6:6</td><td>SPARE</td></tr><tr><td>X6:7</td><td>SPARE</td></tr><tr><td>X6:8</td><td>SPARE</td></tr></table><table><tr><th>TAG</th><th>REF</th></tr><tr><td>X7:1</td><td>/063.2A</td></tr><tr><td>X7:2</td><td>/063.3A</td></tr><tr><td>X7:3</td><td>/063.3A</td></tr><tr><td>X7:4</td><td>/063.3A</td></tr><tr><td>X7:5</td><td>/063.4A</td></tr><tr><td>X7:6</td><td>/063.4A</td></tr><tr><td>X7:7</td><td>/063.4A</td></tr><tr><td>X7:8</td><td>/063.5A</td></tr><tr><td>X7:9</td><td>/063.5A</td></tr><tr><td>X7:10</td><td>/063.6A</td></tr><tr><td>X7:11</td><td>/063.6A</td></tr><tr><td>X7:12</td><td>/063.6A</td></tr><tr><td>X7:13</td><td>/063.3C</td></tr><tr><td>X7:14</td><td>/063.3C</td></tr><tr><td>X7:15</td><td>/063.3C</td></tr><tr><td>X7:16</td><td>/063.3C</td></tr><tr><td>X7:17</td><td>/063.4C</td></tr><tr><td>X7:18</td><td>/063.4C</td></tr><tr><td>X7:19</td><td>/063.5C</td></tr><tr><td>X7:20</td><td>/063.5C</td></tr><tr><td>X7:21</td><td>/063.6C</td></tr><tr><td>X7:22</td><td>/063.6C</td></tr><tr><td>X7:23</td><td>/063.7A</td></tr><tr><td>X7:24</td><td>/063.7A</td></tr><tr><td>X7:25</td><td>/063.2D</td></tr><tr><td>X7:26</td><td>/063.2D</td></tr><tr><td>X7:27</td><td>/063.3D</td></tr><tr><td>X7:28</td><td>/063.3D</td></tr><tr><td>X7:29</td><td>/063.3D</td></tr><tr><td>X7:30</td><td>/063.3D</td></tr><tr><td>X7:31</td><td>/063.4D</td></tr><tr><td>X7:32</td><td>/063.4D</td></tr><tr><td>X7:33</td><td>/063.5D</td></tr><tr><td>X7:34</td><td>/063.5D</td></tr><tr><td>X7:35</td><td>/063.5D</td></tr><tr><td>X7:36</td><td>/063.5D</td></tr><tr><td>X7:37</td><td>/063.6D</td></tr><tr><td>X7:38</td><td>/063.6D</td></tr><tr><td>X7:39</td><td>/063.6D</td></tr><tr><td>X7:40</td><td>/063.6D</td></tr><tr><td>X7:41</td><td>/063.7D</td></tr><tr><td>X7:42</td><td>/063.7D</td></tr><tr><td>X7:43</td><td>SPARE</td></tr><tr><td>X7:44</td><td>SPARE</td></tr><tr><td>X7:45</td><td>/064.3B</td></tr><tr><td>X7:46</td><td>/064.3B</td></tr><tr><td>X7:47</td><td>SPARE</td></tr><tr><td>X7:48</td><td>SPARE</td></tr><tr><td>X7:49</td><td>SPARE</td></tr><tr><td>X7:50</td><td>SPARE</td></tr></table><table><tr><th>TAG</th><th>REF</th></tr><tr><td>X7:51</td><td>/064.3B</td></tr><tr><td>X7:52</td><td>/064.4B</td></tr><tr><td>X7:53</td><td>/064.5B</td></tr><tr><td>X7:54</td><td>/064.5B</td></tr><tr><td>X7:55</td><td>SPARE</td></tr><tr><td>X7:56</td><td>SPARE</td></tr><tr><td>X7:57</td><td>/064.6B</td></tr><tr><td>X7:58</td><td>/064.6B</td></tr><tr><td>X7:59</td><td>SPARE</td></tr><tr><td>X7:60</td><td>SPARE</td></tr><tr><td>X7:61</td><td>/064.3C</td></tr><tr><td>X7:62</td><td>/064.3C</td></tr><tr><td>X7:63</td><td>SPARE</td></tr><tr><td>X7:64</td><td>SPARE</td></tr><tr><td>X7:65</td><td>/064.3C</td></tr><tr><td>X7:66</td><td>/064.4C</td></tr><tr><td>X7:67</td><td>/064.5C</td></tr><tr><td>X7:68</td><td>/064.5C</td></tr><tr><td>X7:69</td><td>/064.5C</td></tr><tr><td>X7:70</td><td>/064.6C</td></tr><tr><td>X7:71</td><td>/064.6C</td></tr><tr><td>X7:72</td><td>/064.6C</td></tr><tr><td>X7:73</td><td>/064.6C</td></tr><tr><td>X7:74</td><td>/064.7C</td></tr><tr><td>X7:75</td><td>/021.5B</td></tr><tr><td>X7:76</td><td>/021.5B</td></tr><tr><td>X7:77</td><td>/021.6B</td></tr><tr><td>X7:78</td><td>/021.6B</td></tr><tr><td>X7:79</td><td>/021.6B</td></tr><tr><td>X7:80</td><td>/021.7B</td></tr><tr><td>X7:81</td><td>/021.7B</td></tr><tr><td>X7:82</td><td>/021.7B</td></tr><tr><td>X7:83</td><td>SPARE</td></tr><tr><td>X7:84</td><td>SPARE</td></tr><tr><td>X7:85</td><td>SPARE</td></tr></table>								TAG	REF	X1:1	/004.1B	X1:2	/004.2B	X1:3	/005.2B	X1:4	/005.2B	X1:5	/006.5D	X1:6	/006.5D	X1:7	SPARE	X1:8	SPARE	TAG	REF	X2:1	/008.3A	X2:2	/008.3B	X2:3	/008.3B	X2:4	/008.3B	X2:5	/008.3B	X2:6	/008.3B	X2:7	/008.3B	X2:8	/008.3C	X2:9	/009.3A	X2:10	/009.3A	X2:11	/009.3B	X2:12	/009.3B	X2:13	/009.3B	X2:14	/009.3B	X2:15	/009.3B	X2:16	/009.3C	X2:17	/009.3E	X2:18	/009.3E	X2:19	/009.3E	X2:20	/009.3E	X2:21	/009.3E	X2:22	/009.3D	X2:23	/009.3D	X2:24	/009.3D	X2:25	/024.4A	X2:26	/024.4B	X2:27	/024.4B	X2:28	/024.4B	X2:29	/024.4B	X2:30	/024.4B	X2:31	/024.4C	X2:32	/024.4C	X2:33	/019.2C	X2:34	/019.2C	X2:35	/019.3C	X2:36	/019.3C	X2:37	SPARE	X2:38	SPARE	X2:39	SPARE	X2:40	SPARE	X2:41	SPARE	X2:42	SPARE	X2:43	SPARE	X2:44	SPARE	X2:45	SPARE	TAG	REF	X3:1	/007.4A	X3:2	/007.4A	X3:3	/007.4B	X3:4	/007.4B	X3:5	/007.4D	X3:6	/007.4D	X3:7	/007.4D	X3:8	/007.4D	X3:9	SPARE	X3:10	SPARE	X3:11	SPARE	X3:12	SPARE	X3:13	SPARE	X3:14	SPARE	X3:15	SPARE	X3:16	SPARE	X3:17	SPARE	X3:18	SPARE	X3:19	SPARE	X3:20	SPARE	TAG	REF	X4:1	/011.2C	X4:2	/011.2C	X4:3	/013.5B	X4:4	/013.6B	X4:5	/014.4D	X4:6	/014.4E	X4:7	/018.2B	X4:8	/018.2B	X4:9	/018.3B	X4:10	/018.4B	X4:11	/018.5B	X4:12	/018.6B	X4:13	/018.7B	X4:14	/021.3B	X4:15	/021.3C	X4:16	/012.5C	X4:17	/012.5C	X4:18	/021.4B	X4:19	/021.4C	X4:20	SPARE	X4:21	SPARE	X4:22	SPARE	X4:23	SPARE	X4:24	SPARE	TAG	REF	X5:1	/015.4E	X5:2	/015.5E	X5:3	/015.5B	X5:4	/015.5C	X5:5	/016.1E	X5:6	/016.2E	X5:7	/016.2E	X5:8	/016.3E	X5:9	/016.6E	X5:10	/016.6E	X5:11	/016.7E	X5:12	/016.5C	X5:13	/016.5C	X5:14	/017.1E	X5:15	/017.2E	X5:16	/017.2E	X5:17	/017.3E	X5:18	/017.6E	X5:19	/017.6E	X5:20	/017.7E	X5:21	/017.5C	X5:22	/017.5C	X5:23	SPARE	X5:24	SPARE	X5:25	SPARE	TAG	REF	X6:1	/020.4E	X6:2	/020.4E	X6:3	/020.4E	X6:4	/020.5E	X6:5	/020.5E	X6:6	SPARE	X6:7	SPARE	X6:8	SPARE	TAG	REF	X7:1	/063.2A	X7:2	/063.3A	X7:3	/063.3A	X7:4	/063.3A	X7:5	/063.4A	X7:6	/063.4A	X7:7	/063.4A	X7:8	/063.5A	X7:9	/063.5A	X7:10	/063.6A	X7:11	/063.6A	X7:12	/063.6A	X7:13	/063.3C	X7:14	/063.3C	X7:15	/063.3C	X7:16	/063.3C	X7:17	/063.4C	X7:18	/063.4C	X7:19	/063.5C	X7:20	/063.5C	X7:21	/063.6C	X7:22	/063.6C	X7:23	/063.7A	X7:24	/063.7A	X7:25	/063.2D	X7:26	/063.2D	X7:27	/063.3D	X7:28	/063.3D	X7:29	/063.3D	X7:30	/063.3D	X7:31	/063.4D	X7:32	/063.4D	X7:33	/063.5D	X7:34	/063.5D	X7:35	/063.5D	X7:36	/063.5D	X7:37	/063.6D	X7:38	/063.6D	X7:39	/063.6D	X7:40	/063.6D	X7:41	/063.7D	X7:42	/063.7D	X7:43	SPARE	X7:44	SPARE	X7:45	/064.3B	X7:46	/064.3B	X7:47	SPARE	X7:48	SPARE	X7:49	SPARE	X7:50	SPARE	TAG	REF	X7:51	/064.3B	X7:52	/064.4B	X7:53	/064.5B	X7:54	/064.5B	X7:55	SPARE	X7:56	SPARE	X7:57	/064.6B	X7:58	/064.6B	X7:59	SPARE	X7:60	SPARE	X7:61	/064.3C	X7:62	/064.3C	X7:63	SPARE	X7:64	SPARE	X7:65	/064.3C	X7:66	/064.4C	X7:67	/064.5C	X7:68	/064.5C	X7:69	/064.5C	X7:70	/064.6C	X7:71	/064.6C	X7:72	/064.6C	X7:73	/064.6C	X7:74	/064.7C	X7:75	/021.5B	X7:76	/021.5B	X7:77	/021.6B	X7:78	/021.6B	X7:79	/021.6B	X7:80	/021.7B	X7:81	/021.7B	X7:82	/021.7B	X7:83	SPARE	X7:84	SPARE	X7:85	SPARE
TAG	REF																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X1:1	/004.1B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X1:2	/004.2B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X1:3	/005.2B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X1:4	/005.2B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X1:5	/006.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X1:6	/006.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X1:7	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X1:8	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
TAG	REF																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:1	/008.3A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:2	/008.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:3	/008.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:4	/008.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:5	/008.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:6	/008.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:7	/008.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:8	/008.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:9	/009.3A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:10	/009.3A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:11	/009.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:12	/009.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:13	/009.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:14	/009.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:15	/009.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:16	/009.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:17	/009.3E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:18	/009.3E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:19	/009.3E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:20	/009.3E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:21	/009.3E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:22	/009.3D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:23	/009.3D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:24	/009.3D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:25	/024.4A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:26	/024.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:27	/024.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:28	/024.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:29	/024.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:30	/024.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:31	/024.4C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:32	/024.4C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:33	/019.2C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:34	/019.2C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:35	/019.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:36	/019.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:37	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:38	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:39	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:40	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:41	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:42	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:43	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:44	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X2:45	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
TAG	REF																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:1	/007.4A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:2	/007.4A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:3	/007.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:4	/007.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:5	/007.4D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:6	/007.4D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:7	/007.4D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:8	/007.4D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:9	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:10	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:11	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:12	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:13	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:14	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:15	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:16	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:17	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:18	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:19	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X3:20	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
TAG	REF																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:1	/011.2C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:2	/011.2C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:3	/013.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:4	/013.6B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:5	/014.4D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:6	/014.4E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:7	/018.2B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:8	/018.2B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:9	/018.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:10	/018.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:11	/018.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:12	/018.6B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:13	/018.7B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:14	/021.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:15	/021.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:16	/012.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:17	/012.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:18	/021.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:19	/021.4C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:20	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:21	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:22	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:23	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X4:24	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
TAG	REF																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:1	/015.4E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:2	/015.5E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:3	/015.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:4	/015.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:5	/016.1E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:6	/016.2E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:7	/016.2E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:8	/016.3E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:9	/016.6E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:10	/016.6E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:11	/016.7E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:12	/016.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:13	/016.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:14	/017.1E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:15	/017.2E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:16	/017.2E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:17	/017.3E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:18	/017.6E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:19	/017.6E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:20	/017.7E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:21	/017.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:22	/017.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:23	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:24	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X5:25	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
TAG	REF																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X6:1	/020.4E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X6:2	/020.4E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X6:3	/020.4E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X6:4	/020.5E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X6:5	/020.5E																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X6:6	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X6:7	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X6:8	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
TAG	REF																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:1	/063.2A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:2	/063.3A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:3	/063.3A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:4	/063.3A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:5	/063.4A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:6	/063.4A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:7	/063.4A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:8	/063.5A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:9	/063.5A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:10	/063.6A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:11	/063.6A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:12	/063.6A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:13	/063.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:14	/063.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:15	/063.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:16	/063.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:17	/063.4C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:18	/063.4C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:19	/063.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:20	/063.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:21	/063.6C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:22	/063.6C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:23	/063.7A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:24	/063.7A																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:25	/063.2D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:26	/063.2D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:27	/063.3D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:28	/063.3D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:29	/063.3D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:30	/063.3D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:31	/063.4D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:32	/063.4D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:33	/063.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:34	/063.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:35	/063.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:36	/063.5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:37	/063.6D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:38	/063.6D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:39	/063.6D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:40	/063.6D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:41	/063.7D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:42	/063.7D																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:43	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:44	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:45	/064.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:46	/064.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:47	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:48	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:49	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:50	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
TAG	REF																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:51	/064.3B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:52	/064.4B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:53	/064.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:54	/064.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:55	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:56	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:57	/064.6B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:58	/064.6B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:59	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:60	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:61	/064.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:62	/064.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:63	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:64	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:65	/064.3C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:66	/064.4C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:67	/064.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:68	/064.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:69	/064.5C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:70	/064.6C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:71	/064.6C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:72	/064.6C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:73	/064.6C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:74	/064.7C																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:75	/021.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:76	/021.5B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:77	/021.6B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:78	/021.6B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:79	/021.6B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:80	/021.7B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:81	/021.7B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:82	/021.7B																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:83	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:84	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
X7:85	SPARE																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL TERMINAL BLOCK REFERENCE		PREPARED : GD	REVISION: Z	SHT :068																																																																																																																																																																																																																																																																																																																																																																																																																																																												
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.							REVIEWED : THY	DATE: 09-02-2015	CONT:069																																																																																																																																																																																																																																																																																																																																																																																																																																																												
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014							APPROVED : APS																																																																																																																																																																																																																																																																																																																																																																																																																																																														
					PANEL TYPE : +1TR1A,+1TR1B		DRG. NO.: 3269PP621-S-07																																																																																																																																																																																																																																																																																																																																																																																																																																																														
1	2	3	4	5	6	7	8																																																																																																																																																																																																																																																																																																																																																																																																																																																														

