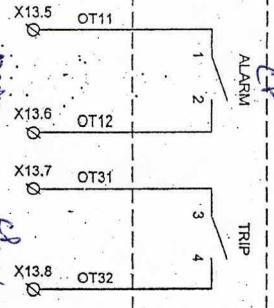
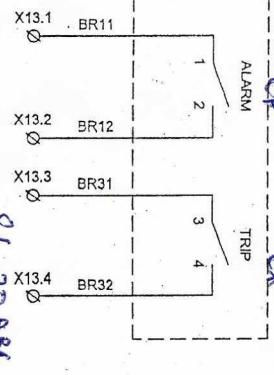


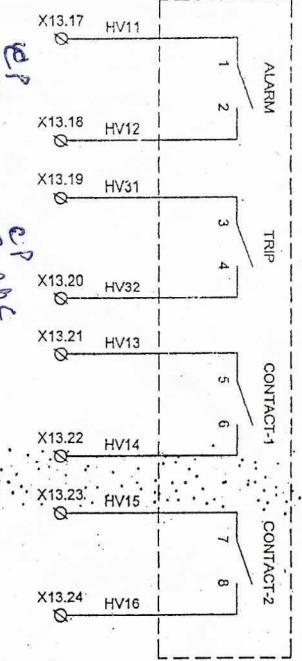
BUCHHOLZ RELAY(B/RELAY)

OIL TEMPERATURE INDICATOR(OTI)

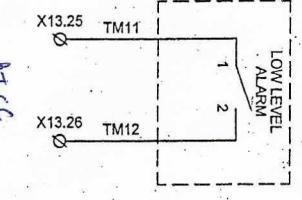
LV WINDING TEMPERATURE INDICATOR(LV WTI)



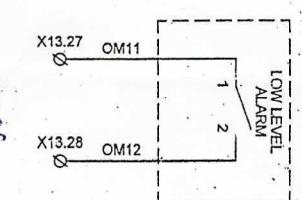
HV WINDING TEMPERATURE INDICATOR(HV WTI)



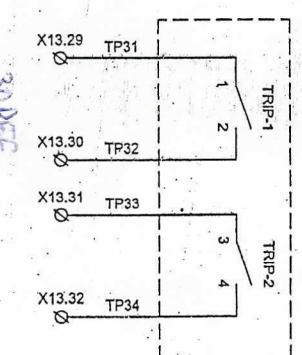
MAIN TANK OIL LEVEL GAUGE(T.MOG)



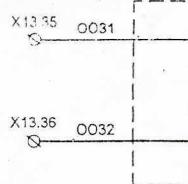
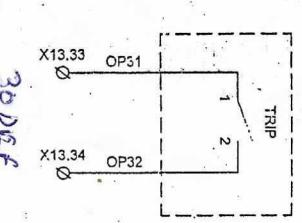
OLTC OIL LEVEL GAUGE(O.MOG)



TANK PRESSURE RELIEF VALVE(T.P.R.V)



OLTC PRESSURE RELIEF VALVE(O.P.R.V)



OLTC OIL SURGE RELAY(O.S.R.)

30 DEF  
86

HV → WTI → 14 V. Alarm → 87  
HV → WTI → LV WTI Alarm → 85 → 95 → Trip → 30 DEF  
86

cheated

fail safe 85

HV → 95 → Trip → 30 DEF  
86

THROUGH PLANNING	MARKETING	PURCHASE	Q.C.	FABRICATION	PRODUCTION
		SIGN	NAME		

TRANSFORMERS & RECTIFIER (INDIA) LTD.

F

X13.11

BR11

X13.12

BR12

X13.13

BR31

X13.14

BR32

X13.17

HV11

X13.18

HV12

X13.19

HV31

X13.20

HV32

X13.21

HV13

X13.22

HV14

X13.23

HV15

X13.24

HV16

X13.25

TM11

X13.26

TM12

X13.27

OM11

X13.28

OM12

X13.29

TP31

X13.30

TP32

X13.31

TP33

X13.32

TP34

X13.33

OP31

X13.34

OP32

X13.1

BR11

X13.2

BR12

X13.3

BR31

X13.4

BR32

X13.17

HV11

X13.18

HV12

X13.19

HV31

X13.20

HV32

X13.21

HV13

X13.22

HV14

X13.23

HV15

X13.24

HV16

X13.25

TM11

X13.26

TM12

X13.27

OM11

X13.28

OM12

X13.29

TP31

X13.30

TP32

X13.31

TP33

X13.32

TP34

X13.33

OP31

X13.34

OP32

X13.1

BR11

X13.2

BR12

X13.3

BR31

X13.4

BR32

X13.17

HV11

X13.18

HV12

X13.19

HV31

X13.20

HV32

X13.21

HV13

X13.22

HV14

X13.23

HV15

X13.24

HV16

X13.25

TM11

X13.26

TM12

X13.27

OM11

X13.28

OM12

X13.29

TP31

X13.30

TP32

X13.31

TP33

X13.32

TP34

X13.33

OP31

X13.34

OP32

X13.1

BR11

X13.2

BR12

X13.3

BR31

X13.4

BR32

X13.17

HV11

X13.18

HV12

X13.19

HV31

X13.20

HV32

X13.21

HV13

X13.22

HV14

X13.23

HV15

X13.24

HV16

X13.25

TM11

X13.26

TM12

X13.27

OM11

X13.28

OM12

X13.29

TP31

X13.30

TP32

X13.31

TP33

X13.32

TP34

X13.33

OP31

X13.34

OP32

X13.1

BR11

X13.2

BR12

X13.3

BR31

X13.4

BR32

X13.17

HV11

X13.18

HV12

X13.19

HV31

X13.20

HV32

X13.21

HV13

X13.22

HV14

X13.23

HV15

X13.24

HV16

X13.25

TM11

X13.26

TM12

X13.27

OM11

X13.28

OM12

X13.29

TP31

X13.30

TP32

X13.31

TP33

X13.32

TP34

X13.33

OP31

X13.34

OP32

X13.1

BR11

X13.2

BR12

X13.3

BR31

X13.4

BR32

X13.17

HV11

X13.18

HV12

X13.19

HV31

X13.20

HV32

X13.21

HV13

X13.22



END CUSTOMER: UTTAR PRADESH POWER TRANSMISSION CORPORATION LIMITED

LOI. NO : 100-ESDCI(E)/SD-643/EASUN DTD: 02.02.2011

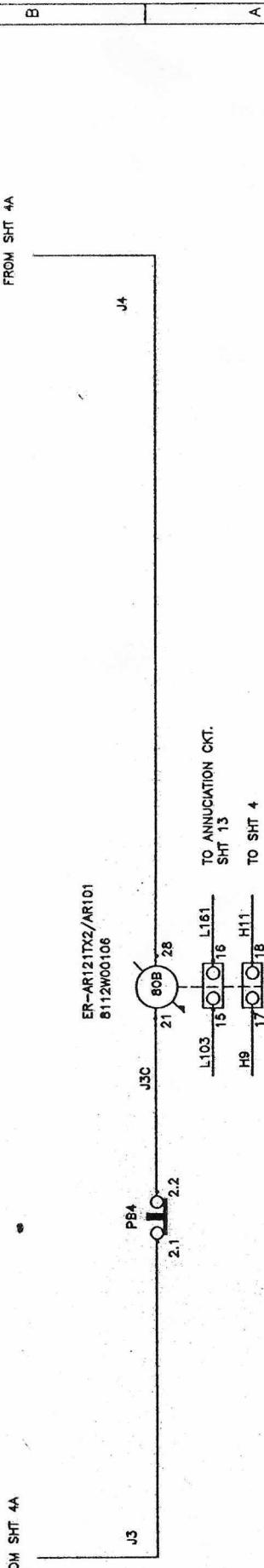
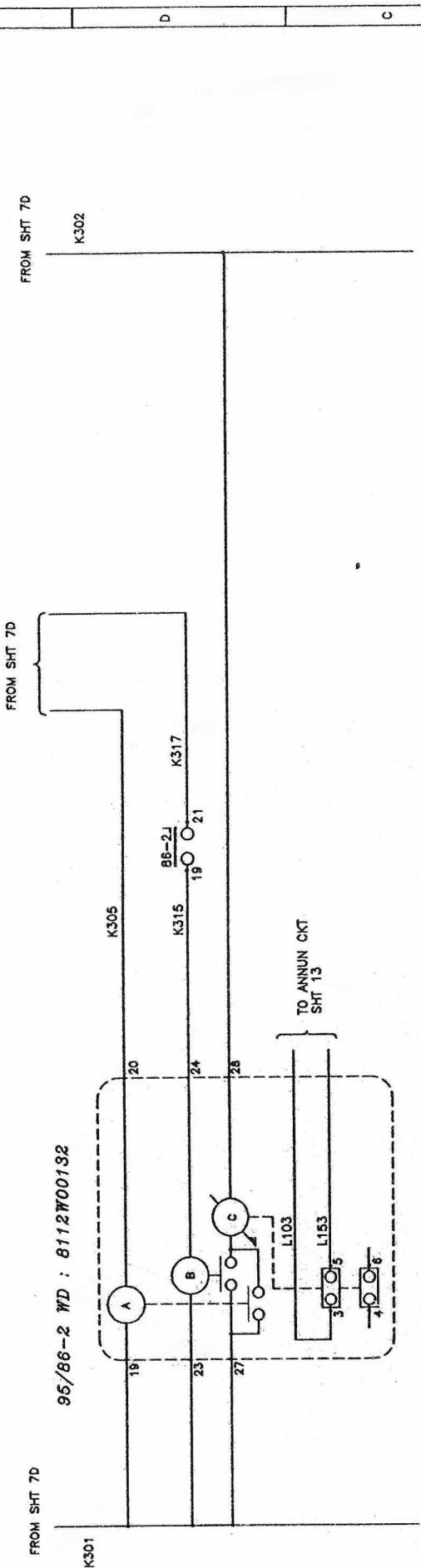
## **63 MVA T/F-II ERL**

132/33KV, TRANSFORMER CONTROL & RELAY PANEL

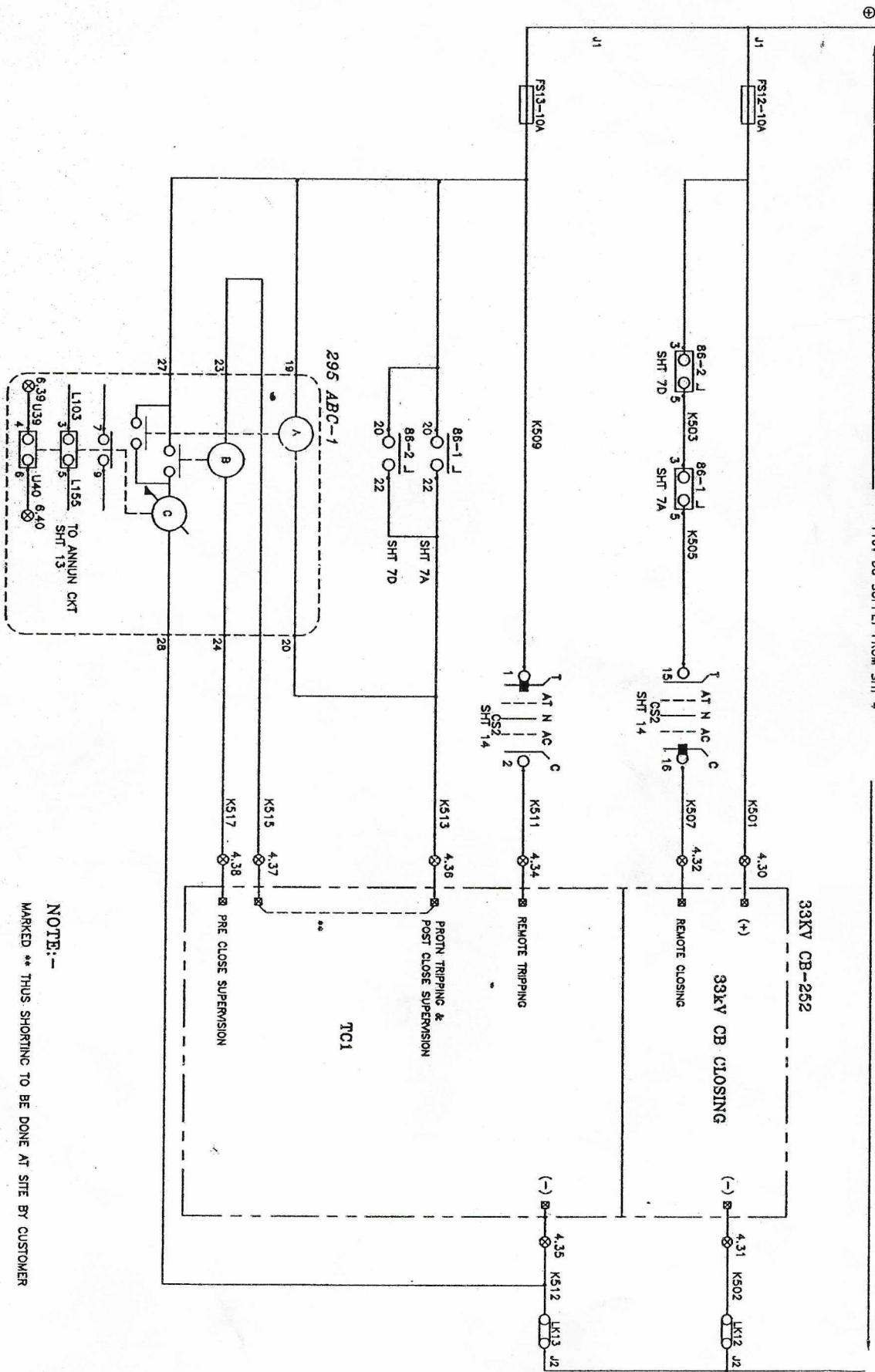
SL.NO.	DESCRIPTION	DWG. NO.
1.	GENERAL ARRANGEMENT	ER1733 GA 7T3L(D)
2.	BILL OF MATERIAL	ER1733 BM 7T3L(D)
3.	SCHEMATIC DIAGRAM	ER1733 SC 7T3L(D)



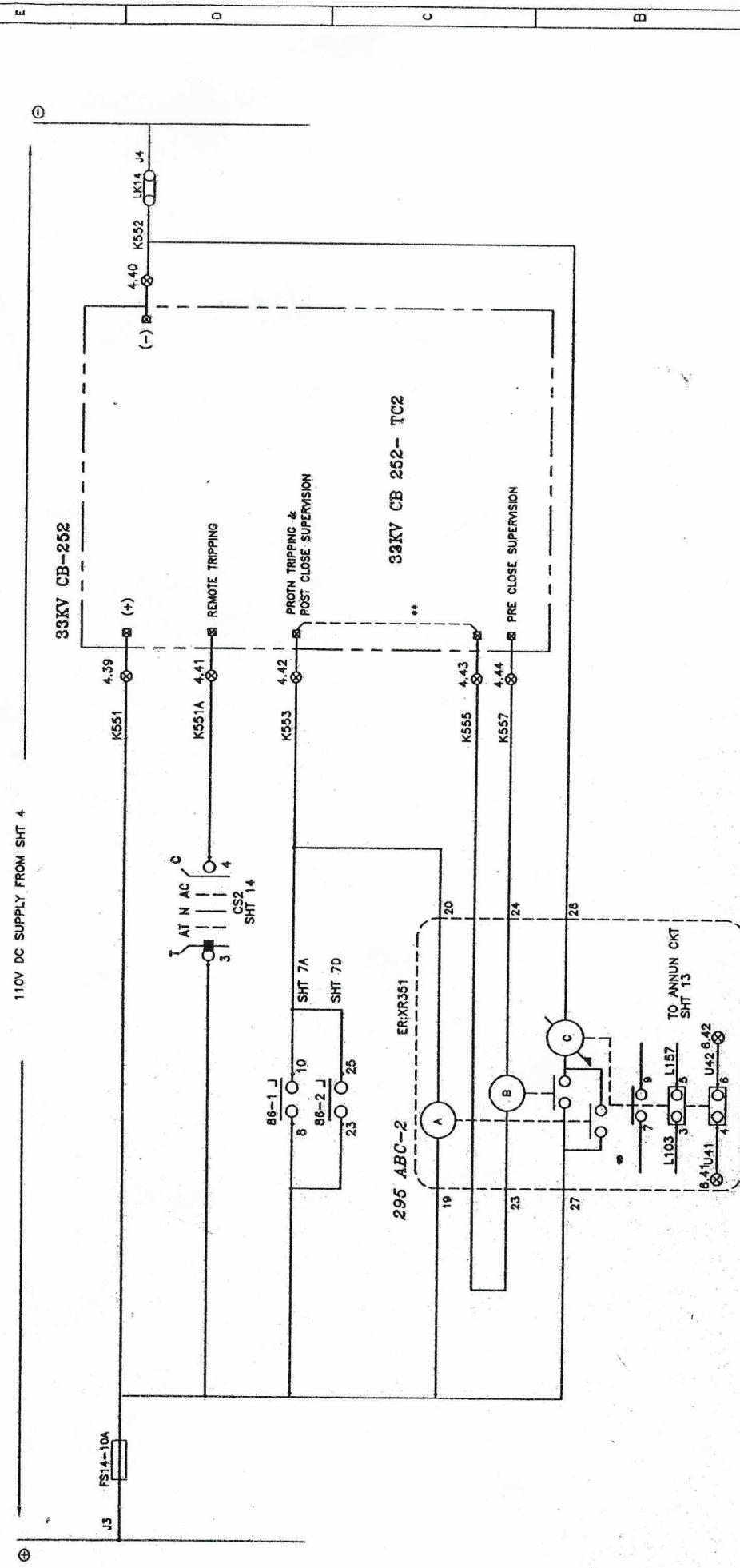
EASUN REYROLLE LTD  
HOSUR , TAMIL NADU  
INDIA