TAG	REF
X1:1	/004.1B
X1:2	/004.2B
X1:3	/005.2B
X1:4	/005.2B
X1:5	/006.5D
X1:6	/006.5D
X1:7	SPARE
X1:8	SPARE

TAG	REF
X2:1	/008.3A
X2:2	/008.3B
X2:3	/008.3B
X2:4	/008.3B
X2:5	/008.3B
X2:6	/008.3B
X2:7	/008.3B
X2:8	/008.3C
X2:9	/009.3A
X2:10	/009.3A
X2:11	/009.3B
X2:12	/009.3B
X2:13	/009.3B
X2:14	/009.3B
X2:15	/009.3B
X2:16	/009.3C
X2:17	/009.3E
X2:18	/009.3E
X2:19	/009.3E
X2:20	/009.3E
X2:21	/009.3E
X2:22	/009.3D
X2:23	/009.3D
X2:24	/009.3D
X2:25	/024.4A
X2:26	/024.4B
X2:27	/024.4B
X2:28	/024.4B
X2:29	/024.4B
X2:30	/024.4B
X2:31	/024.4C
X2:32	/024.4C
X2:33	/019.2C
X2:34	/019.2C
X2:35	/019.3C
X2:36	/019.3C
X2:37	SPARE
X2:38	SPARE
X2:39	SPARE
X2:40	SPARE
X2:41	SPARE
X2:42	SPARE
X2:43	SPARE
X2:44	SPARE
X2:45	SPARE

TAG	REF
X3:1	/007.4A
X3:2	/007.4A
X3:3	/007.4B
X3:4	/007.4B
X3:5	/007.4D
X3:6	/007.4D
X3:7	/007.4D
X3:8	/007.4D
X3:9	SPARE
X3:10	SPARE
X3:11	SPARE
X3:12	SPARE
X3:13	SPARE
X3:14	SPARE
X3:15	SPARE
X3:16	SPARE
X3:17	SPARE
X3:18	SPARE
X3:19	SPARE
X3:20	SPARE

TAG	REF
X4:1	/011.2C
X4:2	/011.2C
X4:3	/013.5B
X4:4	/013.6B
X4:5	/014.4D
X4:6	/014.4E
X4:7	/018.2B
X4:8	/018.2B
X4:9	/018.3B
X4:10	/018.4B
X4:11	/018.5B
X4:12	/018.6B
X4:13	/018.7B
X4:14	/021.3B
X4:15	/021.3C
X4:16	/012.5C
X4:17	/012.5C
X4:18	/021.4B
X4:19	/021.4C
X4:20	SPARE
X4:21	SPARE
X4:22	SPARE
X4:23	SPARE
X4:24	SPARE

TAG	REF
X5:1	/015.4E
X5:2	/015.5E
X5:3	/015.5B
X5:4	/015.5C
X5:5	/016.1E
X5:6	/016.2E
X5:7	/016.2E
X5:8	/016.3E
X5:9	/016.6E
X5:10	/016.6E
X5:11	/016.7E
X5:12	/016.5C
X5:13	/016.5C
X5:14	/017.1E
X5:15	/017.2E
X5:16	/017.2E
X5:17	/017.3E
X5:18	/017.6E
X5:19	/017.6E
X5:20	/017.7E
X5:21	/017.5C
X5:22	/017.5C
X5:23	SPARE
X5:24	SPARE
X5:25	SPARE

TAG	REF
X6:1	/020.4E
X6:2	/020.4E
X6:3	/020.4E
X6:4	/020.5E
X6:5	/020.5E
X6:6	SPARE
X6:7	SPARE
X6:8	SPARE

TAG	REF
X7:1	/063.2A
X7:2	/063.3A
X7:3	/063.3A
X7:4	/063.3A
X7:5	/063.4A
X7:6	/063.4A
X7:7	/063.4A
X7:8	/063.5A
X7:9	/063.5A
X7:10	/063.6A
X7:11	/063.6A
X7:12	/063.6A
X7:13	/063.3C
X7:14	/063.3C
X7:15	/063.3C
X7:16	/063.3C
X7:17	/063.4C
X7:18	/063.4C
X7:19	/063.5C
X7:20	/063.5C
X7:21	/063.6C
X7:22	/063.6C
X7:23	/063.7A
X7:24	/063.7A
X7:25	/063.2D
X7:26	/063.2D
X7:27	/063.3D
X7:28	/063.3D
X7:29	/063.3D
X7:30	/063.3D
X7:31	/063.4D
X7:32	/063.4D
X7:33	/063.5D
X7:34	/063.5D
X7:35	/063.5D
X7:36	/063.5D
X7:37	/063.6D
X7:38	/063.6D
X7:39	/063.6D
X7:40	/063.6D
X7:41	/063.7D
X7:42	/063.7D
X7:43	SPARE
X7:44	SPARE
X7:45	/064.3B
X7:46	/064.3B
X7:47	SPARE
X7:48	SPARE
X7:49	SPARE
X7:50	SPARE

TAG	REF
X7:51	/064.3B
X7:52	/064.4B
X7:53	/064.5B
X7:54	/064.5B
X7:55	SPARE
X7:56	SPARE
X7:57	/064.6B
X7:58	/064.6B
X7:59	SPARE
X7:60	SPARE
X7:61	/064.3C
X7:62	/064.3C
X7:63	SPARE
X7:64	SPARE
X7:65	/064.3C
X7:66	/064.4C
X7:67	/064.5C
X7:68	/064.5C
X7:69	/064.5C
X7:70	/064.6C
X7:71	/064.6C
X7:72	/064.6C
X7:73	/064.6C
X7:74	/064.7C
X7:75	/021.5B
X7:76	/021.5B
X7:77	/021.6B
X7:78	/021.6B
X7:79	/021.6B
X7:80	/021.7B
X7:81	/021.7B
X7:82	/021.7B
X7:83	SPARE
X7:84	SPARE
X7:85	SPARE