		EASUN REYROLLE LTD		DWG.NO : ER1733 GA 773L(D)		CUSTOMER : UPPCL	
		SUBSTATION: SHT. TITLE :		CONTRACTOR:			
		LV SUPERVISION CIRCUIT		CONSULTANT:			
		DWG. TITLE : 132/33KV TRANSFORMER		LOI. NO. : 100-ESDC(E)/SD-643/ EASUN DTID: 02.02.2011		THIS SHI NEXT SHI ERL. REF. : ZCP1733	
REV	DESCRIPTION	DESIGNED	CHECKED	APPROVED	C & R PANEL	SCALE : NTSTOT. SHT 28	SCALE : NTSTOT. SHT 28
B	AS BUILT	16.04.11	S.E.	S.E.	GM		
A	FOR APPROVAL	09.01.11	N.A.	S.E.	GM		
REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED	C & R PANEL	SCALE : NTSTOT. SHT 28

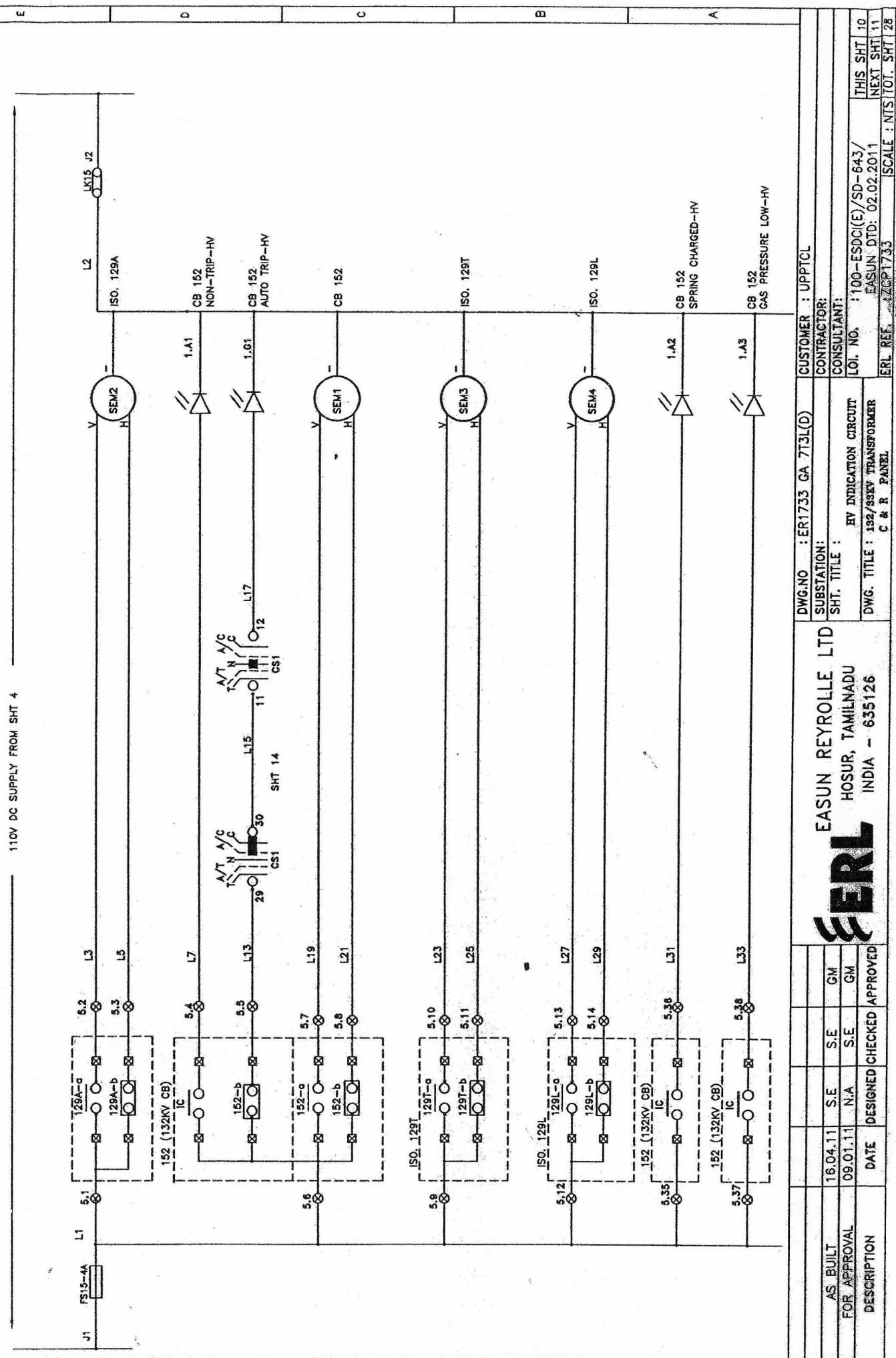


EASUN REYROLLE LTD HOSUR, TAMILNADU INDIA - 635126			
REV	DESCRIPTION	DATE	DESIGNED CHECKED APPROVED
B A A	AS BUILT FOR APPROVAL DESCRIPTION	16.04.11 09.01.11 S.E S.E S.E GM GM	ERL ERL ERL

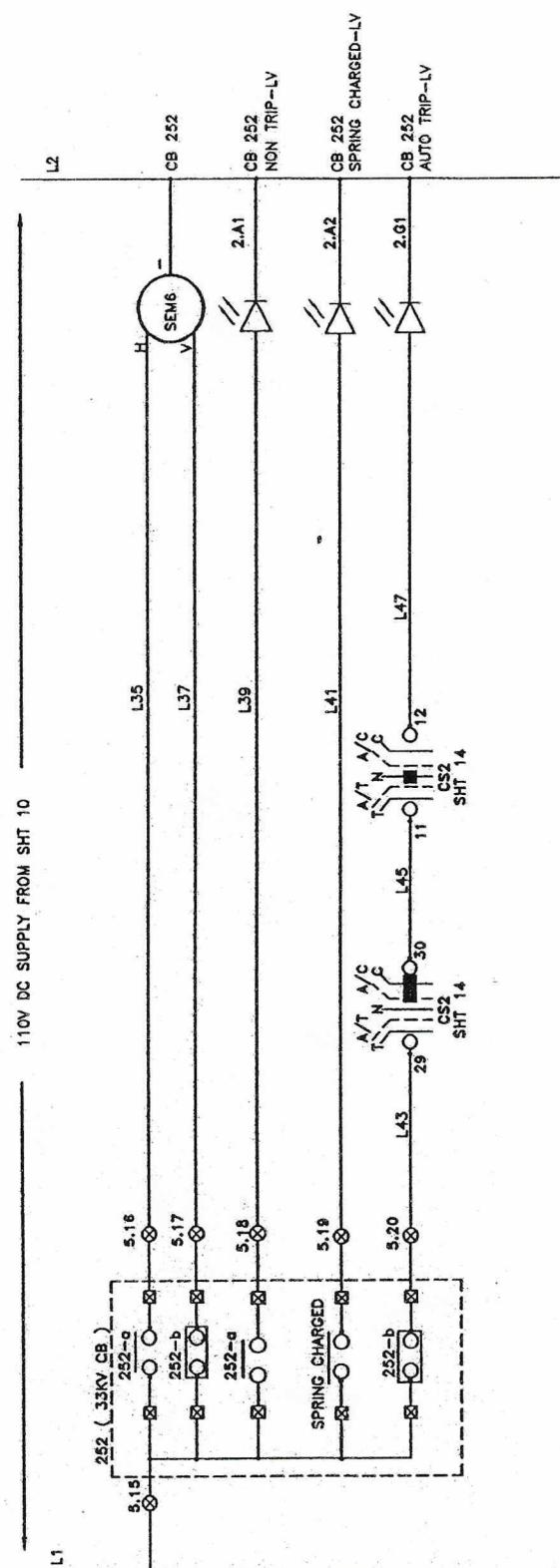


**NOTE:**— MARKED \*\* THUS SHORTING TO BE DONE AT SITE BY CUSTOMER

EERI						DWG.NO : ER1733 CA 773L(D)	CUSTOMER : UPPTCL
B	AS BUILT	16.04.11	S.E	GM		SUBSTATION:	CONTRACTOR:
A	FOR APPROVAL	09.01.11	NA	S.E	GM	SHT. TITLE :	CONSULTANT:
REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED	LV CB TRIPPING TS2 CKT.	LOI. NO. : 100-ESDC(E)/SD-643/
						EASUN REYROLLE LTD	EASUN DTD: 02-02-2011
						HOSUR, TAMILNADU	ERL REF. : ZCP 733
						INDIA - 635126	SCALE : NTS 1:500 C & R PANEL