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

1		2		3		4		5		6		7		8																																																																																																																																																																																																																																																																					
		+1TR1B																																																																																																																																																																																																																																																																																	
		<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X1:1</td><td>/040.1A</td></tr><tr><td>X1:2</td><td>/040.1A</td></tr><tr><td>X1:3</td><td>SPARE</td></tr><tr><td>X1:4</td><td>SPARE</td></tr><tr><td>X1:5</td><td>SPARE</td></tr></table>				TAG	REF	X1:1	/040.1A	X1:2	/040.1A	X1:3	SPARE	X1:4	SPARE	X1:5	SPARE	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X3:1</td><td>/041.5A</td></tr><tr><td>X3:2</td><td>/041.5A</td></tr><tr><td>X3:3</td><td>/041.5B</td></tr><tr><td>X3:4</td><td>/041.5B</td></tr><tr><td>X3:5</td><td>/041.5D</td></tr><tr><td>X3:6</td><td>/041.5D</td></tr><tr><td>X3:7</td><td>/041.5D</td></tr><tr><td>X3:8</td><td>/041.5E</td></tr><tr><td>X3:9</td><td>/042.3C</td></tr><tr><td>X3:10</td><td>/042.3C</td></tr><tr><td>X3:11</td><td>/042.3D</td></tr><tr><td>X3:12</td><td>/042.3D</td></tr><tr><td>X3:13</td><td>/053.3E</td></tr><tr><td>X3:14</td><td>/053.3E</td></tr><tr><td>X3:15</td><td>/053.3E</td></tr><tr><td>X3:16</td><td>/053.3E</td></tr><tr><td>X3:17</td><td>SPARE</td></tr><tr><td>X3:18</td><td>SPARE</td></tr><tr><td>X3:19</td><td>SPARE</td></tr><tr><td>X3:20</td><td>SPARE</td></tr></table>				TAG	REF	X3:1	/041.5A	X3:2	/041.5A	X3:3	/041.5B	X3:4	/041.5B	X3:5	/041.5D	X3:6	/041.5D	X3:7	/041.5D	X3:8	/041.5E	X3:9	/042.3C	X3:10	/042.3C	X3:11	/042.3D	X3:12	/042.3D	X3:13	/053.3E	X3:14	/053.3E	X3:15	/053.3E	X3:16	/053.3E	X3:17	SPARE	X3:18	SPARE	X3:19	SPARE	X3:20	SPARE	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X6:1</td><td>/049.3E</td></tr><tr><td>X6:2</td><td>/049.4E</td></tr><tr><td>X6:3</td><td>/049.4E</td></tr><tr><td>X6:4</td><td>/049.4E</td></tr><tr><td>X6:5</td><td>/049.5E</td></tr><tr><td>X6:6</td><td>SPARE</td></tr><tr><td>X6:7</td><td>SPARE</td></tr></table>		TAG	REF	X6:1	/049.3E	X6:2	/049.4E	X6:3	/049.4E	X6:4	/049.4E	X6:5	/049.5E	X6:6	SPARE	X6:7	SPARE	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X7:1</td><td>/065.2A</td></tr><tr><td>X7:2</td><td>/065.2A</td></tr><tr><td>X7:3</td><td>/065.2A</td></tr><tr><td>X7:4</td><td>/065.2A</td></tr><tr><td>X7:5</td><td>/065.3A</td></tr><tr><td>X7:6</td><td>/065.3A</td></tr><tr><td>X7:7</td><td>/065.4A</td></tr><tr><td>X7:8</td><td>/065.4A</td></tr><tr><td>X7:9</td><td>/065.5A</td></tr><tr><td>X7:10</td><td>/065.5A</td></tr><tr><td>X7:11</td><td>/065.5A</td></tr><tr><td>X7:12</td><td>/065.5A</td></tr><tr><td>X7:13</td><td>/065.6A</td></tr><tr><td>X7:14</td><td>/065.6A</td></tr><tr><td>X7:15</td><td>/065.7A</td></tr><tr><td>X7:16</td><td>/065.7A</td></tr><tr><td>X7:17</td><td>/065.7A</td></tr><tr><td>X7:18</td><td>/065.7A</td></tr><tr><td>X7:19</td><td>/065.1B</td></tr><tr><td>X7:20</td><td>/065.2B</td></tr><tr><td>X7:21</td><td>/065.2B</td></tr><tr><td>X7:22</td><td>/065.2B</td></tr><tr><td>X7:23</td><td>/065.3B</td></tr><tr><td>X7:24</td><td>/065.3B</td></tr><tr><td>X7:25</td><td>/065.3B</td></tr><tr><td>X7:26</td><td>/065.4B</td></tr><tr><td>X7:27</td><td>/065.4B</td></tr><tr><td>X7:28</td><td>/065.5B</td></tr><tr><td>X7:29</td><td>/065.5B</td></tr><tr><td>X7:30</td><td>/065.5B</td></tr><tr><td>X7:31</td><td>/065.6B</td></tr><tr><td>X7:32</td><td>/065.6B</td></tr><tr><td>X7:33</td><td>/065.6B</td></tr><tr><td>X7:34</td><td>/065.7B</td></tr><tr><td>X7:35</td><td>/065.7B</td></tr><tr><td>X7:36</td><td>/065.7B</td></tr><tr><td>X7:37</td><td>/065.7B</td></tr><tr><td>X7:38</td><td>/065.8B</td></tr><tr><td>X7:39</td><td>/050.5B</td></tr><tr><td>X7:40</td><td>/050.5B</td></tr><tr><td>X7:41</td><td>/050.6B</td></tr><tr><td>X7:42</td><td>/050.6B</td></tr><tr><td>X7:43</td><td>/065.5E</td></tr><tr><td>X7:44</td><td>/065.5E</td></tr><tr><td>X7:45</td><td>/065.5E</td></tr><tr><td>X7:46</td><td>/065.5E</td></tr><tr><td>X7:47</td><td>/050.6B</td></tr><tr><td>X7:48</td><td>/050.7B</td></tr><tr><td>X7:49</td><td>/050.7B</td></tr><tr><td>X7:50</td><td>/050.7B</td></tr><tr><td>X7:51</td><td>SPARE</td></tr><tr><td>X7:52</td><td>SPARE</td></tr><tr><td>X7:53</td><td>SPARE</td></tr><tr><td>X7:54</td><td>SPARE</td></tr><tr><td>X7:55</td><td>SPARE</td></tr></table>				TAG	REF	X7:1	/065.2A	X7:2	/065.2A	X7:3	/065.2A	X7:4	/065.2A	X7:5	/065.3A	X7:6	/065.3A	X7:7	/065.4A	X7:8	/065.4A	X7:9	/065.5A	X7:10	/065.5A	X7:11	/065.5A	X7:12	/065.5A	X7:13	/065.6A	X7:14	/065.6A	X7:15	/065.7A	X7:16	/065.7A	X7:17	/065.7A	X7:18	/065.7A	X7:19	/065.1B	X7:20	/065.2B	X7:21	/065.2B	X7:22	/065.2B	X7:23	/065.3B	X7:24	/065.3B	X7:25	/065.3B	X7:26	/065.4B	X7:27	/065.4B	X7:28	/065.5B	X7:29	/065.5B	X7:30	/065.5B	X7:31	/065.6B	X7:32	/065.6B	X7:33	/065.6B	X7:34	/065.7B	X7:35	/065.7B	X7:36	/065.7B	X7:37	/065.7B	X7:38	/065.8B	X7:39	/050.5B	X7:40	/050.5B	X7:41	/050.6B	X7:42	/050.6B	X7:43	/065.5E	X7:44	/065.5E	X7:45	/065.5E	X7:46	/065.5E	X7:47	/050.6B	X7:48	/050.7B	X7:49	/050.7B	X7:50	/050.7B	X7:51	SPARE	X7:52	SPARE	X7:53	SPARE	X7:54	SPARE	X7:55	SPARE	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X7A:1</td><td>/065.1D</td></tr><tr><td>X7A:2</td><td>/065.1D</td></tr><tr><td>X7A:3</td><td>/065.2D</td></tr><tr><td>X7A:4</td><td>/065.2D</td></tr><tr><td>X7A:5</td><td>/065.2D</td></tr><tr><td>X7A:6</td><td>/065.2D</td></tr><tr><td>X7A:7</td><td>/065.3D</td></tr><tr><td>X7A:8</td><td>/065.3D</td></tr><tr><td>X7A:9</td><td>/065.3D</td></tr><tr><td>X7A:10</td><td>/065.3D</td></tr><tr><td>X7A:11</td><td>/065.4D</td></tr><tr><td>X7A:12</td><td>/065.4D</td></tr><tr><td>X7A:13</td><td>/065.4D</td></tr><tr><td>X7A:14</td><td>/065.5D</td></tr><tr><td>X7A:15</td><td>/065.5D</td></tr><tr><td>X7A:16</td><td>/065.5D</td></tr><tr><td>X7A:17</td><td>/065.5D</td></tr><tr><td>X7A:18</td><td>/065.6D</td></tr><tr><td>X7A:19</td><td>/065.6D</td></tr><tr><td>X7A:20</td><td>/065.6D</td></tr><tr><td>X7A:21</td><td>/065.6D</td></tr><tr><td>X7A:22</td><td>/065.7D</td></tr><tr><td>X7A:23</td><td>/065.7D</td></tr><tr><td>X7A:24</td><td>/065.7D</td></tr><tr><td>X7A:25</td><td>/065.8D</td></tr><tr><td>X7A:26</td><td>/065.8D</td></tr><tr><td>X7A:27</td><td>/065.3E</td></tr><tr><td>X7A:28</td><td>/065.3E</td></tr><tr><td>X7A:29</td><td>/065.3E</td></tr><tr><td>X7A:30</td><td>/065.4E</td></tr><tr><td>X7A:31</td><td>SPARE</td></tr><tr><td>X7A:32</td><td>SPARE</td></tr><tr><td>X7A:33</td><td>SPARE</td></tr><tr><td>X7A:34</td><td>SPARE</td></tr><tr><td>X7A:35</td><td>SPARE</td></tr></table>				TAG	REF	X7A:1	/065.1D	X7A:2	/065.1D	X7A:3	/065.2D	X7A:4	/065.2D	X7A:5	/065.2D	X7A:6	/065.2D	X7A:7	/065.3D	X7A:8	/065.3D	X7A:9	/065.3D	X7A:10	/065.3D	X7A:11	/065.4D	X7A:12	/065.4D	X7A:13	/065.4D	X7A:14	/065.5D	X7A:15	/065.5D	X7A:16	/065.5D	X7A:17	/065.5D	X7A:18	/065.6D	X7A:19	/065.6D	X7A:20	/065.6D	X7A:21	/065.6D	X7A:22	/065.7D	X7A:23	/065.7D	X7A:24	/065.7D	X7A:25	/065.8D	X7A:26	/065.8D	X7A:27	/065.3E	X7A:28	/065.3E	X7A:29	/065.3E	X7A:30	/065.4E	X7A:31	SPARE	X7A:32	SPARE	X7A:33	SPARE	X7A:34	SPARE	X7A:35	SPARE		
TAG	REF																																																																																																																																																																																																																																																																																		
X1:1	/040.1A																																																																																																																																																																																																																																																																																		
X1:2	/040.1A																																																																																																																																																																																																																																																																																		
X1:3	SPARE																																																																																																																																																																																																																																																																																		
X1:4	SPARE																																																																																																																																																																																																																																																																																		
X1:5	SPARE																																																																																																																																																																																																																																																																																		
TAG	REF																																																																																																																																																																																																																																																																																		
X3:1	/041.5A																																																																																																																																																																																																																																																																																		
X3:2	/041.5A																																																																																																																																																																																																																																																																																		
X3:3	/041.5B																																																																																																																																																																																																																																																																																		
X3:4	/041.5B																																																																																																																																																																																																																																																																																		
X3:5	/041.5D																																																																																																																																																																																																																																																																																		
X3:6	/041.5D																																																																																																																																																																																																																																																																																		
X3:7	/041.5D																																																																																																																																																																																																																																																																																		
X3:8	/041.5E																																																																																																																																																																																																																																																																																		
X3:9	/042.3C																																																																																																																																																																																																																																																																																		
X3:10	/042.3C																																																																																																																																																																																																																																																																																		
X3:11	/042.3D																																																																																																																																																																																																																																																																																		
X3:12	/042.3D																																																																																																																																																																																																																																																																																		
X3:13	/053.3E																																																																																																																																																																																																																																																																																		
X3:14	/053.3E																																																																																																																																																																																																																																																																																		
X3:15	/053.3E																																																																																																																																																																																																																																																																																		
X3:16	/053.3E																																																																																																																																																																																																																																																																																		
X3:17	SPARE																																																																																																																																																																																																																																																																																		
X3:18	SPARE																																																																																																																																																																																																																																																																																		
X3:19	SPARE																																																																																																																																																																																																																																																																																		
X3:20	SPARE																																																																																																																																																																																																																																																																																		
TAG	REF																																																																																																																																																																																																																																																																																		
X6:1	/049.3E																																																																																																																																																																																																																																																																																		
X6:2	/049.4E																																																																																																																																																																																																																																																																																		
X6:3	/049.4E																																																																																																																																																																																																																																																																																		
X6:4	/049.4E																																																																																																																																																																																																																																																																																		
X6:5	/049.5E																																																																																																																																																																																																																																																																																		
X6:6	SPARE																																																																																																																																																																																																																																																																																		
X6:7	SPARE																																																																																																																																																																																																																																																																																		
TAG	REF																																																																																																																																																																																																																																																																																		
X7:1	/065.2A																																																																																																																																																																																																																																																																																		
X7:2	/065.2A																																																																																																																																																																																																																																																																																		
X7:3	/065.2A																																																																																																																																																																																																																																																																																		
X7:4	/065.2A																																																																																																																																																																																																																																																																																		
X7:5	/065.3A																																																																																																																																																																																																																																																																																		
X7:6	/065.3A																																																																																																																																																																																																																																																																																		
X7:7	/065.4A																																																																																																																																																																																																																																																																																		
X7:8	/065.4A																																																																																																																																																																																																																																																																																		
X7:9	/065.5A																																																																																																																																																																																																																																																																																		
X7:10	/065.5A																																																																																																																																																																																																																																																																																		
X7:11	/065.5A																																																																																																																																																																																																																																																																																		
X7:12	/065.5A																																																																																																																																																																																																																																																																																		
X7:13	/065.6A																																																																																																																																																																																																																																																																																		
X7:14	/065.6A																																																																																																																																																																																																																																																																																		
X7:15	/065.7A																																																																																																																																																																																																																																																																																		
X7:16	/065.7A																																																																																																																																																																																																																																																																																		
X7:17	/065.7A																																																																																																																																																																																																																																																																																		
X7:18	/065.7A																																																																																																																																																																																																																																																																																		
X7:19	/065.1B																																																																																																																																																																																																																																																																																		
X7:20	/065.2B																																																																																																																																																																																																																																																																																		
X7:21	/065.2B																																																																																																																																																																																																																																																																																		
X7:22	/065.2B																																																																																																																																																																																																																																																																																		
X7:23	/065.3B																																																																																																																																																																																																																																																																																		
X7:24	/065.3B																																																																																																																																																																																																																																																																																		
X7:25	/065.3B																																																																																																																																																																																																																																																																																		
X7:26	/065.4B																																																																																																																																																																																																																																																																																		
X7:27	/065.4B																																																																																																																																																																																																																																																																																		
X7:28	/065.5B																																																																																																																																																																																																																																																																																		
X7:29	/065.5B																																																																																																																																																																																																																																																																																		
X7:30	/065.5B																																																																																																																																																																																																																																																																																		
X7:31	/065.6B																																																																																																																																																																																																																																																																																		
X7:32	/065.6B																																																																																																																																																																																																																																																																																		
X7:33	/065.6B																																																																																																																																																																																																																																																																																		
X7:34	/065.7B																																																																																																																																																																																																																																																																																		
X7:35	/065.7B																																																																																																																																																																																																																																																																																		
X7:36	/065.7B																																																																																																																																																																																																																																																																																		
X7:37	/065.7B																																																																																																																																																																																																																																																																																		
X7:38	/065.8B																																																																																																																																																																																																																																																																																		
X7:39	/050.5B																																																																																																																																																																																																																																																																																		
X7:40	/050.5B																																																																																																																																																																																																																																																																																		
X7:41	/050.6B																																																																																																																																																																																																																																																																																		
X7:42	/050.6B																																																																																																																																																																																																																																																																																		
X7:43	/065.5E																																																																																																																																																																																																																																																																																		
X7:44	/065.5E																																																																																																																																																																																																																																																																																		
X7:45	/065.5E																																																																																																																																																																																																																																																																																		
X7:46	/065.5E																																																																																																																																																																																																																																																																																		
X7:47	/050.6B																																																																																																																																																																																																																																																																																		
X7:48	/050.7B																																																																																																																																																																																																																																																																																		
X7:49	/050.7B																																																																																																																																																																																																																																																																																		
X7:50	/050.7B																																																																																																																																																																																																																																																																																		
X7:51	SPARE																																																																																																																																																																																																																																																																																		
X7:52	SPARE																																																																																																																																																																																																																																																																																		
X7:53	SPARE																																																																																																																																																																																																																																																																																		
X7:54	SPARE																																																																																																																																																																																																																																																																																		
X7:55	SPARE																																																																																																																																																																																																																																																																																		
TAG	REF																																																																																																																																																																																																																																																																																		
X7A:1	/065.1D																																																																																																																																																																																																																																																																																		
X7A:2	/065.1D																																																																																																																																																																																																																																																																																		
X7A:3	/065.2D																																																																																																																																																																																																																																																																																		
X7A:4	/065.2D																																																																																																																																																																																																																																																																																		
X7A:5	/065.2D																																																																																																																																																																																																																																																																																		
X7A:6	/065.2D																																																																																																																																																																																																																																																																																		
X7A:7	/065.3D																																																																																																																																																																																																																																																																																		
X7A:8	/065.3D																																																																																																																																																																																																																																																																																		
X7A:9	/065.3D																																																																																																																																																																																																																																																																																		
X7A:10	/065.3D																																																																																																																																																																																																																																																																																		
X7A:11	/065.4D																																																																																																																																																																																																																																																																																		
X7A:12	/065.4D																																																																																																																																																																																																																																																																																		
X7A:13	/065.4D																																																																																																																																																																																																																																																																																		
X7A:14	/065.5D																																																																																																																																																																																																																																																																																		
X7A:15	/065.5D																																																																																																																																																																																																																																																																																		
X7A:16	/065.5D																																																																																																																																																																																																																																																																																		
X7A:17	/065.5D																																																																																																																																																																																																																																																																																		
X7A:18	/065.6D																																																																																																																																																																																																																																																																																		
X7A:19	/065.6D																																																																																																																																																																																																																																																																																		
X7A:20	/065.6D																																																																																																																																																																																																																																																																																		
X7A:21	/065.6D																																																																																																																																																																																																																																																																																		
X7A:22	/065.7D																																																																																																																																																																																																																																																																																		
X7A:23	/065.7D																																																																																																																																																																																																																																																																																		
X7A:24	/065.7D																																																																																																																																																																																																																																																																																		
X7A:25	/065.8D																																																																																																																																																																																																																																																																																		
X7A:26	/065.8D																																																																																																																																																																																																																																																																																		
X7A:27	/065.3E																																																																																																																																																																																																																																																																																		
X7A:28	/065.3E																																																																																																																																																																																																																																																																																		
X7A:29	/065.3E																																																																																																																																																																																																																																																																																		
X7A:30	/065.4E																																																																																																																																																																																																																																																																																		
X7A:31	SPARE																																																																																																																																																																																																																																																																																		
X7A:32	SPARE																																																																																																																																																																																																																																																																																		
X7A:33	SPARE																																																																																																																																																																																																																																																																																		
X7A:34	SPARE																																																																																																																																																																																																																																																																																		
X7A:35	SPARE																																																																																																																																																																																																																																																																																		
		<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X2:1</td><td>/042.3A</td></tr><tr><td>X2:2</td><td>/042.3A</td></tr><tr><td>X2:3</td><td>/042.3B</td></tr><tr><td>X2:4</td><td>/042.3B</td></tr><tr><td>X2:5</td><td>/042.3B</td></tr><tr><td>X2:6</td><td>/042.3B</td></tr><tr><td>X2:7</td><td>/042.3B</td></tr><tr><td>X2:8</td><td>/042.3B</td></tr><tr><td>X2:9</td><td>/053.3B</td></tr><tr><td>X2:10</td><td>/053.3B</td></tr><tr><td>X2:11</td><td>/053.3B</td></tr><tr><td>X2:12</td><td>/053.3B</td></tr><tr><td>X2:13</td><td>/053.3B</td></tr><tr><td>X2:14</td><td>/053.3B</td></tr><tr><td>X2:15</td><td>/053.3C</td></tr><tr><td>X2:16</td><td>/053.3C</td></tr><tr><td>X2:17</td><td>SPARE</td></tr><tr><td>X2:18</td><td>SPARE</td></tr><tr><td>X2:19</td><td>SPARE</td></tr><tr><td>X2:20</td><td>SPARE</td></tr></table>				TAG	REF	X2:1	/042.3A	X2:2	/042.3A	X2:3	/042.3B	X2:4	/042.3B	X2:5	/042.3B	X2:6	/042.3B	X2:7	/042.3B	X2:8	/042.3B	X2:9	/053.3B	X2:10	/053.3B	X2:11	/053.3B	X2:12	/053.3B	X2:13	/053.3B	X2:14	/053.3B	X2:15	/053.3C	X2:16	/053.3C	X2:17	SPARE	X2:18	SPARE	X2:19	SPARE	X2:20	SPARE																																																																																																																																																																																																																																				
TAG	REF																																																																																																																																																																																																																																																																																		
X2:1	/042.3A																																																																																																																																																																																																																																																																																		
X2:2	/042.3A																																																																																																																																																																																																																																																																																		
X2:3	/042.3B																																																																																																																																																																																																																																																																																		
X2:4	/042.3B																																																																																																																																																																																																																																																																																		
X2:5	/042.3B																																																																																																																																																																																																																																																																																		
X2:6	/042.3B																																																																																																																																																																																																																																																																																		
X2:7	/042.3B																																																																																																																																																																																																																																																																																		
X2:8	/042.3B																																																																																																																																																																																																																																																																																		
X2:9	/053.3B																																																																																																																																																																																																																																																																																		
X2:10	/053.3B																																																																																																																																																																																																																																																																																		
X2:11	/053.3B																																																																																																																																																																																																																																																																																		
X2:12	/053.3B																																																																																																																																																																																																																																																																																		
X2:13	/053.3B																																																																																																																																																																																																																																																																																		
X2:14	/053.3B																																																																																																																																																																																																																																																																																		
X2:15	/053.3C																																																																																																																																																																																																																																																																																		
X2:16	/053.3C																																																																																																																																																																																																																																																																																		
X2:17	SPARE																																																																																																																																																																																																																																																																																		
X2:18	SPARE																																																																																																																																																																																																																																																																																		
X2:19	SPARE																																																																																																																																																																																																																																																																																		
X2:20	SPARE																																																																																																																																																																																																																																																																																		
		<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X4:1</td><td>/044.5C</td></tr><tr><td>X4:2</td><td>/044.5C</td></tr><tr><td>X4:3</td><td>/045.3B</td></tr><tr><td>X4:4</td><td>/045.4B</td></tr><tr><td>X4:5</td><td>/050.3B</td></tr><tr><td>X4:6</td><td>/050.3C</td></tr><tr><td>X4:7</td><td>/050.4B</td></tr><tr><td>X4:8</td><td>/050.4C</td></tr><tr><td>X4:9</td><td>SPARE</td></tr><tr><td>X4:10</td><td>SPARE</td></tr><tr><td>X4:11</td><td>SPARE</td></tr><tr><td>X4:12</td><td>SPARE</td></tr></table>				TAG	REF	X4:1	/044.5C	X4:2	/044.5C	X4:3	/045.3B	X4:4	/045.4B	X4:5	/050.3B	X4:6	/050.3C	X4:7	/050.4B	X4:8	/050.4C	X4:9	SPARE	X4:10	SPARE	X4:11	SPARE	X4:12	SPARE	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X5:1</td><td>/046.3E</td></tr><tr><td>X5:2</td><td>/046.5E</td></tr><tr><td>X5:3</td><td>/046.5C</td></tr><tr><td>X5:4</td><td>/046.5C</td></tr><tr><td>X5:5</td><td>/047.1E</td></tr><tr><td>X5:6</td><td>/047.1E</td></tr><tr><td>X5:7</td><td>/047.2E</td></tr><tr><td>X5:8</td><td>/047.2E</td></tr><tr><td>X5:9</td><td>/047.5C</td></tr><tr><td>X5:10</td><td>/047.5C</td></tr><tr><td>X5:11</td><td>/047.6E</td></tr><tr><td>X5:12</td><td>/047.6E</td></tr><tr><td>X5:13</td><td>/047.7E</td></tr><tr><td>X5:14</td><td>/048.1E</td></tr><tr><td>X5:15</td><td>/048.2E</td></tr><tr><td>X5:16</td><td>/048.2E</td></tr><tr><td>X5:17</td><td>/048.2E</td></tr><tr><td>X5:18</td><td>/048.5C</td></tr><tr><td>X5:19</td><td>/048.5C</td></tr><tr><td>X5:20</td><td>/048.6E</td></tr><tr><td>X5:21</td><td>/048.6E</td></tr><tr><td>X5:22</td><td>/048.7E</td></tr><tr><td>X5:23</td><td>SPARE</td></tr><tr><td>X5:24</td><td>SPARE</td></tr><tr><td>X5:25</td><td>SPARE</td></tr><tr><td>X5:26</td><td>SPARE</td></tr><tr><td>X5:27</td><td>SPARE</td></tr></table>				TAG	REF	X5:1	/046.3E	X5:2	/046.5E	X5:3	/046.5C	X5:4	/046.5C	X5:5	/047.1E	X5:6	/047.1E	X5:7	/047.2E	X5:8	/047.2E	X5:9	/047.5C	X5:10	/047.5C	X5:11	/047.6E	X5:12	/047.6E	X5:13	/047.7E	X5:14	/048.1E	X5:15	/048.2E	X5:16	/048.2E	X5:17	/048.2E	X5:18	/048.5C	X5:19	/048.5C	X5:20	/048.6E	X5:21	/048.6E	X5:22	/048.7E	X5:23	SPARE	X5:24	SPARE	X5:25	SPARE	X5:26	SPARE	X5:27	SPARE																																																																																																																																																																																								
TAG	REF																																																																																																																																																																																																																																																																																		
X4:1	/044.5C																																																																																																																																																																																																																																																																																		
X4:2	/044.5C																																																																																																																																																																																																																																																																																		
X4:3	/045.3B																																																																																																																																																																																																																																																																																		
X4:4	/045.4B																																																																																																																																																																																																																																																																																		
X4:5	/050.3B																																																																																																																																																																																																																																																																																		
X4:6	/050.3C																																																																																																																																																																																																																																																																																		
X4:7	/050.4B																																																																																																																																																																																																																																																																																		
X4:8	/050.4C																																																																																																																																																																																																																																																																																		
X4:9	SPARE																																																																																																																																																																																																																																																																																		
X4:10	SPARE																																																																																																																																																																																																																																																																																		
X4:11	SPARE																																																																																																																																																																																																																																																																																		
X4:12	SPARE																																																																																																																																																																																																																																																																																		
TAG	REF																																																																																																																																																																																																																																																																																		
X5:1	/046.3E																																																																																																																																																																																																																																																																																		
X5:2	/046.5E																																																																																																																																																																																																																																																																																		
X5:3	/046.5C																																																																																																																																																																																																																																																																																		
X5:4	/046.5C																																																																																																																																																																																																																																																																																		
X5:5	/047.1E																																																																																																																																																																																																																																																																																		
X5:6	/047.1E																																																																																																																																																																																																																																																																																		
X5:7	/047.2E																																																																																																																																																																																																																																																																																		
X5:8	/047.2E																																																																																																																																																																																																																																																																																		
X5:9	/047.5C																																																																																																																																																																																																																																																																																		
X5:10	/047.5C																																																																																																																																																																																																																																																																																		
X5:11	/047.6E																																																																																																																																																																																																																																																																																		
X5:12	/047.6E																																																																																																																																																																																																																																																																																		
X5:13	/047.7E																																																																																																																																																																																																																																																																																		
X5:14	/048.1E																																																																																																																																																																																																																																																																																		
X5:15	/048.2E																																																																																																																																																																																																																																																																																		
X5:16	/048.2E																																																																																																																																																																																																																																																																																		
X5:17	/048.2E																																																																																																																																																																																																																																																																																		
X5:18	/048.5C																																																																																																																																																																																																																																																																																		
X5:19	/048.5C																																																																																																																																																																																																																																																																																		
X5:20	/048.6E																																																																																																																																																																																																																																																																																		
X5:21	/048.6E																																																																																																																																																																																																																																																																																		
X5:22	/048.7E																																																																																																																																																																																																																																																																																		
X5:23	SPARE																																																																																																																																																																																																																																																																																		
X5:24	SPARE																																																																																																																																																																																																																																																																																		
X5:25	SPARE																																																																																																																																																																																																																																																																																		
X5:26	SPARE																																																																																																																																																																																																																																																																																		
X5:27	SPARE																																																																																																																																																																																																																																																																																		
CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS						TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL TERMINAL BLOCK REFERENCE		PREPARED : GD	REVISION: Z	SHT :069																																																																																																																																																																																																																																																																							
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.										REVIEWED : THY	DATE: 09-02-2015	CONT:070																																																																																																																																																																																																																																																																							
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014								PANEL TYPE : +1TR1A,+1TR1B		APPROVED : APS																																																																																																																																																																																																																																																																									
								DRG. NO.: 3269PP621-S-07																																																																																																																																																																																																																																																																											
1		2		3		4		5		6		7		8																																																																																																																																																																																																																																																																					

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

1	2	3	4	5	6	7	8
+1TR1A							
A							A
B							B
C							C
D							D
E							E
F							F

TAG	REF	TAG	REF	TAG	REF	TAG	REF	TAG	REF	TAG	REF	TAG	REF
X-BCPU-AIU-D:1	/039.2D	X-BCPU-DIU-K:1	/035.2D	X-BCPU-DIU-L:1	/033.2D	X-BCPU-DIU-M:1	/031.2D	X-BCPU-DIU-N:1	/029.2D	X-BCPU-DIU-O:1	/027.2D	X-BCPU-DIU-P:1	/025.2D
X-BCPU-AIU-D:2	/039.2D	X-BCPU-DIU-K:2	/035.2D	X-BCPU-DIU-L:2	/033.2D	X-BCPU-DIU-M:2	/031.2D	X-BCPU-DIU-N:2	/029.2D	X-BCPU-DIU-O:2	/027.2D	X-BCPU-DIU-P:2	/025.2D
X-BCPU-AIU-D:3	/039.3D	X-BCPU-DIU-K:3	/035.3D	X-BCPU-DIU-L:3	/033.3D	X-BCPU-DIU-M:3	/031.3D	X-BCPU-DIU-N:3	/029.3D	X-BCPU-DIU-O:3	/027.3D	X-BCPU-DIU-P:3	/025.3D
X-BCPU-AIU-D:4	/039.3D	X-BCPU-DIU-K:4	/035.3D	X-BCPU-DIU-L:4	/033.3D	X-BCPU-DIU-M:4	/031.3D	X-BCPU-DIU-N:4	/029.3D	X-BCPU-DIU-O:4	/027.3D	X-BCPU-DIU-P:4	/025.3D
X-BCPU-AIU-D:5	/039.3D	X-BCPU-DIU-K:5	/035.4D	X-BCPU-DIU-L:5	/033.4D	X-BCPU-DIU-M:5	/031.4D	X-BCPU-DIU-N:5	/029.4D	X-BCPU-DIU-O:5	/027.4D	X-BCPU-DIU-P:5	/025.4D
X-BCPU-AIU-D:6	/039.3D	X-BCPU-DIU-K:6	/035.4D	X-BCPU-DIU-L:6	/033.4D	X-BCPU-DIU-M:6	/031.4D	X-BCPU-DIU-N:6	/029.4D	X-BCPU-DIU-O:6	/027.4D	X-BCPU-DIU-P:6	/025.4D
X-BCPU-AIU-D:7	/039.3D	X-BCPU-DIU-K:7	/035.5D	X-BCPU-DIU-L:7	/033.5D	X-BCPU-DIU-M:7	/031.5D	X-BCPU-DIU-N:7	/029.5D	X-BCPU-DIU-O:7	/027.5D	X-BCPU-DIU-P:7	/025.5D
X-BCPU-AIU-D:8	/039.4D	X-BCPU-DIU-K:8	/035.5D	X-BCPU-DIU-L:8	/033.5D	X-BCPU-DIU-M:8	/031.5D	X-BCPU-DIU-N:8	/029.5D	X-BCPU-DIU-O:8	/027.5D	X-BCPU-DIU-P:8	/025.5D
X-BCPU-AIU-D:9	/039.4D	X-BCPU-DIU-K:9	/035.6D	X-BCPU-DIU-L:9	/033.6D	X-BCPU-DIU-M:9	/031.6D	X-BCPU-DIU-N:9	/029.6D	X-BCPU-DIU-O:9	/027.6D	X-BCPU-DIU-P:9	/025.6D
X-BCPU-AIU-D:10	/039.4D	X-BCPU-DIU-K:10	/035.6D	X-BCPU-DIU-L:10	/033.6D	X-BCPU-DIU-M:10	/031.6D	X-BCPU-DIU-N:10	/029.6D	X-BCPU-DIU-O:10	/027.6D	X-BCPU-DIU-P:10	/025.6D
X-BCPU-AIU-D:11	/039.4D	X-BCPU-DIU-K:11	/035.7D	X-BCPU-DIU-L:11	/033.7D	X-BCPU-DIU-M:11	/031.7D	X-BCPU-DIU-N:11	/029.7D	X-BCPU-DIU-O:11	/027.7D	X-BCPU-DIU-P:11	/025.7D
X-BCPU-AIU-D:12	/039.4D	X-BCPU-DIU-K:12	/035.7D	X-BCPU-DIU-L:12	/033.7D	X-BCPU-DIU-M:12	/031.7D	X-BCPU-DIU-N:12	/029.7D	X-BCPU-DIU-O:12	/027.7D	X-BCPU-DIU-P:12	/025.7D
X-BCPU-AIU-D:13	/039.5D	X-BCPU-DIU-K:13	/036.2D	X-BCPU-DIU-L:13	/034.2D	X-BCPU-DIU-M:13	/032.2D	X-BCPU-DIU-N:13	/030.2D	X-BCPU-DIU-O:13	/028.2D	X-BCPU-DIU-P:13	/026.2D
X-BCPU-AIU-D:14	/039.5D	X-BCPU-DIU-K:14	/036.2D	X-BCPU-DIU-L:14	/034.2D	X-BCPU-DIU-M:14	/032.2D	X-BCPU-DIU-N:14	/030.2D	X-BCPU-DIU-O:14	/028.2D	X-BCPU-DIU-P:14	/026.2D
X-BCPU-AIU-D:15	/039.5D	X-BCPU-DIU-K:15	/036.3D	X-BCPU-DIU-L:15	/034.3D	X-BCPU-DIU-M:15	/032.3D	X-BCPU-DIU-N:15	/030.3D	X-BCPU-DIU-O:15	/028.3D	X-BCPU-DIU-P:15	/026.3D
X-BCPU-AIU-D:16	/039.5D	X-BCPU-DIU-K:16	/036.3D	X-BCPU-DIU-L:16	/034.3D	X-BCPU-DIU-M:16	/032.3D	X-BCPU-DIU-N:16	/030.3D	X-BCPU-DIU-O:16	/028.3D	X-BCPU-DIU-P:16	/026.3D
X-BCPU-AIU-D:17	/039.6D	X-BCPU-DIU-K:17	/036.4D	X-BCPU-DIU-L:17	/034.4D	X-BCPU-DIU-M:17	/032.4D	X-BCPU-DIU-N:17	/030.4D	X-BCPU-DIU-O:17	/028.4D	X-BCPU-DIU-P:17	/026.4D
X-BCPU-AIU-D:18	/039.6D	X-BCPU-DIU-K:18	/036.4D	X-BCPU-DIU-L:18	/034.4D	X-BCPU-DIU-M:18	/032.4D	X-BCPU-DIU-N:18	/030.4D	X-BCPU-DIU-O:18	/028.4D	X-BCPU-DIU-P:18	/026.4D
X-BCPU-AIU-D:19	/039.6D	X-BCPU-DIU-K:19	/036.5D	X-BCPU-DIU-L:19	/034.5D	X-BCPU-DIU-M:19	/032.5D	X-BCPU-DIU-N:19	/030.5D	X-BCPU-DIU-O:19	/028.5D	X-BCPU-DIU-P:19	/026.5D
X-BCPU-AIU-D:20	/039.6D	X-BCPU-DIU-K:20	/036.5D	X-BCPU-DIU-L:20	/034.5D	X-BCPU-DIU-M:20	/032.5D	X-BCPU-DIU-N:20	/030.5D	X-BCPU-DIU-O:20	/028.5D	X-BCPU-DIU-P:20	/026.5D
X-BCPU-AIU-D:21	/039.6D	X-BCPU-DIU-K:21	/036.6D	X-BCPU-DIU-L:21	/034.6D	X-BCPU-DIU-M:21	/032.6D	X-BCPU-DIU-N:21	/030.6D	X-BCPU-DIU-O:21	/028.6D	X-BCPU-DIU-P:21	/026.6D
X-BCPU-AIU-D:22	/039.7D	X-BCPU-DIU-K:22	/036.6D	X-BCPU-DIU-L:22	/034.6D	X-BCPU-DIU-M:22	/032.6D	X-BCPU-DIU-N:22	/030.6D	X-BCPU-DIU-O:22	/028.6D	X-BCPU-DIU-P:22	/026.6D
X-BCPU-AIU-D:23	/039.7D	X-BCPU-DIU-K:23	/036.7D	X-BCPU-DIU-L:23	/034.7D	X-BCPU-DIU-M:23	/032.7D	X-BCPU-DIU-N:23	/030.7D	X-BCPU-DIU-O:23	/028.7D	X-BCPU-DIU-P:23	/026.7D
X-BCPU-AIU-D:24	/039.7D	X-BCPU-DIU-K:24	/036.7D	X-BCPU-DIU-L:24	/034.7D	X-BCPU-DIU-M:24	/032.7D	X-BCPU-DIU-N:24	/030.7D	X-BCPU-DIU-O:24	/028.7D	X-BCPU-DIU-P:24	/026.7D
		X-BCPU-DIU-K:25	/035.1C	X-BCPU-DIU-L:25	/033.1C	X-BCPU-DIU-M:25	/031.1C	X-BCPU-DIU-N:25	/029.1C	X-BCPU-DIU-O:25	/027.6C	X-BCPU-DIU-P:25	/025.1C
		X-BCPU-DIU-K:26	/035.7C	X-BCPU-DIU-L:26	/033.3C	X-BCPU-DIU-M:26	SPARE	X-BCPU-DIU-N:26	/029.8C	X-BCPU-DIU-O:26	/028.4C	X-BCPU-DIU-P:26	/026.1C
		X-BCPU-DIU-K:27	/036.7C	X-BCPU-DIU-L:27	/034.1C	X-BCPU-DIU-M:27	SPARE	X-BCPU-DIU-N:27	/030.4C	X-BCPU-DIU-O:27	SPARE	X-BCPU-DIU-P:27	/026.3C
		X-BCPU-DIU-K:28	/036.7C	X-BCPU-DIU-L:28	SPARE	X-BCPU-DIU-M:28	SPARE	X-BCPU-DIU-N:28	SPARE	X-BCPU-DIU-O:28	SPARE	X-BCPU-DIU-P:28	SPARE
		X-BCPU-DIU-K:29	SPARE	X-BCPU-DIU-L:29	SPARE	X-BCPU-DIU-M:29	SPARE	X-BCPU-DIU-N:29	SPARE	X-BCPU-DIU-O:29	SPARE	X-BCPU-DIU-P:29	SPARE
		X-BCPU-DIU-K:30	SPARE	X-BCPU-DIU-L:30	SPARE	X-BCPU-DIU-M:30	SPARE	X-BCPU-DIU-N:30	SPARE	X-BCPU-DIU-O:30	SPARE	X-BCPU-DIU-P:30	SPARE