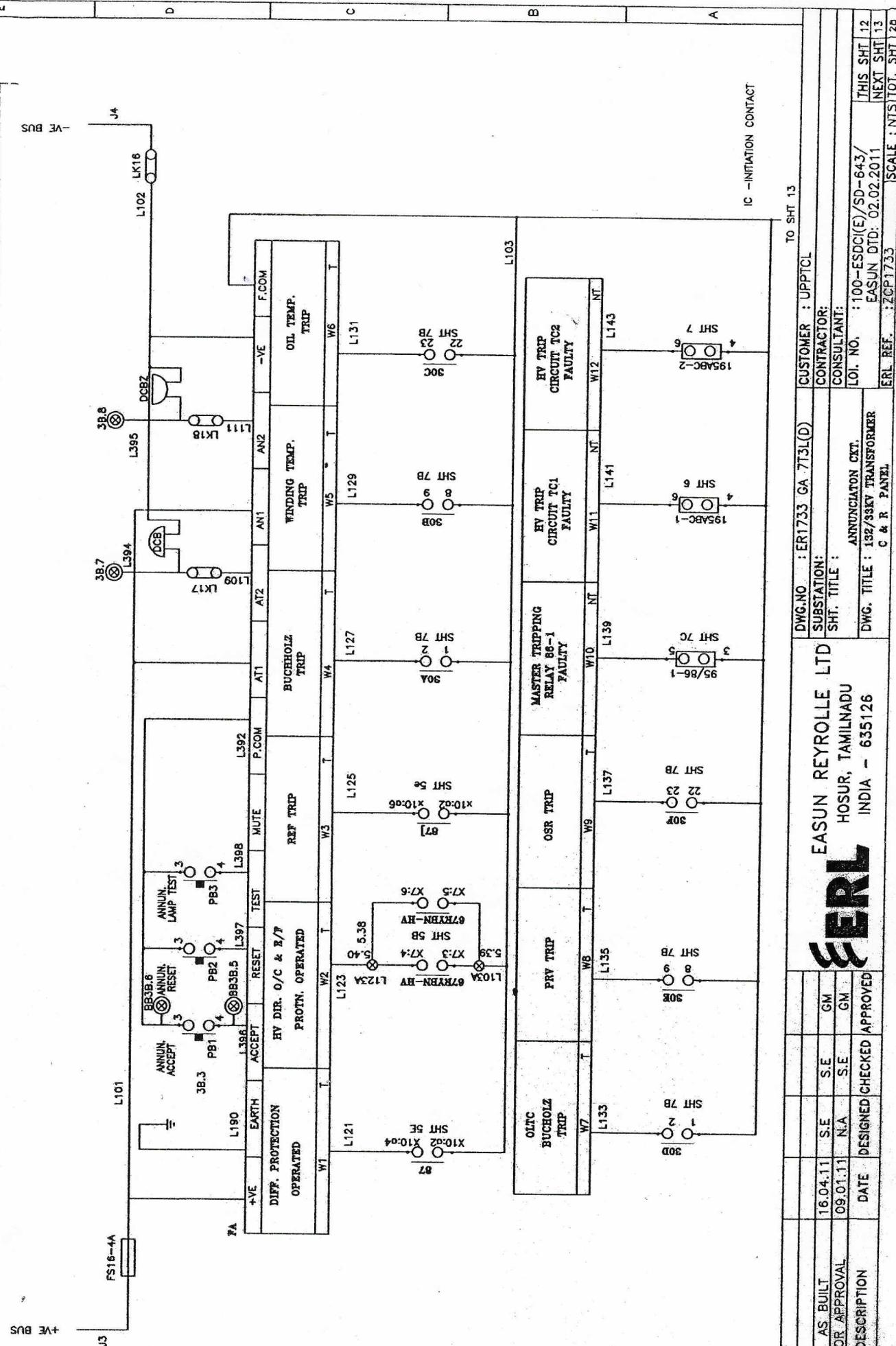


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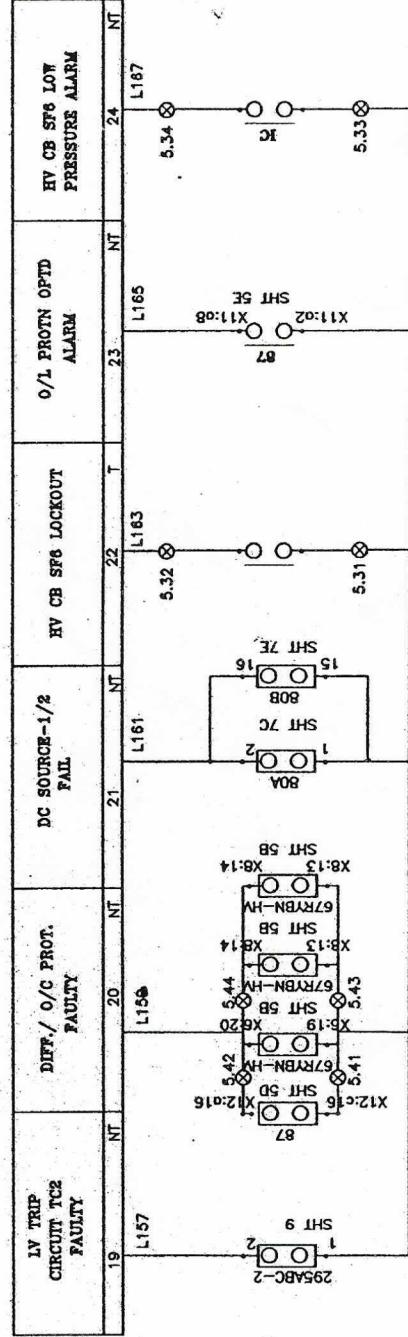
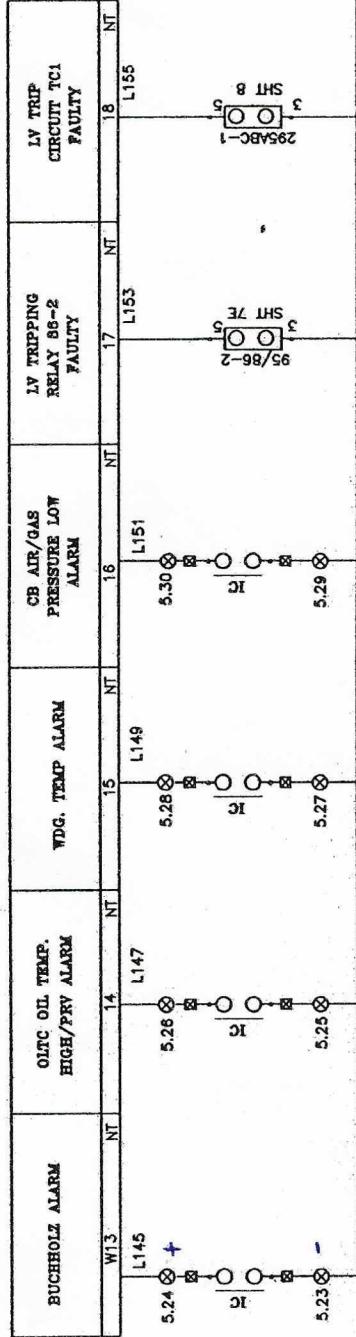
		DWG.NO : ER1733 GA 773L(D)	CUSTOMER : UPTCL
		SUBSTATION:	CONTRACTOR:
B	AS BUILT	S.E	GM
A	FOR APPROVAL	N.A	GM
REV	DESCRIPTION	DATE	DESIGNED CHECKED APPROVED C & R PANEL
			EASUN REYROLLE LTD HOSUR, TAMILNADU INDIA - 635126
			1V INDICATION CT
			LOI. NO. : 100-ESDC(E)/SD-643/ EASUN DTD: 02/02/2011 THIS SHT 11 DWG. TITLE : 132/33KV TRANSFORMER NEXT SHT 12 ERL REF. : ZCP 1733 SCALE : NTS 1:128 C & R PANEL

110V DC SUPPLY FROM SHF 4



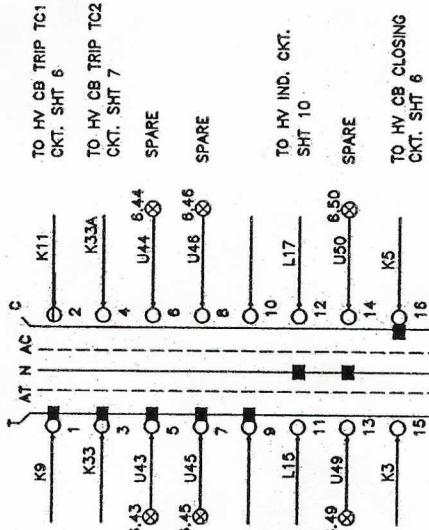
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L103

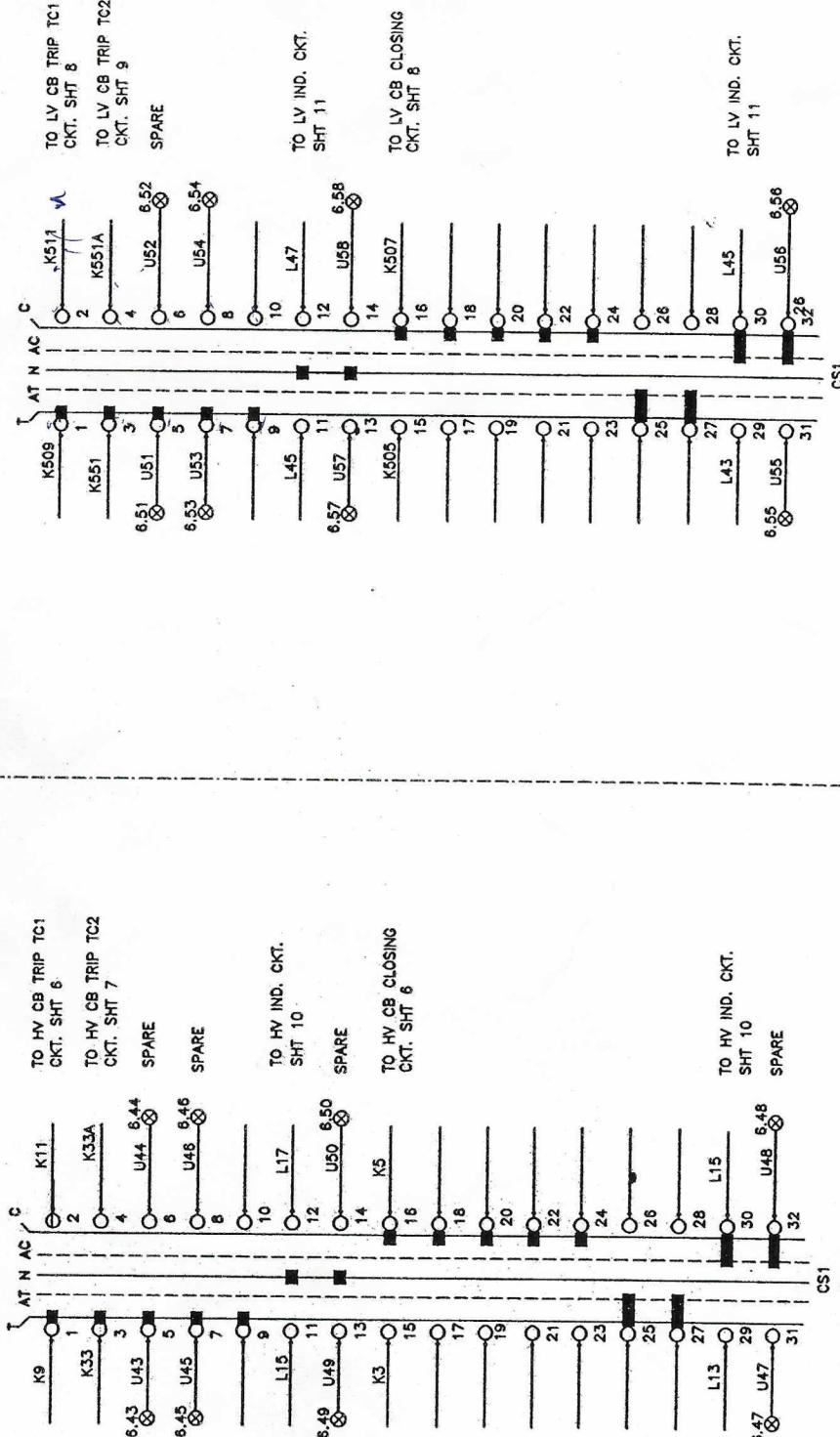


EASUN REYROLLE LTD	DWG.NO : ER1733 GA 773L(D)	CUSTOMER : UPPTEL
SUBSTATION:	CONTRACTOR:	
SHT. TITLE :	CONSULTANT:	
ANNUNCIATION CIR.	LOI. NO. : 100-ESDC(E)/SD-643/	THIS SHT 13
DWG. TITLE : 132/33KV TRANSFORMER	EASUN DTD: 02/02/2011	NEXT SHT 14
C & R PANEL	ERL REF. : ZCP1733	SCALE : NTS TOT. SHT 28