TAG	REF	TAG	REF	TAG	REF
X-BCPU-DOU-E:1	/037.1B	X-BCPU-DOU-F:1	/038.1B	X-BCPU-PS-A:1	/023.6D
X-BCPU-DOU-E:2	/037.2B	X-BCPU-DOU-F:2	/038.1B	X-BCPU-PS-A:2	/023.6D
X-BCPU-DOU-E:3	/037.2B	X-BCPU-DOU-F:3	/038.2B	X-BCPU-PS-A:3	/023.3D
X-BCPU-DOU-E:4	/037.2B	X-BCPU-DOU-F:4	/038.2B	X-BCPU-PS-A:4	/023.3D
X-BCPU-DOU-E:5	/037.3B	X-BCPU-DOU-F:5	/038.3B	X-BCPU-PS-A:5	/023.7D
X-BCPU-DOU-E:6	/037.3B	X-BCPU-DOU-F:6	/038.3B	X-BCPU-PS-A:6	/023.7D
X-BCPU-DOU-E:7	/037.3B	X-BCPU-DOU-F:7	/038.3B	X-BCPU-PS-A:7	/023.7D
X-BCPU-DOU-E:8	/037.4B	X-BCPU-DOU-F:8	/038.3B	X-BCPU-PS-A:8	/023.7D
X-BCPU-DOU-E:9	/037.4B	X-BCPU-DOU-F:9	/038.4B	X-BCPU-PS-A:9	/023.5D
X-BCPU-DOU-E:10	/037.4B	X-BCPU-DOU-F:10	/038.4B	X-BCPU-PS-A:10	/023.5D
X-BCPU-DOU-E:11	/037.5B	X-BCPU-DOU-F:11	/038.5B	X-BCPU-PS-A:11	/023.5D
X-BCPU-DOU-E:12	/037.5B	X-BCPU-DOU-F:12	/038.5B	X-BCPU-PS-A:12	SPARE
X-BCPU-DOU-E:13	/037.5B	X-BCPU-DOU-F:13	/038.5B	X-BCPU-PS-A:13	SPARE
X-BCPU-DOU-E:14	/037.6B	X-BCPU-DOU-F:14	/038.6B	X-BCPU-PS-A:14	SPARE
X-BCPU-DOU-E:15	/037.6B	X-BCPU-DOU-F:15	/038.6B	X-BCPU-PS-A:15	SPARE
X-BCPU-DOU-E:16	/037.6B	X-BCPU-DOU-F:16	/038.6B		
X-BCPU-DOU-E:17	SPARE	X-BCPU-DOU-F:17	SPARE		
X-BCPU-DOU-E:18	SPARE	X-BCPU-DOU-F:18	SPARE		
X-BCPU-DOU-E:19	/037.7B	X-BCPU-DOU-F:19	/038.7B		
X-BCPU-DOU-E:20	/037.7B	X-BCPU-DOU-F:20	/038.7B		
X-BCPU-DOU-E:21	/037.7B	X-BCPU-DOU-F:21	/038.7B		
X-BCPU-DOU-E:22	/037.7B	X-BCPU-DOU-F:22	/038.7B		
X-BCPU-DOU-E:23	/037.8B	X-BCPU-DOU-F:23	/038.7B		
X-BCPU-DOU-E:24	/037.8B	X-BCPU-DOU-F:24	/038.8B		

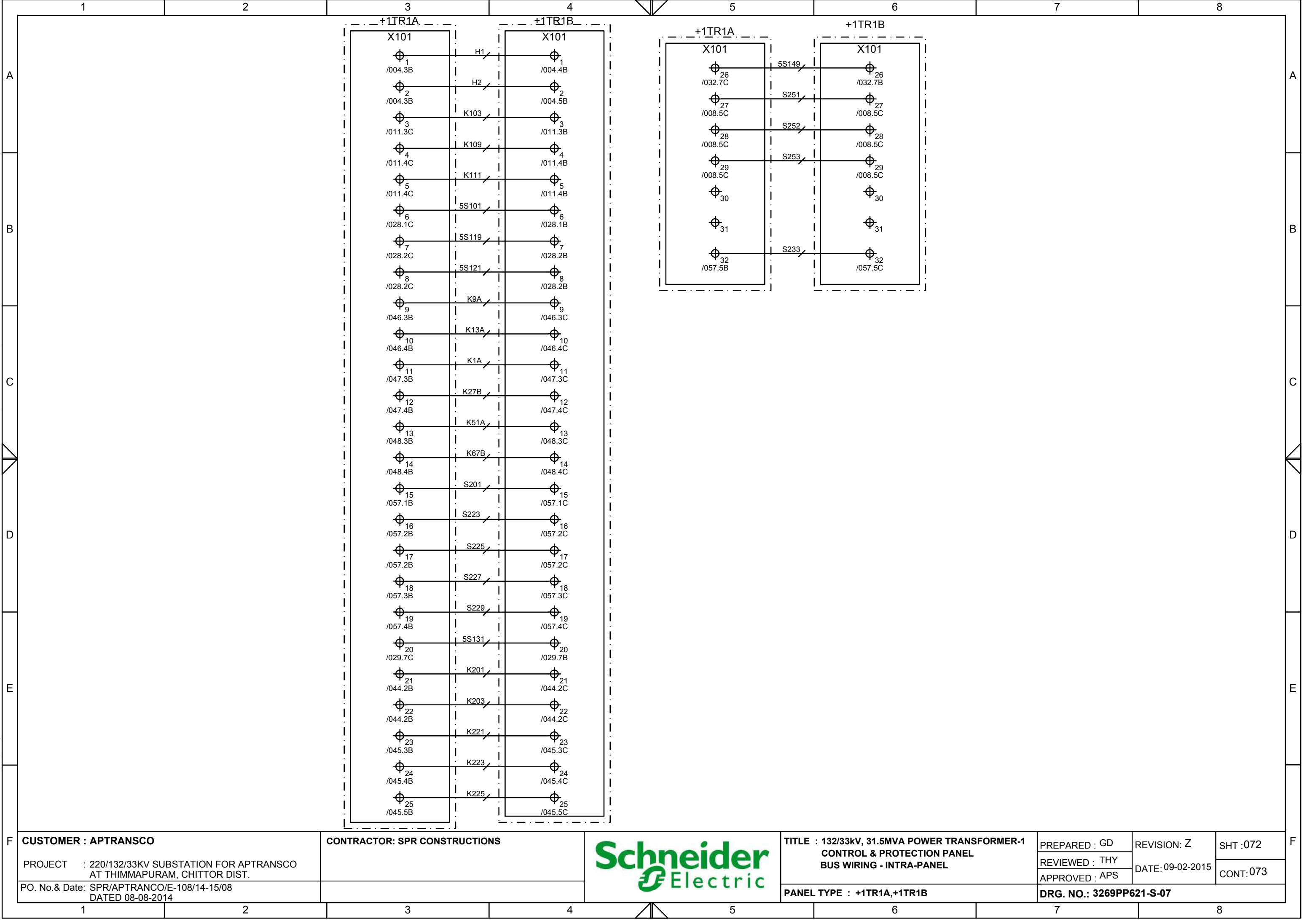
CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL TB REFERENCE		PREPARED : GD	REVISION: Z DATE: 09-02-2015	SHT :070
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.							REVIEWED : THY		CONT:071
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014							APPROVED : APS		
					PANEL TYPE : +1TR1A,+1TR1B		DRG. NO.: 3269PP621-S-07		