CB 152-HV CONTROL SWITCH-CS1

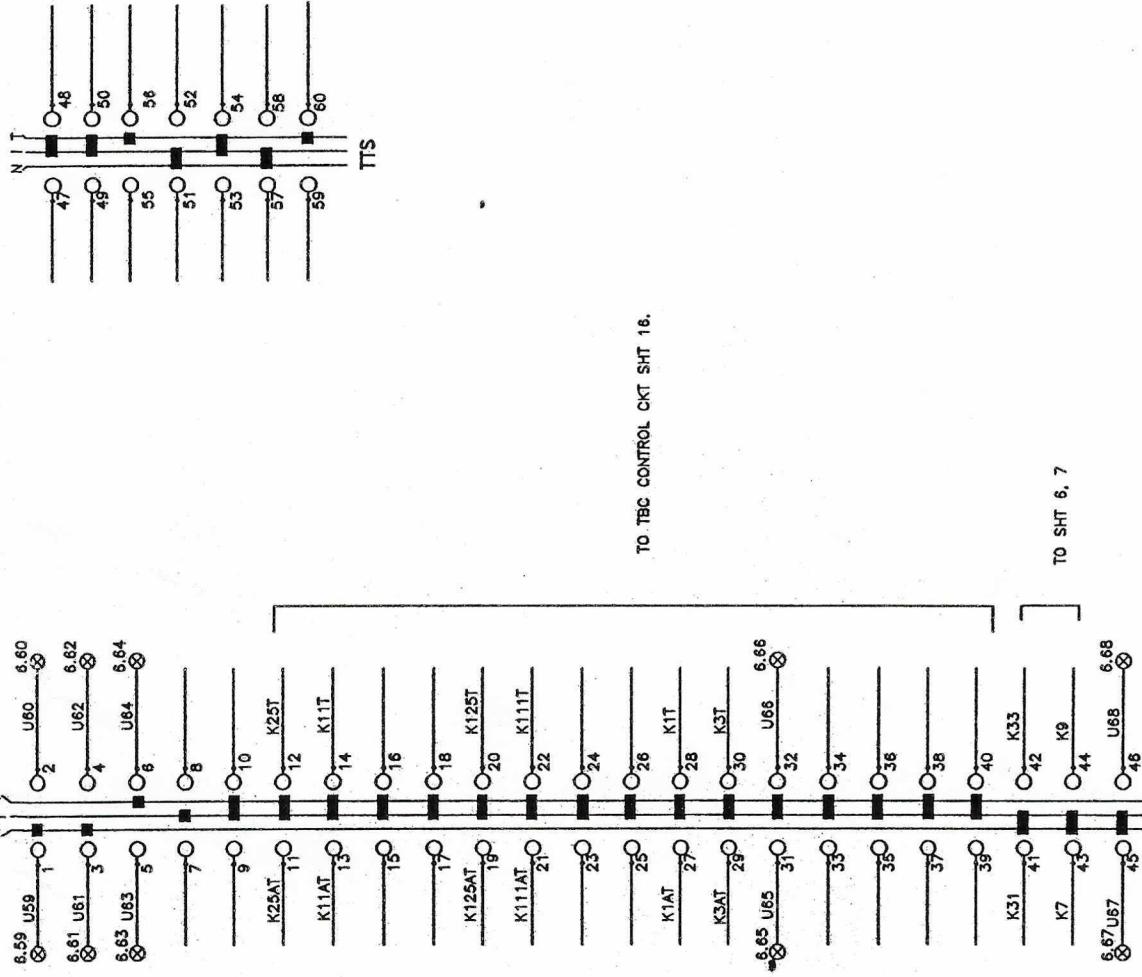


CB 252-LV CONTROL SWITCH-CS2

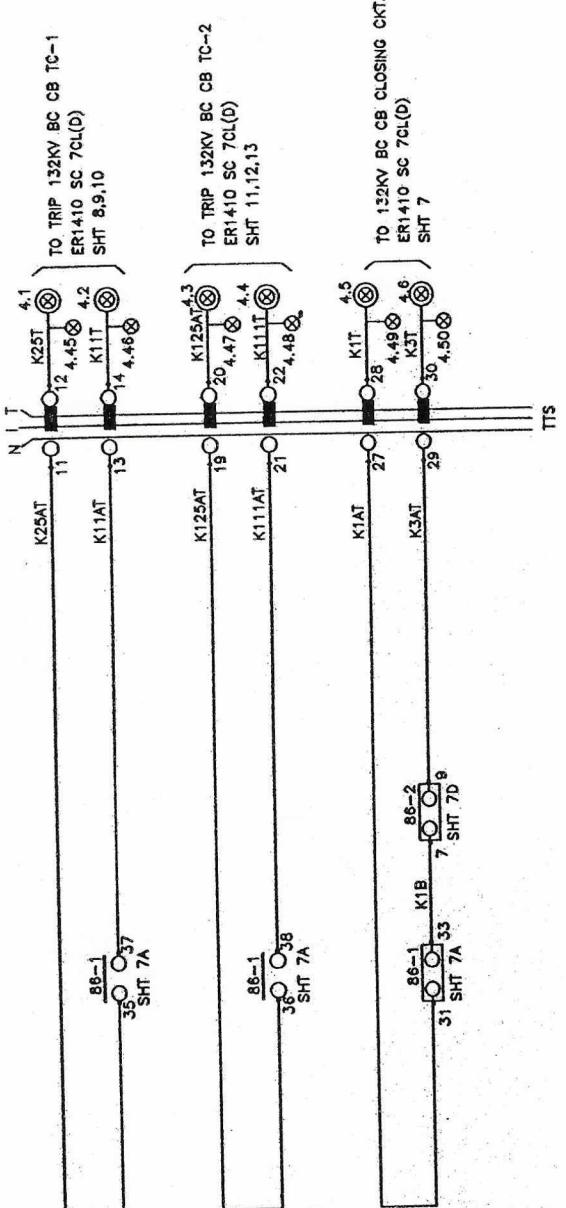


B	AS BUILT	16.04.11	S.E.	S.E.	EASUN REYROLLE LTD	DWG.NO : ER1733 GA 7T3L(D)	CUSTOMER : UPPTCL
A	FOR APPROVAL	09.01.11	N.A.	S.E.	CONTRACTOR:		
REV	DESCRIPTION	DATE	DESIGNED	CHECKED	CONSULTANT:		
			APPROVED		SWITCH DISTRIBUTION CIRCUIT	LOI. NO. : 100-ESDC(E)/SD-643/	THIS SHT 14
					DWG. TITLE : 132/33KV TRANSFORMER	EASUN DTD: 02.02.2011	NEXT SHT 15
					C & R PANEL	ERL REF. : ZCP1733	SCALE : NTS TOT. SHT 28

**TRIP TRANSFER SWITCH -1 TTS**



		DWG.NO : ER1733 GA 7731(D)		CUSTOMER : UPPCL	
		SUBSTATION:		CONTRACTOR:	
		SHT. TITLE : TTS SWITCH DIST. &		CONSULTANT:	
B	AS. BUILT	16.04.11	S.E.	GM	100-ESD(E)/SD-643/
A	FOR APPROVAL	09.01.11	N.A.	S.E.	EASUN LTD
REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED
					THIS SHT 15 NEXT SHT 16 ERI REF. : ZCP1733 SCALE : NTS/TOT. SHT 28



DWG. NO :	ER1733 GA 773L(D)	CUSTOMER :	UPPTCL
SUBSTATION:		CONTRACTOR:	
SHT. TITLE :		CONSULTANT:	
TBC CONTROL CIRCUIT		LO. NO. :	100-ESDC(E)/SD-643/ THIS SHT 16
DWG. TITLE : 132/33KV TRANSFORMER		EASUN DTD: 02/02/2011	NEXT SHT 17
C & R PANEL		ERL REF. : ZCP1733	SCALE : NTS TOT. SHT 28

**ERL**

EASUN REYROLLE LTD  
HOSUR, TAMILNADU  
INDIA - 635126

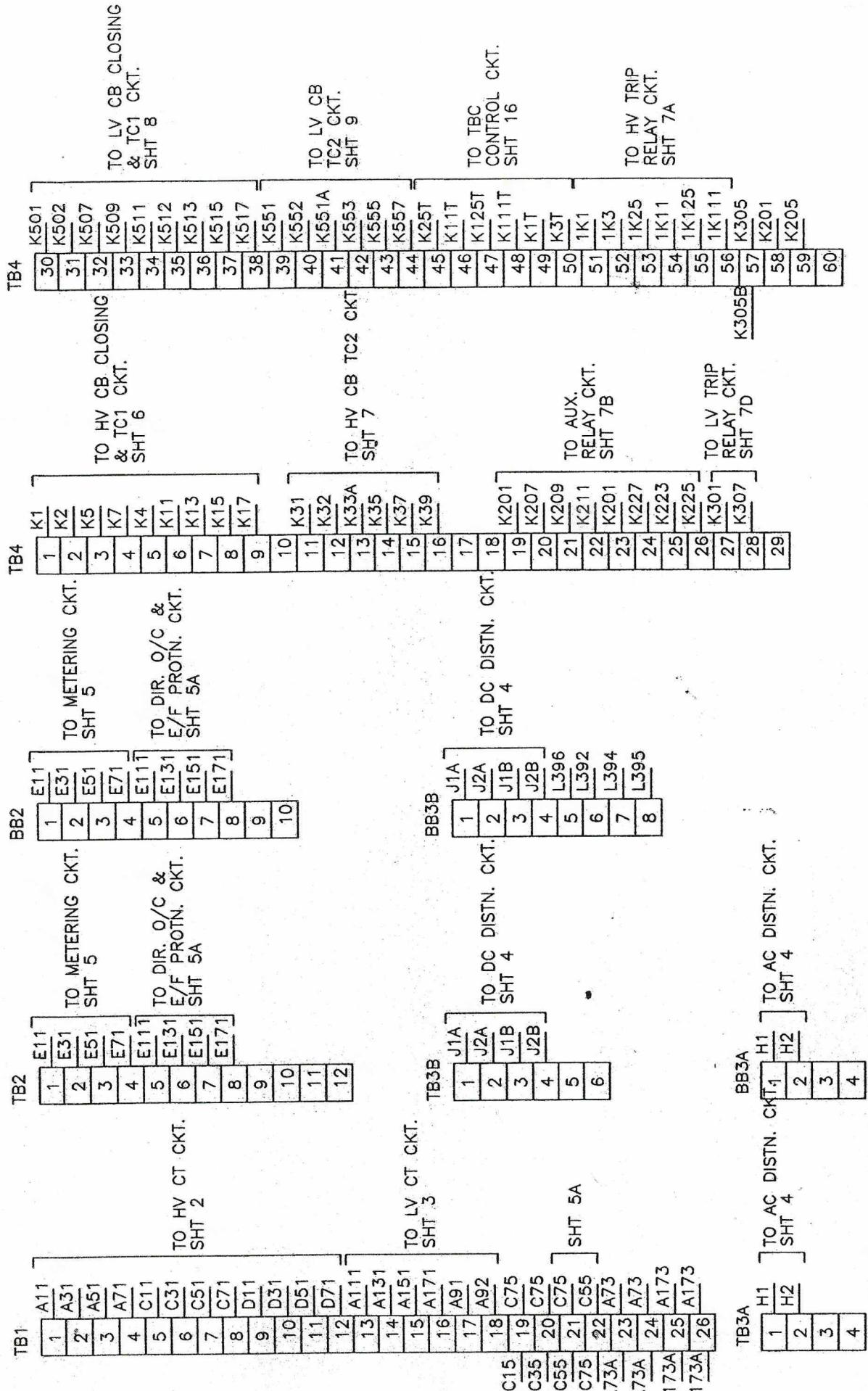
REV	DESCRIPTION	DATE	DESIGNED CHECKED APPROVED
B	AS BUILT	16.04.11	S.E S.E GM
A	FOR APPROVAL	09.01.11	N.A. S.E GM

END CUSTOMER: UTTAR PRADESH POWER TRANSMISSION CORPORATION LIMITED  
LOI NO : 100-ESDCI(E)/SD-643/EASUN DTD: 02.02.2011

132/33KV, TRANSFORMER CONTROL & RELAY PANEL

SL.NO.	DESCRIPTION	DWG. NO.
1.	GENERAL ARRANGEMENT	ER1733 GA 7T3L(D)
2.	BILL OF MATERIAL	ER1733 BM 7T3L(D)
3.	SCHEMATIC DIAGRAM	ER1733 SC 7T3L(D)

**EERL** EASUN REYROLLE LTD  
HOSUR , TAMIL NADU  
INDIA



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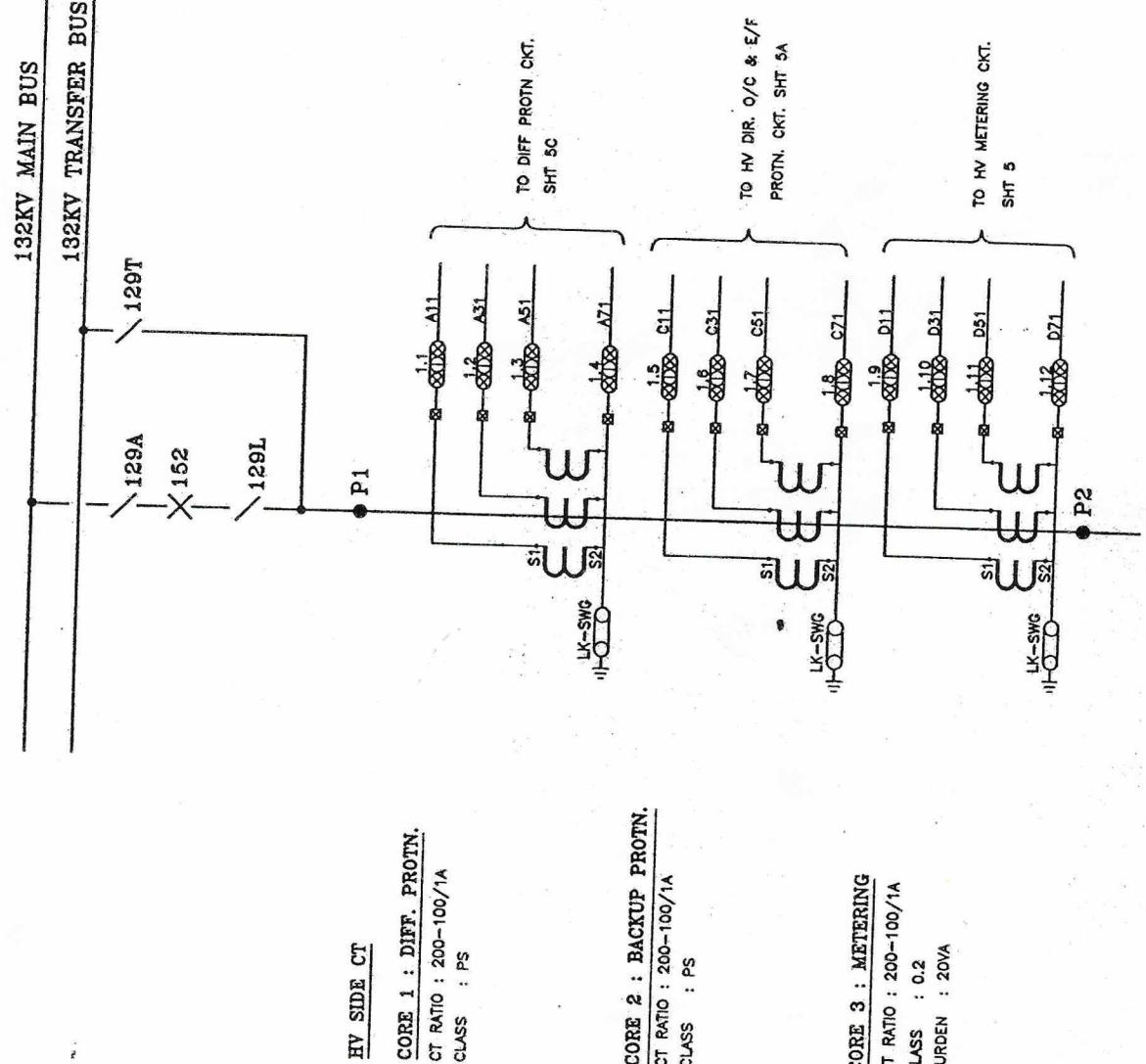


**Easun Reyrolle Limited**  
BILL OF MATERIAL

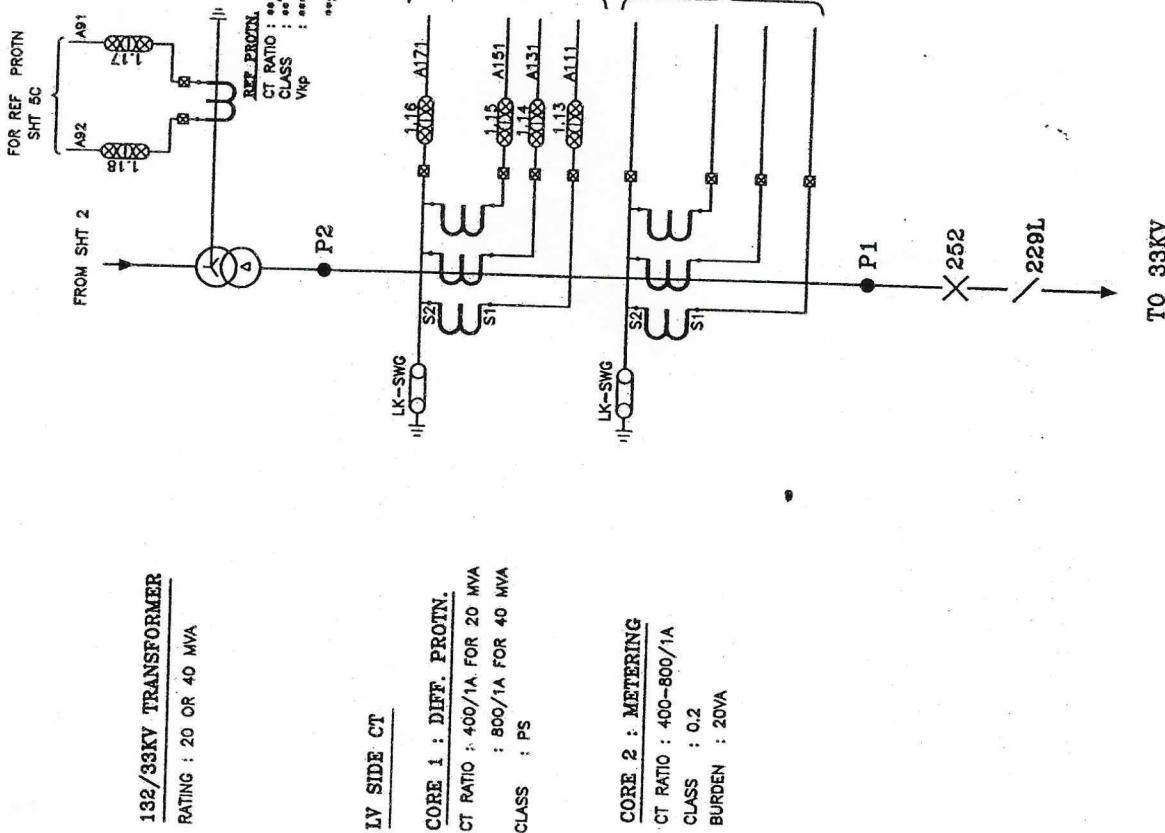
PANEL REF.	GA REF.	DESCRIPTION	MAKE/SPECIFICATION	QTY
	86-1	TRIP RELAY FOR HV	MAKE: ER TYPE: TR221H2 CASE SIZE: E4 AUX.SUPPLY: 110 VDC CONTACT: 18 NO,4 NC W.D: 8112W00083	1
	86-2	TRIP RELAY FOR LV	MAKE: ER TYPE: TR221 CASE SIZE: E4 AUX.SUPPLY: 110 VDC CONTACT: 7 NO,4 NC W.D: 8112W00077	1
	80ABC	DC SUPERVISION RELAY	ER-AR121T*2/AR101 110V DC 80C(AR101)-2NO,2NC SR (240V AC) 80A(AR121T)-4NC SR, 80B(AR121T)-4NC SR(110V DC) HR REV. FLAG CASE SIZE: 3N W/D : 8112W00106	1
	195ABC-1 195ABC-2	CIRCUIT BREAKER TRIP CKT-1/2 SUPERVISION RELAYS FOR HV	MAKE: ER TYPE: XR 351 CASE SIZE: E4 AUX.SUPPLY: 110V DC CONTACTS: 2NO,2NC W.D : 8112W00132	2
	295ABC-1 295ABC-2	CIRCUIT BREAKER TRIP CKT-1/2 SUPERVISION RELAYS FOR LV	MAKE: ER TYPE: XR 351 CASE SIZE: E4 AUX.SUPPLY: 110V DC CONTACTS: 2NO,2NC W.D : 8112W00132	2
	BLK A,B,C	TEST BLOCK	MAKE: ER TYPE: ERMLG	3
		TEST PLUG	MAKE: ER TYPE: ERMLB	2
	TTB	TEST TERMINAL BLOCK FOR MULTI FUNCTION METER	MAKE: DEEPL TYPE: 3PH,4WIRE REAR CONNECTION LINK TYPE	1
MOUNTED INSIDE				
CFL	COMPACT FLUORESCENT LAMP	MAKE: PHILIPS AUX.SUPPLY: 240 VAC	1	
TH	THERMOSTAT	MAKE: TEMPTRON	1	
H	SPACE HEATER	MAKE: SURYA	1	
DS	DOOR SWITCH FOR CFL	MAKE: SURAJ	1	
PS	POWER SOCKET WITH ON/OFF SWITCH	MAKE: ANCHOR RATINGS: 15 AMP	1	
HS	HEATER ON/OFF SWITCH	MAKE: SWITRON	1	
ACB	AC BUZZER	MAKE: ALAN 240V AC	1	
DCB	DC BELL	MAKE: ALAN 110V DC	1	
DCBZ	DC BUZZER	MAKE: ALAN 110V DC	1	
LOOSE SUPPLY	COMMUNICATION CABLE	2M LENGTH OF RS232 COMMUNICATION CABLE FROM CSC RELAY TO PC REF.DRG NO-ER-CSC-C	1	
LOOSE SUPPLY	COMMUNICATION CABLE	2M LENGTH OF RS232 COMMUNICATION CABLE FROM CSC211 RELAY TO PC REF.DRG NO-ER-CSC211-CC	1	
FS-LK	SET OF FUSE AND LINKS	MAKE: REPUTED MAKE	AS PER SCHEME REQUIREMENT	
TB	SET OF TERMINAL BLOCKS	MAKE: CONNECTWELL	AS PER SCHEME	