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

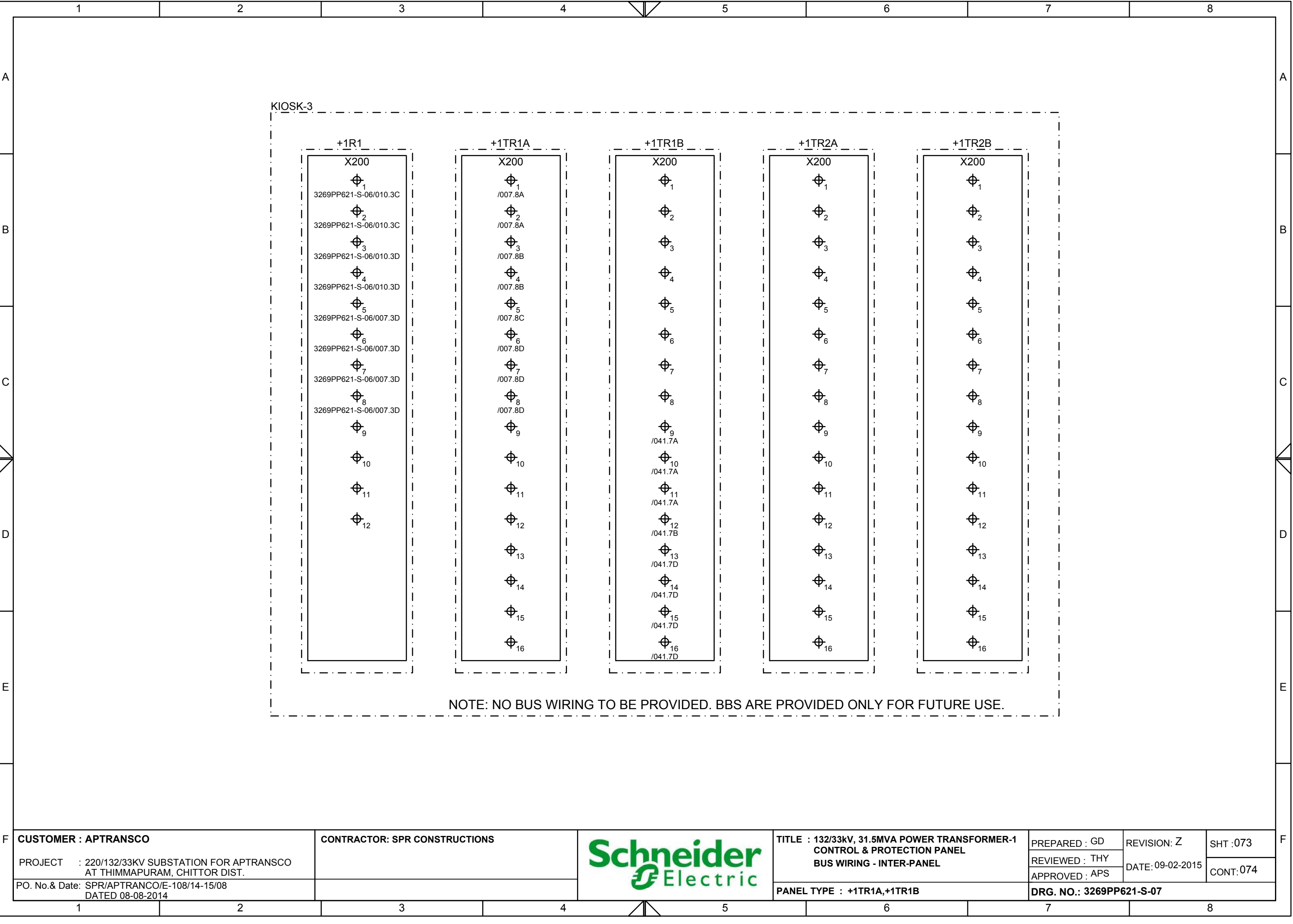
1		2		3		4		5		6		7		8																																																																																																																																																																																																																																																																																																																											
+1TR1B																																																																																																																																																																																																																																																																																																																																									
<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X-BCPU-DIU-N:1</td><td>/058.2D</td></tr><tr><td>X-BCPU-DIU-N:2</td><td>/058.2D</td></tr><tr><td>X-BCPU-DIU-N:3</td><td>/058.3D</td></tr><tr><td>X-BCPU-DIU-N:4</td><td>/058.3D</td></tr><tr><td>X-BCPU-DIU-N:5</td><td>/058.4D</td></tr><tr><td>X-BCPU-DIU-N:6</td><td>/058.4D</td></tr><tr><td>X-BCPU-DIU-N:7</td><td>/058.5D</td></tr><tr><td>X-BCPU-DIU-N:8</td><td>/058.5D</td></tr><tr><td>X-BCPU-DIU-N:9</td><td>/058.6D</td></tr><tr><td>X-BCPU-DIU-N:10</td><td>/058.6D</td></tr><tr><td>X-BCPU-DIU-N:11</td><td>/058.7D</td></tr><tr><td>X-BCPU-DIU-N:12</td><td>/058.7D</td></tr><tr><td>X-BCPU-DIU-N:13</td><td>/059.2D</td></tr><tr><td>X-BCPU-DIU-N:14</td><td>/059.2D</td></tr><tr><td>X-BCPU-DIU-N:15</td><td>/059.3D</td></tr><tr><td>X-BCPU-DIU-N:16</td><td>/059.3D</td></tr><tr><td>X-BCPU-DIU-N:17</td><td>/059.4D</td></tr><tr><td>X-BCPU-DIU-N:18</td><td>/059.4D</td></tr><tr><td>X-BCPU-DIU-N:19</td><td>/059.5D</td></tr><tr><td>X-BCPU-DIU-N:20</td><td>/059.5D</td></tr><tr><td>X-BCPU-DIU-N:21</td><td>/059.6D</td></tr><tr><td>X-BCPU-DIU-N:22</td><td>/059.6D</td></tr><tr><td>X-BCPU-DIU-N:23</td><td>/059.7D</td></tr><tr><td>X-BCPU-DIU-N:24</td><td>/059.7D</td></tr><tr><td>X-BCPU-DIU-N:25</td><td>/058.1C</td></tr><tr><td>X-BCPU-DIU-N:26</td><td>/058.3C</td></tr><tr><td>X-BCPU-DIU-N:27</td><td>/059.7C</td></tr><tr><td>X-BCPU-DIU-N:28</td><td>SPARE</td></tr><tr><td>X-BCPU-DIU-N:29</td><td>SPARE</td></tr><tr><td>X-BCPU-DIU-N:30</td><td>SPARE</td></tr></table>		TAG	REF	X-BCPU-DIU-N:1	/058.2D	X-BCPU-DIU-N:2	/058.2D	X-BCPU-DIU-N:3	/058.3D	X-BCPU-DIU-N:4	/058.3D	X-BCPU-DIU-N:5	/058.4D	X-BCPU-DIU-N:6	/058.4D	X-BCPU-DIU-N:7	/058.5D	X-BCPU-DIU-N:8	/058.5D	X-BCPU-DIU-N:9	/058.6D	X-BCPU-DIU-N:10	/058.6D	X-BCPU-DIU-N:11	/058.7D	X-BCPU-DIU-N:12	/058.7D	X-BCPU-DIU-N:13	/059.2D	X-BCPU-DIU-N:14	/059.2D	X-BCPU-DIU-N:15	/059.3D	X-BCPU-DIU-N:16	/059.3D	X-BCPU-DIU-N:17	/059.4D	X-BCPU-DIU-N:18	/059.4D	X-BCPU-DIU-N:19	/059.5D	X-BCPU-DIU-N:20	/059.5D	X-BCPU-DIU-N:21	/059.6D	X-BCPU-DIU-N:22	/059.6D	X-BCPU-DIU-N:23	/059.7D	X-BCPU-DIU-N:24	/059.7D	X-BCPU-DIU-N:25	/058.1C	X-BCPU-DIU-N:26	/058.3C	X-BCPU-DIU-N:27	/059.7C	X-BCPU-DIU-N:28	SPARE	X-BCPU-DIU-N:29	SPARE	X-BCPU-DIU-N:30	SPARE	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X-BCPU-DIU-O:1</td><td>/056.2D</td></tr><tr><td>X-BCPU-DIU-O:2</td><td>/056.2D</td></tr><tr><td>X-BCPU-DIU-O:3</td><td>/056.3D</td></tr><tr><td>X-BCPU-DIU-O:4</td><td>/056.3D</td></tr><tr><td>X-BCPU-DIU-O:5</td><td>/056.4D</td></tr><tr><td>X-BCPU-DIU-O:6</td><td>/056.4D</td></tr><tr><td>X-BCPU-DIU-O:7</td><td>/056.5D</td></tr><tr><td>X-BCPU-DIU-O:8</td><td>/056.5D</td></tr><tr><td>X-BCPU-DIU-O:9</td><td>/056.6D</td></tr><tr><td>X-BCPU-DIU-O:10</td><td>/056.6D</td></tr><tr><td>X-BCPU-DIU-O:11</td><td>/056.7D</td></tr><tr><td>X-BCPU-DIU-O:12</td><td>/056.7D</td></tr><tr><td>X-BCPU-DIU-O:13</td><td>/057.2D</td></tr><tr><td>X-BCPU-DIU-O:14</td><td>/057.2D</td></tr><tr><td>X-BCPU-DIU-O:15</td><td>/057.3D</td></tr><tr><td>X-BCPU-DIU-O:16</td><td>/057.3D</td></tr><tr><td>X-BCPU-DIU-O:17</td><td>/057.4D</td></tr><tr><td>X-BCPU-DIU-O:18</td><td>/057.4D</td></tr><tr><td>X-BCPU-DIU-O:19</td><td>/057.5D</td></tr><tr><td>X-BCPU-DIU-O:20</td><td>/057.5D</td></tr><tr><td>X-BCPU-DIU-O:21</td><td>/057.6D</td></tr><tr><td>X-BCPU-DIU-O:22</td><td>/057.6D</td></tr><tr><td>X-BCPU-DIU-O:23</td><td>/057.7D</td></tr><tr><td>X-BCPU-DIU-O:24</td><td>/057.7D</td></tr><tr><td>X-BCPU-DIU-O:25</td><td>/056.1C</td></tr><tr><td>X-BCPU-DIU-O:26</td><td>SPARE</td></tr><tr><td>X-BCPU-DIU-O:27</td><td>/057.7C</td></tr><tr><td>X-BCPU-DIU-O:28</td><td>/057.7C</td></tr><tr><td>X-BCPU-DIU-O:29</td><td>SPARE</td></tr><tr><td>X-BCPU-DIU-O:30</td><td>SPARE</td></tr></table>		TAG	REF	X-BCPU-DIU-O:1	/056.2D	X-BCPU-DIU-O:2	/056.2D	X-BCPU-DIU-O:3	/056.3D	X-BCPU-DIU-O:4	/056.3D	X-BCPU-DIU-O:5	/056.4D	X-BCPU-DIU-O:6	/056.4D	X-BCPU-DIU-O:7	/056.5D	X-BCPU-DIU-O:8	/056.5D	X-BCPU-DIU-O:9	/056.6D	X-BCPU-DIU-O:10	/056.6D	X-BCPU-DIU-O:11	/056.7D	X-BCPU-DIU-O:12	/056.7D	X-BCPU-DIU-O:13	/057.2D	X-BCPU-DIU-O:14	/057.2D	X-BCPU-DIU-O:15	/057.3D	X-BCPU-DIU-O:16	/057.3D	X-BCPU-DIU-O:17	/057.4D	X-BCPU-DIU-O:18	/057.4D	X-BCPU-DIU-O:19	/057.5D	X-BCPU-DIU-O:20	/057.5D	X-BCPU-DIU-O:21	/057.6D	X-BCPU-DIU-O:22	/057.6D	X-BCPU-DIU-O:23	/057.7D	X-BCPU-DIU-O:24	/057.7D	X-BCPU-DIU-O:25	/056.1C	X-BCPU-DIU-O:26	SPARE	X-BCPU-DIU-O:27	/057.7C	X-BCPU-DIU-O:28	/057.7C	X-BCPU-DIU-O:29	SPARE	X-BCPU-DIU-O:30	SPARE	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X-BCPU-DIU-P:1</td><td>/054.2D</td></tr><tr><td>X-BCPU-DIU-P:2</td><td>/054.2D</td></tr><tr><td>X-BCPU-DIU-P:3</td><td>/054.3D</td></tr><tr><td>X-BCPU-DIU-P:4</td><td>/054.3D</td></tr><tr><td>X-BCPU-DIU-P:5</td><td>/054.4D</td></tr><tr><td>X-BCPU-DIU-P:6</td><td>/054.4D</td></tr><tr><td>X-BCPU-DIU-P:7</td><td>/054.5D</td></tr><tr><td>X-BCPU-DIU-P:8</td><td>/054.5D</td></tr><tr><td>X-BCPU-DIU-P:9</td><td>/054.6D</td></tr><tr><td>X-BCPU-DIU-P:10</td><td>/054.6D</td></tr><tr><td>X-BCPU-DIU-P:11</td><td>/054.7D</td></tr><tr><td>X-BCPU-DIU-P:12</td><td>/054.7D</td></tr><tr><td>X-BCPU-DIU-P:13</td><td>/055.2D</td></tr><tr><td>X-BCPU-DIU-P:14</td><td>/055.2D</td></tr><tr><td>X-BCPU-DIU-P:15</td><td>/055.3D</td></tr><tr><td>X-BCPU-DIU-P:16</td><td>/055.3D</td></tr><tr><td>X-BCPU-DIU-P:17</td><td>/055.4D</td></tr><tr><td>X-BCPU-DIU-P:18</td><td>/055.4D</td></tr><tr><td>X-BCPU-DIU-P:19</td><td>/055.5D</td></tr><tr><td>X-BCPU-DIU-P:20</td><td>/055.5D</td></tr><tr><td>X-BCPU-DIU-P:21</td><td>/055.6D</td></tr><tr><td>X-BCPU-DIU-P:22</td><td>/055.6D</td></tr><tr><td>X-BCPU-DIU-P:23</td><td>/055.7D</td></tr><tr><td>X-BCPU-DIU-P:24</td><td>/055.7D</td></tr><tr><td>X-BCPU-DIU-P:25</td><td>/054.1C</td></tr><tr><td>X-BCPU-DIU-P:26</td><td>SPARE</td></tr><tr><td>X-BCPU-DIU-P:27</td><td>SPARE</td></tr><tr><td>X-BCPU-DIU-P:28</td><td>SPARE</td></tr><tr><td>X-BCPU-DIU-P:29</td><td>SPARE</td></tr><tr><td>X-BCPU-DIU-P:30</td><td>SPARE</td></tr></table>		TAG	REF	X-BCPU-DIU-P:1	/054.2D	X-BCPU-DIU-P:2	/054.2D	X-BCPU-DIU-P:3	/054.3D	X-BCPU-DIU-P:4	/054.3D	X-BCPU-DIU-P:5	/054.4D	X-BCPU-DIU-P:6	/054.4D	X-BCPU-DIU-P:7	/054.5D	X-BCPU-DIU-P:8	/054.5D	X-BCPU-DIU-P:9	/054.6D	X-BCPU-DIU-P:10	/054.6D	X-BCPU-DIU-P:11	/054.7D	X-BCPU-DIU-P:12	/054.7D	X-BCPU-DIU-P:13	/055.2D	X-BCPU-DIU-P:14	/055.2D	X-BCPU-DIU-P:15	/055.3D	X-BCPU-DIU-P:16	/055.3D	X-BCPU-DIU-P:17	/055.4D	X-BCPU-DIU-P:18	/055.4D	X-BCPU-DIU-P:19	/055.5D	X-BCPU-DIU-P:20	/055.5D	X-BCPU-DIU-P:21	/055.6D	X-BCPU-DIU-P:22	/055.6D	X-BCPU-DIU-P:23	/055.7D	X-BCPU-DIU-P:24	/055.7D	X-BCPU-DIU-P:25	/054.1C	X-BCPU-DIU-P:26	SPARE	X-BCPU-DIU-P:27	SPARE	X-BCPU-DIU-P:28	SPARE	X-BCPU-DIU-P:29	SPARE	X-BCPU-DIU-P:30	SPARE	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X-BCPU-DOU-D:1</td><td>/060.1B</td></tr><tr><td>X-BCPU-DOU-D:2</td><td>/060.1B</td></tr><tr><td>X-BCPU-DOU-D:3</td><td>/060.2B</td></tr><tr><td>X-BCPU-DOU-D:4</td><td>/060.2B</td></tr><tr><td>X-BCPU-DOU-D:5</td><td>/060.2B</td></tr><tr><td>X-BCPU-DOU-D:6</td><td>/060.3B</td></tr><tr><td>X-BCPU-DOU-D:7</td><td>/060.3B</td></tr><tr><td>X-BCPU-DOU-D:8</td><td>/060.3B</td></tr><tr><td>X-BCPU-DOU-D:9</td><td>/060.4B</td></tr><tr><td>X-BCPU-DOU-D:10</td><td>/060.4B</td></tr><tr><td>X-BCPU-DOU-D:11</td><td>/060.5B</td></tr><tr><td>X-BCPU-DOU-D:12</td><td>/060.5B</td></tr><tr><td>X-BCPU-DOU-D:13</td><td>/060.5B</td></tr><tr><td>X-BCPU-DOU-D:14</td><td>/060.5B</td></tr><tr><td>X-BCPU-DOU-D:15</td><td>/060.6B</td></tr><tr><td>X-BCPU-DOU-D:16</td><td>/060.6B</td></tr><tr><td>X-BCPU-DOU-D:17</td><td>SPARE</td></tr><tr><td>X-BCPU-DOU-D:18</td><td>SPARE</td></tr><tr><td>X-BCPU-DOU-D:19</td><td>/060.7B</td></tr><tr><td>X-BCPU-DOU-D:20</td><td>/060.7B</td></tr><tr><td>X-BCPU-DOU-D:21</td><td>/060.7B</td></tr><tr><td>X-BCPU-DOU-D:22</td><td>/060.7B</td></tr><tr><td>X-BCPU-DOU-D:23</td><td>/060.7B</td></tr><tr><td>X-BCPU-DOU-D:24</td><td>/060.8B</td></tr></table>		TAG	REF	X-BCPU-DOU-D:1	/060.1B	X-BCPU-DOU-D:2	/060.1B	X-BCPU-DOU-D:3	/060.2B	X-BCPU-DOU-D:4	/060.2B	X-BCPU-DOU-D:5	/060.2B	X-BCPU-DOU-D:6	/060.3B	X-BCPU-DOU-D:7	/060.3B	X-BCPU-DOU-D:8	/060.3B	X-BCPU-DOU-D:9	/060.4B	X-BCPU-DOU-D:10	/060.4B	X-BCPU-DOU-D:11	/060.5B	X-BCPU-DOU-D:12	/060.5B	X-BCPU-DOU-D:13	/060.5B	X-BCPU-DOU-D:14	/060.5B	X-BCPU-DOU-D:15	/060.6B	X-BCPU-DOU-D:16	/060.6B	X-BCPU-DOU-D:17	SPARE	X-BCPU-DOU-D:18	SPARE	X-BCPU-DOU-D:19	/060.7B	X-BCPU-DOU-D:20	/060.7B	X-BCPU-DOU-D:21	/060.7B	X-BCPU-DOU-D:22	/060.7B	X-BCPU-DOU-D:23	/060.7B	X-BCPU-DOU-D:24	/060.8B	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X-BCPU-DOU-E:1</td><td>/061.1B</td></tr><tr><td>X-BCPU-DOU-E:2</td><td>/061.2B</td></tr><tr><td>X-BCPU-DOU-E:3</td><td>/061.2B</td></tr><tr><td>X-BCPU-DOU-E:4</td><td>/061.2B</td></tr><tr><td>X-BCPU-DOU-E:5</td><td>/061.3B</td></tr><tr><td>X-BCPU-DOU-E:6</td><td>/061.3B</td></tr><tr><td>X-BCPU-DOU-E:7</td><td>/061.3B</td></tr><tr><td>X-BCPU-DOU-E:8</td><td>/061.4B</td></tr><tr><td>X-BCPU-DOU-E:9</td><td>/061.4B</td></tr><tr><td>X-BCPU-DOU-E:10</td><td>/061.4B</td></tr><tr><td>X-BCPU-DOU-E:11</td><td>/061.5B</td></tr><tr><td>X-BCPU-DOU-E:12</td><td>/061.5B</td></tr><tr><td>X-BCPU-DOU-E:13</td><td>/061.5B</td></tr><tr><td>X-BCPU-DOU-E:14</td><td>/061.6B</td></tr><tr><td>X-BCPU-DOU-E:15</td><td>/061.6B</td></tr><tr><td>X-BCPU-DOU-E:16</td><td>/061.6B</td></tr><tr><td>X-BCPU-DOU-E:17</td><td>SPARE</td></tr><tr><td>X-BCPU-DOU-E:18</td><td>SPARE</td></tr><tr><td>X-BCPU-DOU-E:19</td><td>/061.7B</td></tr><tr><td>X-BCPU-DOU-E:20</td><td>/061.7B</td></tr><tr><td>X-BCPU-DOU-E:21</td><td>/061.7B</td></tr><tr><td>X-BCPU-DOU-E:22</td><td>/061.7B</td></tr><tr><td>X-BCPU-DOU-E:23</td><td>/061.8B</td></tr><tr><td>X-BCPU-DOU-E:24</td><td>/061.8B</td></tr></table>		TAG	REF	X-BCPU-DOU-E:1	/061.1B	X-BCPU-DOU-E:2	/061.2B	X-BCPU-DOU-E:3	/061.2B	X-BCPU-DOU-E:4	/061.2B	X-BCPU-DOU-E:5	/061.3B	X-BCPU-DOU-E:6	/061.3B	X-BCPU-DOU-E:7	/061.3B	X-BCPU-DOU-E:8	/061.4B	X-BCPU-DOU-E:9	/061.4B	X-BCPU-DOU-E:10	/061.4B	X-BCPU-DOU-E:11	/061.5B	X-BCPU-DOU-E:12	/061.5B	X-BCPU-DOU-E:13	/061.5B	X-BCPU-DOU-E:14	/061.6B	X-BCPU-DOU-E:15	/061.6B	X-BCPU-DOU-E:16	/061.6B	X-BCPU-DOU-E:17	SPARE	X-BCPU-DOU-E:18	SPARE	X-BCPU-DOU-E:19	/061.7B	X-BCPU-DOU-E:20	/061.7B	X-BCPU-DOU-E:21	/061.7B	X-BCPU-DOU-E:22	/061.7B	X-BCPU-DOU-E:23	/061.8B	X-BCPU-DOU-E:24	/061.8B	<table><tr><th>TAG</th><th>REF</th></tr><tr><td>X-BCPU-PS-A:1</td><td>/052.6D</td></tr><tr><td>X-BCPU-PS-A:2</td><td>/052.7D</td></tr><tr><td>X-BCPU-PS-A:3</td><td>/052.3D</td></tr><tr><td>X-BCPU-PS-A:4</td><td>/052.3D</td></tr><tr><td>X-BCPU-PS-A:5</td><td>/052.7D</td></tr><tr><td>X-BCPU-PS-A:6</td><td>/052.7D</td></tr><tr><td>X-BCPU-PS-A:7</td><td>/052.7D</td></tr><tr><td>X-BCPU-PS-A:8</td><td>/052.7D</td></tr><tr><td>X-BCPU-PS-A:9</td><td>/052.5D</td></tr><tr><td>X-BCPU-PS-A:10</td><td>/052.5D</td></tr><tr><td>X-BCPU-PS-A:11</td><td>/052.5D</td></tr><tr><td>X-BCPU-PS-A:12</td><td>SPARE</td></tr><tr><td>X-BCPU-PS-A:13</td><td>SPARE</td></tr><tr><td>X-BCPU-PS-A:14</td><td>SPARE</td></tr><tr><td>X-BCPU-PS-A:15</td><td>SPARE</td></tr></table>		TAG	REF	X-BCPU-PS-A:1	/052.6D	X-BCPU-PS-A:2	/052.7D	X-BCPU-PS-A:3	/052.3D	X-BCPU-PS-A:4	/052.3D	X-BCPU-PS-A:5	/052.7D	X-BCPU-PS-A:6	/052.7D	X-BCPU-PS-A:7	/052.7D	X-BCPU-PS-A:8	/052.7D	X-BCPU-PS-A:9	/052.5D	X-BCPU-PS-A:10	/052.5D	X-BCPU-PS-A:11	/052.5D	X-BCPU-PS-A:12	SPARE	X-BCPU-PS-A:13	SPARE	X-BCPU-PS-A:14	SPARE	X-BCPU-PS-A:15	SPARE
TAG	REF																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:1	/058.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:2	/058.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:3	/058.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:4	/058.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:5	/058.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:6	/058.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:7	/058.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:8	/058.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:9	/058.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:10	/058.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:11	/058.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:12	/058.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:13	/059.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:14	/059.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:15	/059.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:16	/059.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:17	/059.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:18	/059.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:19	/059.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:20	/059.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:21	/059.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:22	/059.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:23	/059.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:24	/059.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:25	/058.1C																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:26	/058.3C																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:27	/059.7C																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:28	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:29	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-N:30	SPARE																																																																																																																																																																																																																																																																																																																																								
TAG	REF																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:1	/056.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:2	/056.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:3	/056.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:4	/056.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:5	/056.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:6	/056.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:7	/056.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:8	/056.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:9	/056.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:10	/056.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:11	/056.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:12	/056.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:13	/057.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:14	/057.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:15	/057.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:16	/057.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:17	/057.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:18	/057.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:19	/057.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:20	/057.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:21	/057.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:22	/057.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:23	/057.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:24	/057.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:25	/056.1C																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:26	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:27	/057.7C																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:28	/057.7C																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:29	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-O:30	SPARE																																																																																																																																																																																																																																																																																																																																								
TAG	REF																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:1	/054.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:2	/054.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:3	/054.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:4	/054.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:5	/054.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:6	/054.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:7	/054.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:8	/054.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:9	/054.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:10	/054.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:11	/054.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:12	/054.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:13	/055.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:14	/055.2D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:15	/055.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:16	/055.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:17	/055.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:18	/055.4D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:19	/055.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:20	/055.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:21	/055.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:22	/055.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:23	/055.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:24	/055.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:25	/054.1C																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:26	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:27	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:28	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:29	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DIU-P:30	SPARE																																																																																																																																																																																																																																																																																																																																								
TAG	REF																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:1	/060.1B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:2	/060.1B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:3	/060.2B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:4	/060.2B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:5	/060.2B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:6	/060.3B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:7	/060.3B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:8	/060.3B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:9	/060.4B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:10	/060.4B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:11	/060.5B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:12	/060.5B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:13	/060.5B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:14	/060.5B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:15	/060.6B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:16	/060.6B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:17	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:18	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:19	/060.7B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:20	/060.7B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:21	/060.7B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:22	/060.7B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:23	/060.7B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-D:24	/060.8B																																																																																																																																																																																																																																																																																																																																								
TAG	REF																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:1	/061.1B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:2	/061.2B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:3	/061.2B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:4	/061.2B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:5	/061.3B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:6	/061.3B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:7	/061.3B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:8	/061.4B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:9	/061.4B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:10	/061.4B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:11	/061.5B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:12	/061.5B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:13	/061.5B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:14	/061.6B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:15	/061.6B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:16	/061.6B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:17	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:18	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:19	/061.7B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:20	/061.7B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:21	/061.7B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:22	/061.7B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:23	/061.8B																																																																																																																																																																																																																																																																																																																																								
X-BCPU-DOU-E:24	/061.8B																																																																																																																																																																																																																																																																																																																																								
TAG	REF																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:1	/052.6D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:2	/052.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:3	/052.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:4	/052.3D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:5	/052.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:6	/052.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:7	/052.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:8	/052.7D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:9	/052.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:10	/052.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:11	/052.5D																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:12	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:13	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:14	SPARE																																																																																																																																																																																																																																																																																																																																								
X-BCPU-PS-A:15	SPARE																																																																																																																																																																																																																																																																																																																																								
CUSTOMER : APTRANSCO		CONTRACTOR: SPR CONSTRUCTIONS				TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL TB REFERENCE		PREPARED : GD	REVISION: Z	SHT :071																																																																																																																																																																																																																																																																																																																															
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.						PANEL TYPE : +1TR1A,+1TR1B		REVIEWED : THY	DATE: 09-02-2015	CONT:072																																																																																																																																																																																																																																																																																																																															
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014						DRG. NO.: 3269PP621-S-07																																																																																																																																																																																																																																																																																																																																			
1		2		3		4		5		6		7		8																																																																																																																																																																																																																																																																																																																											

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



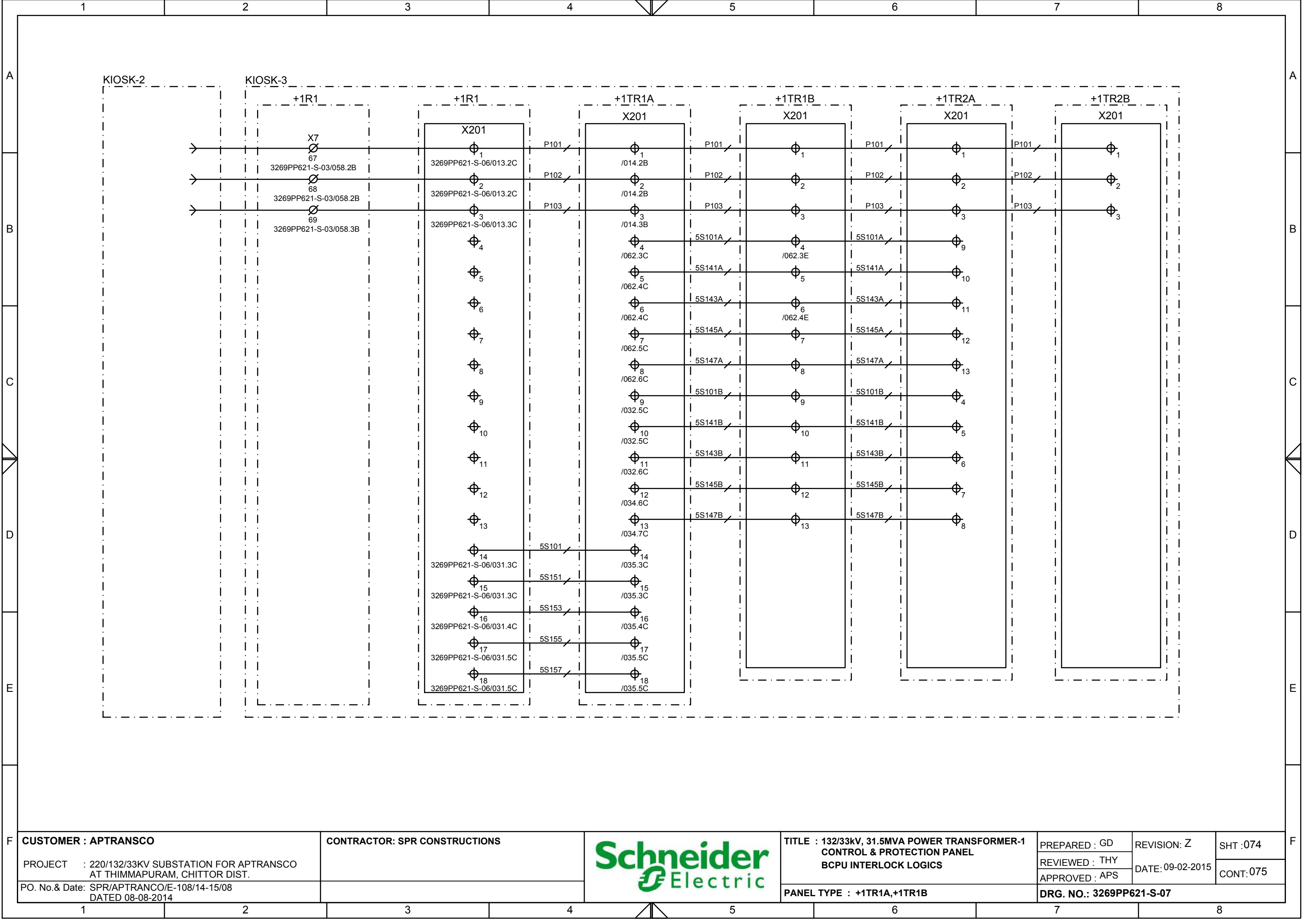
This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO			TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1 CONTROL & PROTECTION PANEL BUS WIRING - INTER-PANEL		PREPARED : GD	REVISION: Z	SHT :073
PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO AT THIMMAPURAM, CHITTOR DIST.					REVIEWED : THY	DATE: 09-02-2015	CONT:074
PO. No.& Date: SPR/APTRANCO/E-108/14-15/08 DATED 08-08-2014					APPROVED : APS		
			PANEL TYPE : +1TR1A,+1TR1B		DRG. NO.: 3269PP621-S-07		

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS

Schneider

Electric

TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
BCPU INTERLOCK LOGICS

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD

REVIEWED : THY

APPROVED : APS

REVISION: Z

DATE: 09-02-2015

SHT :074

CONT:075

DRG. NO.: 3269PP621-S-07

1

2

3

4

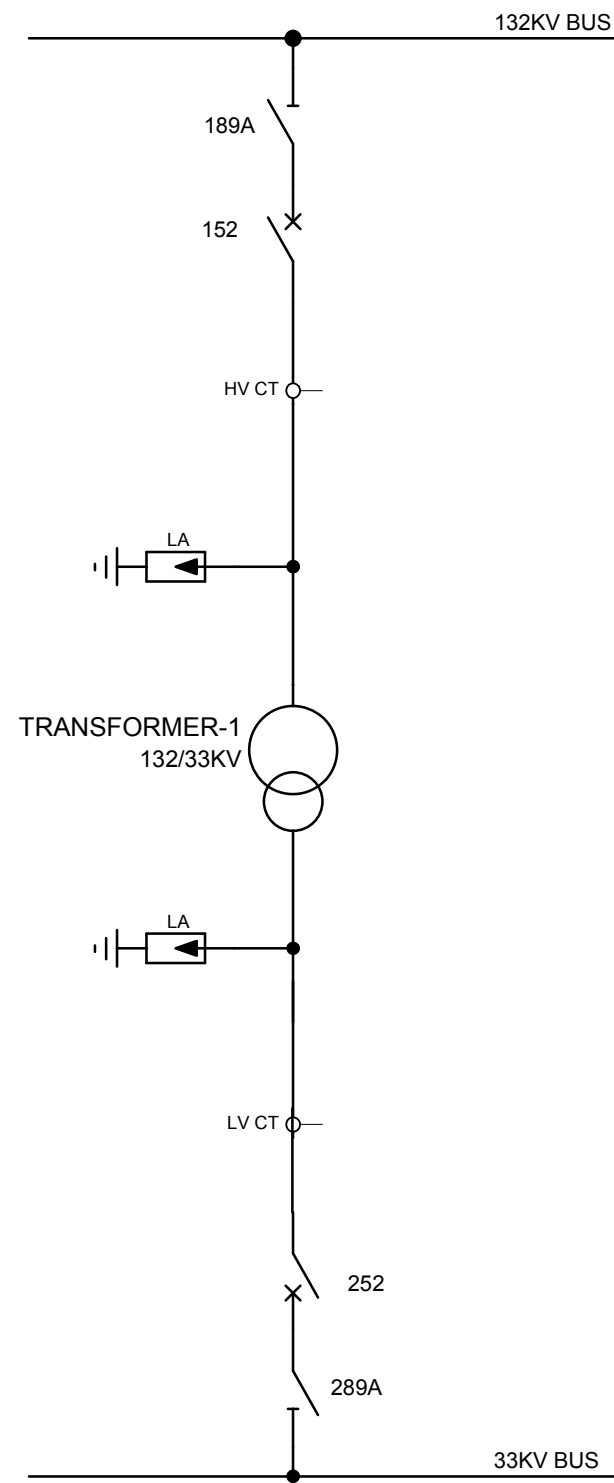
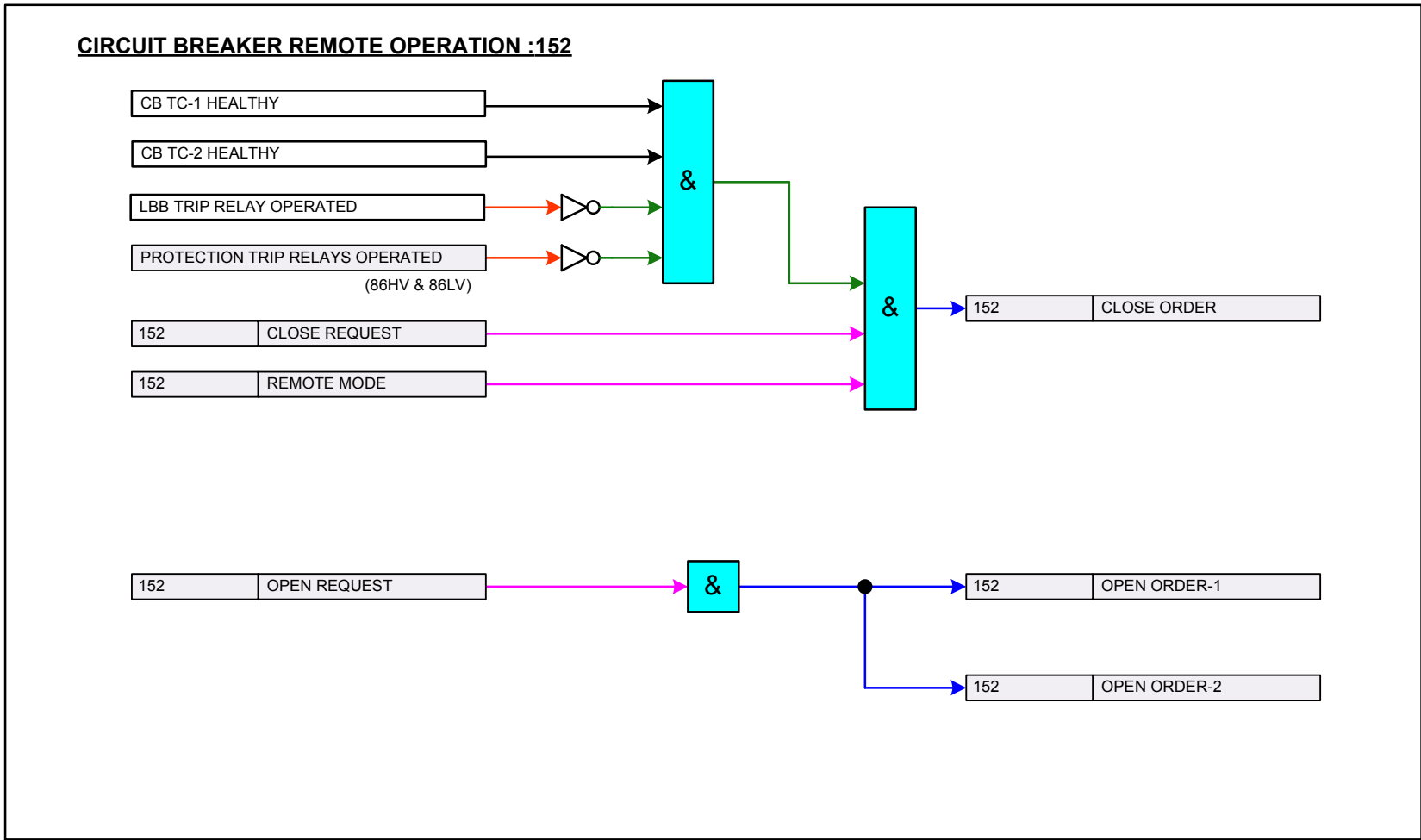
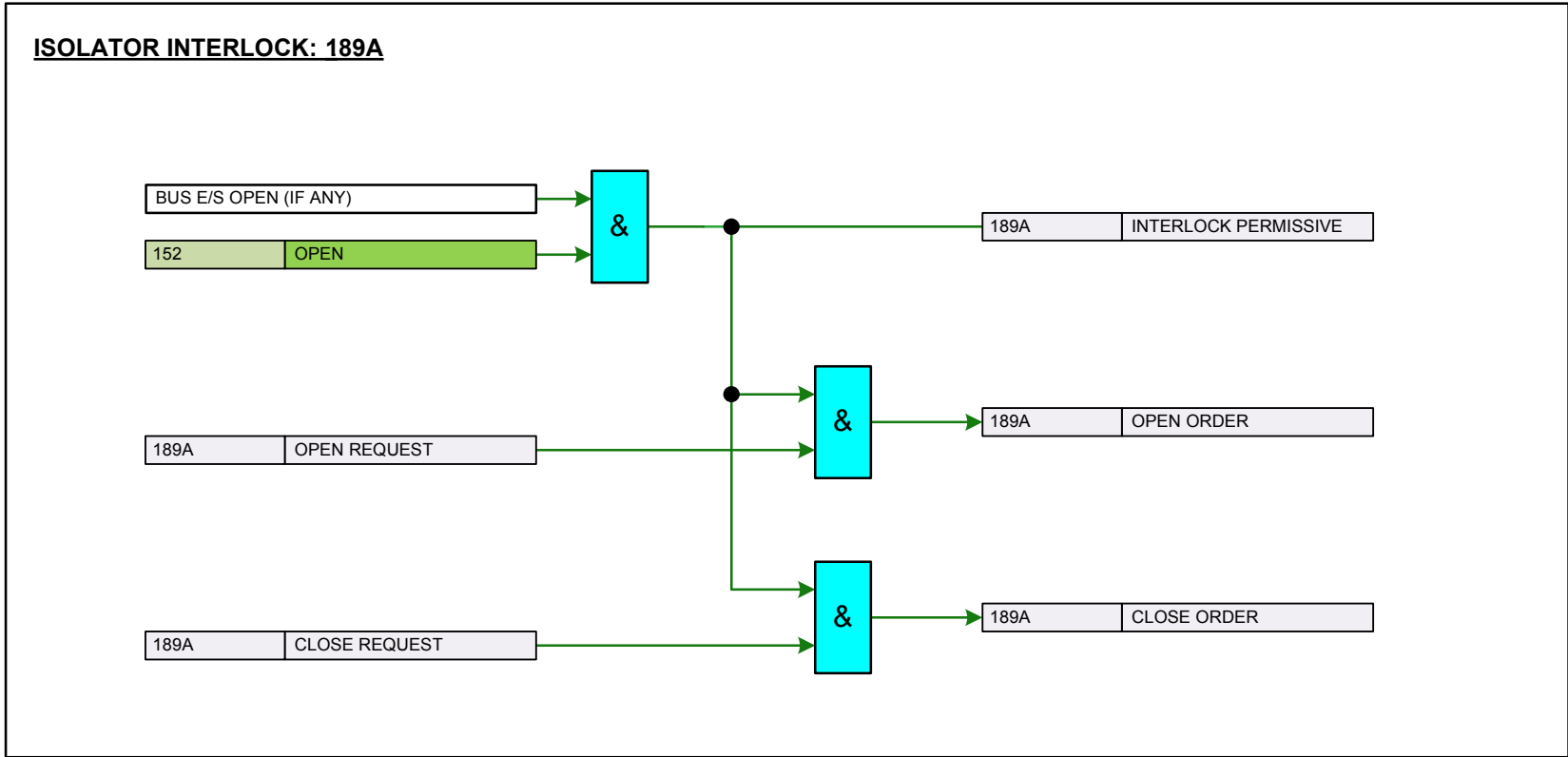
5

6

7

8

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS

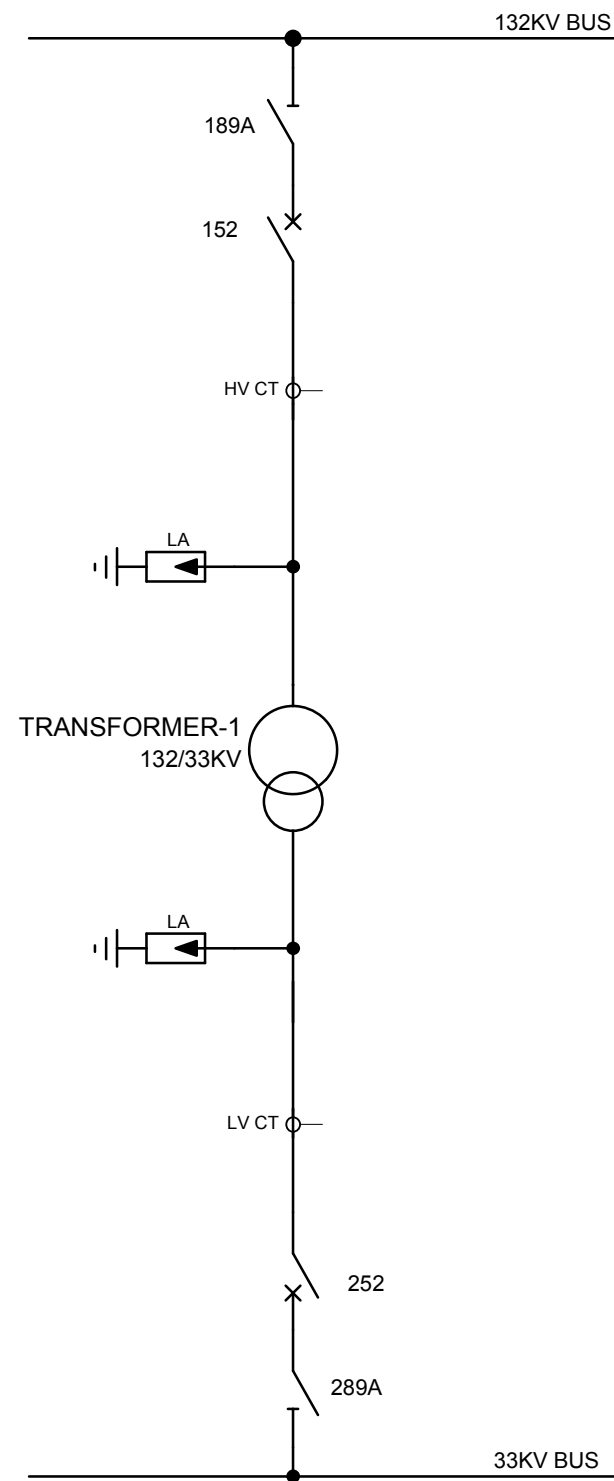
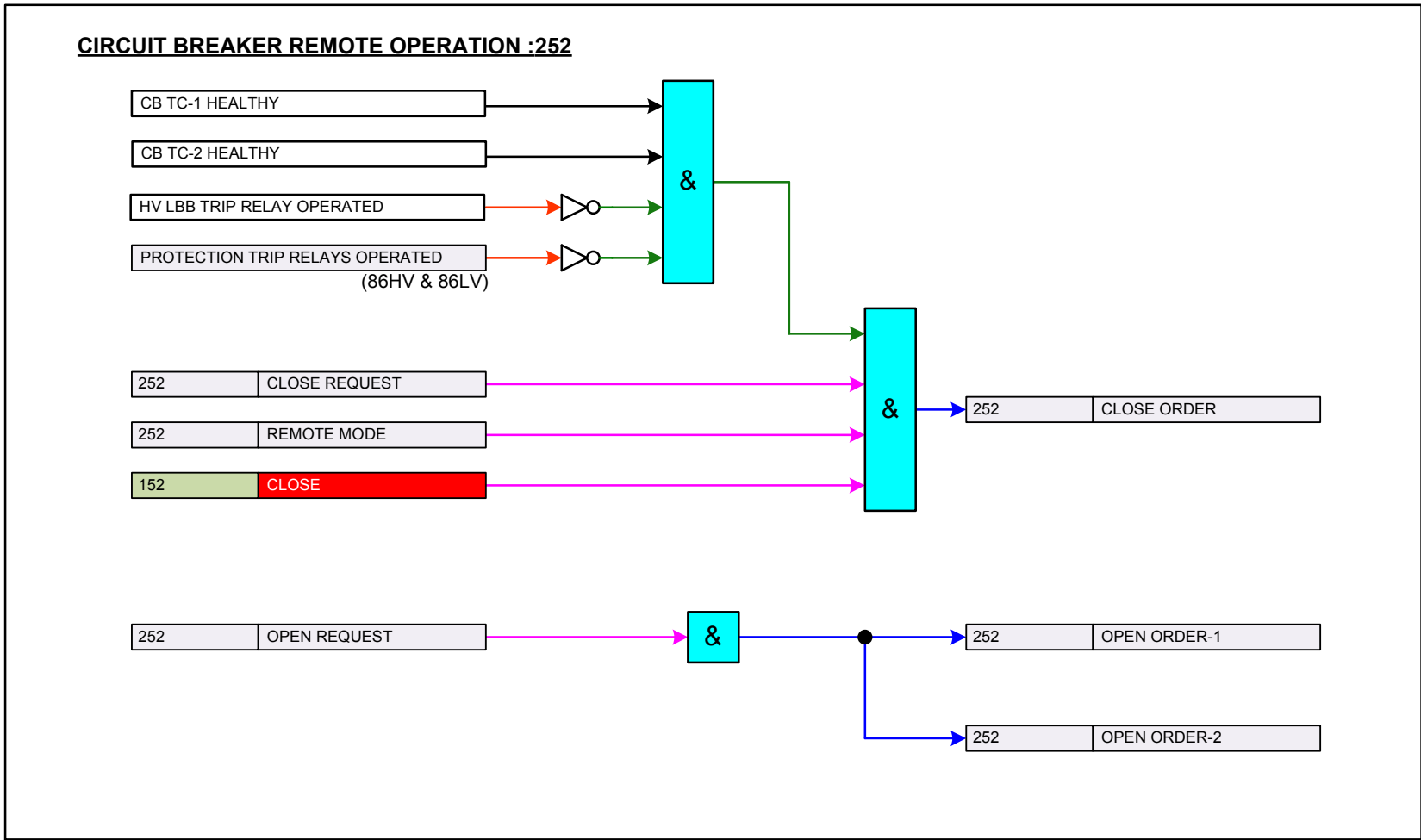
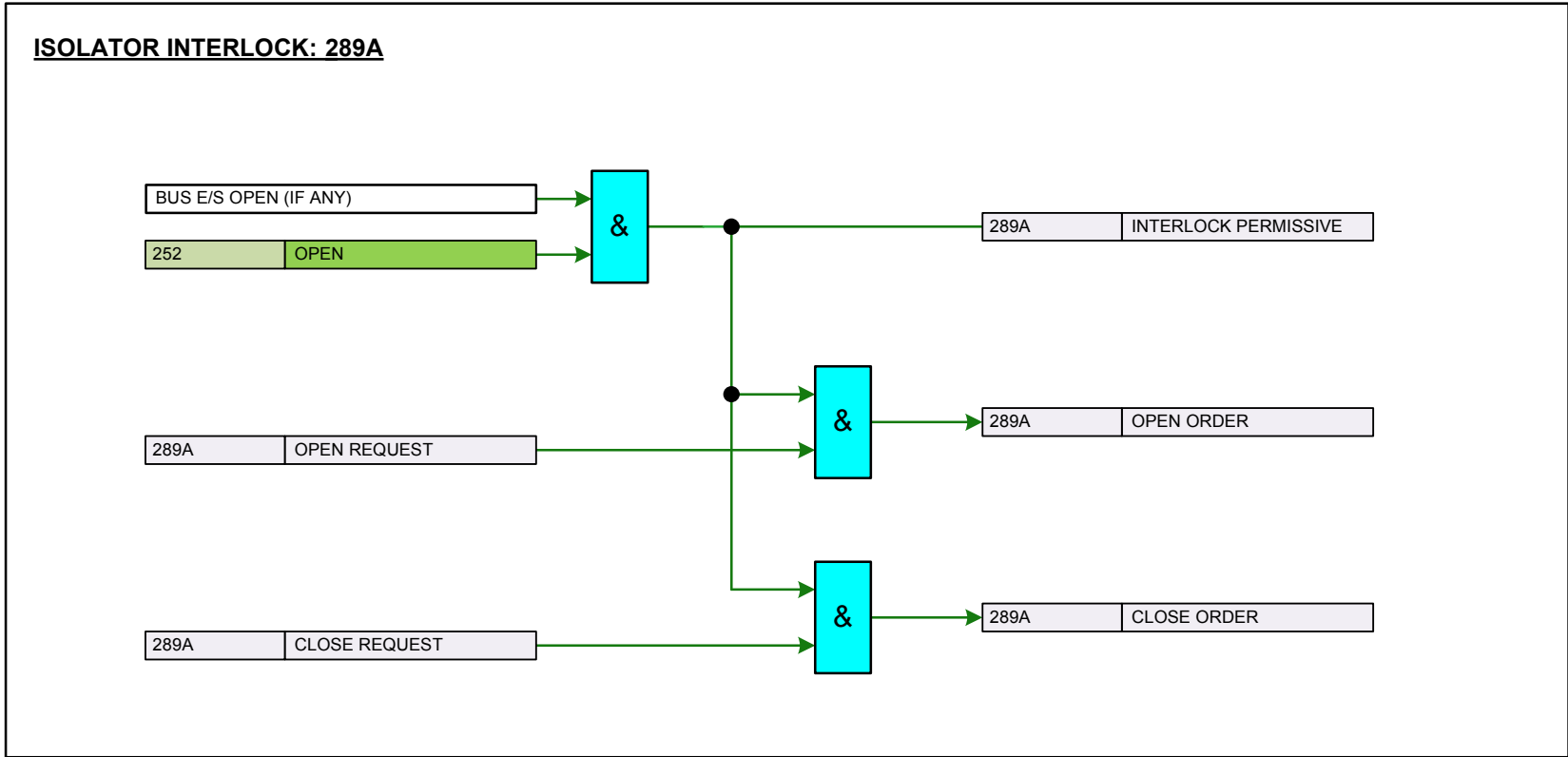


**TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
BCPU INTERLOCK LOGICS**

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD	REVISION: Z	SHT :075
REVIEWED : THY	DATE: 09-02-2015	CONT:076
APPROVED : APS	DRG. NO.: 3269PP621-S-07	

This document is the exclusive property of Schneider Electric and shall not be used, copied or communicated to third parties without prior authorization.



CUSTOMER : APTRANSCO

PROJECT : 220/132/33KV SUBSTATION FOR APTRANSCO
AT THIMMAPURAM, CHITTOR DIST.

PO. No. & Date: SPR/APTRANCO/E-108/14-15/08
DATED 08-08-2014

CONTRACTOR: SPR CONSTRUCTIONS



**TITLE : 132/33kV, 31.5MVA POWER TRANSFORMER-1
CONTROL & PROTECTION PANEL
BCPU INTERLOCK LOGICS**

PANEL TYPE : +1TR1A,+1TR1B

PREPARED : GD	REVISION: Z	SHT :076
REVIEWED : THY	DATE: 09-02-2015	CONT: NIL
APPROVED : APS		

DRG. NO.: 3269PP621-S-07