SHT NO.	ISSUE	DESCRIPTION
1	B	DRAWING CONTENTS
2	B	HV CT CIRCUIT
3	B	LV CT CIRCUIT
4	B	DC & AC DISTRIBUTION CIRCUIT
5	B	HV METERING CIRCUIT
5A,5B	B	DIR, O/C & E/F PROT. CIRCUIT
5C,5D,5E	B	DIFF. PROTECTION CIRCUIT
6	B	LV CB CLOSING & TC1 CIRCUIT
7	B	LV TRIP RELAY CIRCUIT
7A	B	HV CB TC2 CIRCUIT
7B	B	AUXILIARY RELAY CIRCUIT
7C	B	HV TRIP RELAY SUPVN. CIRCUIT
7D	B	LV TRIP RELAY CIRCUIT
7E	B	LV TRIP RELAY SUPVN. CIRCUIT
8	B	LV CB CLOSING & TC1 CIRCUIT
9	B	LV CB TC2 CIRCUIT
10	B	HV INDICATION CIRCUIT
11	B	LV INDICATION CIRCUIT
12	B	ANNUNCIATION CIRCUIT
13	B	ANNUNCIATION CIRCUIT
14	B	SWITCH DISTRIBUTION CKT.
15	B	TTS SWITCH DISTRIBUTION CKT.
16	B	TBC CONTROL CKT.
17	B	TB SCHEDULE
18	B	TB SCHEDULE

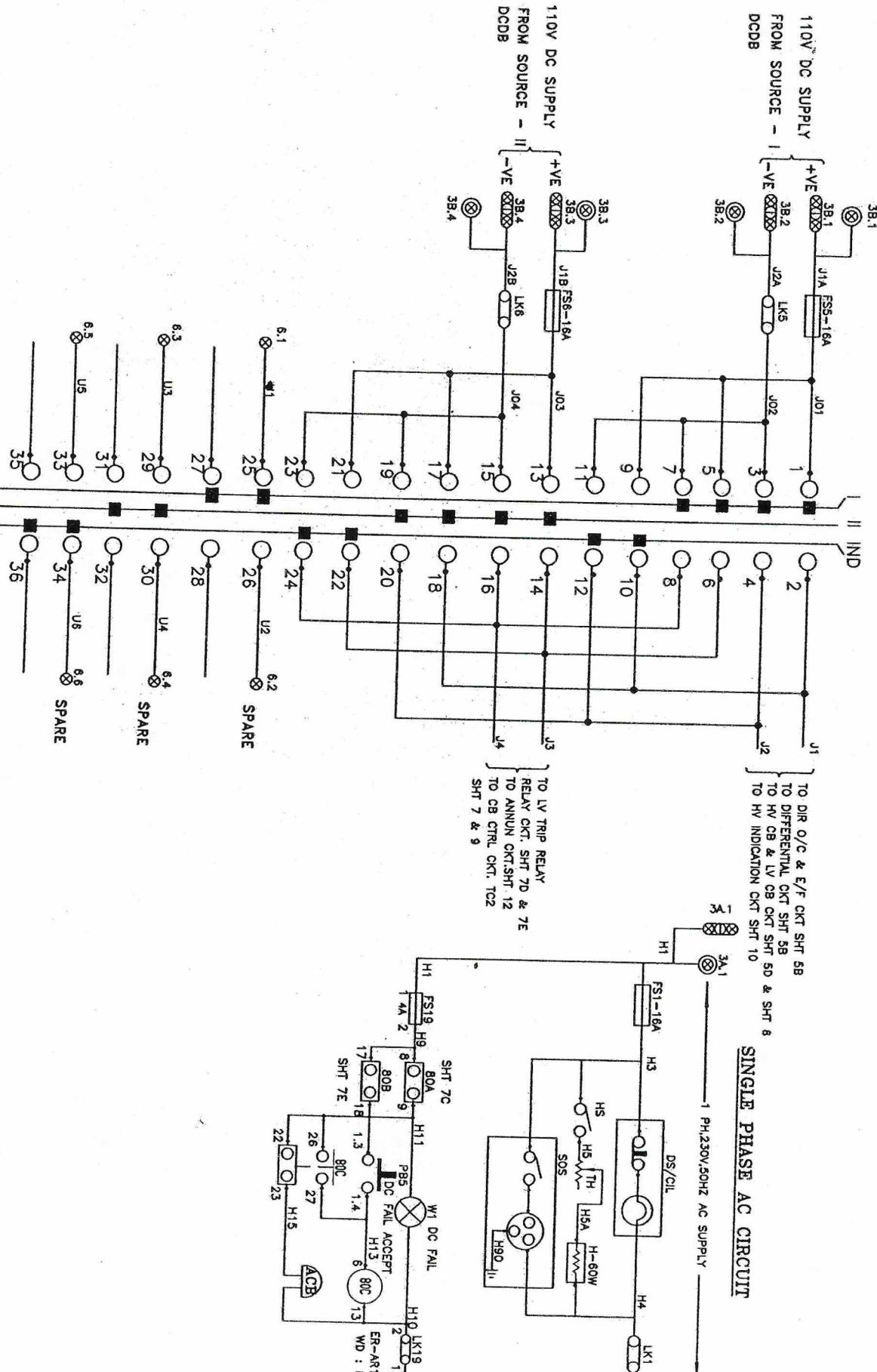
B AS BUILT FOR APPROVAL	16.04.11 09.01.11	S.E. N.A.	S.E. S.E.	GM GM	DWG.NO : ER1733 GA 7T3L(D)	CUSTOMER : UPPCL
					CONTRACTOR:	
A DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED	CONSULTANT: LOI. NO. : 100-ESDC(E)/SD-643/ DWG. TITLE : 132/33KV TRANSFORMER C & R PANEL	THIS SHT 1 NEXT SHT 2 SCALE : NTS TO 1. SHT 28
					ERL REF. : 2CP1733	ERL REF. : 2CP1733



B	AS BUILT	16.04.11	S.E.	S.E.	GM	DWG.NO : ER1733 GA 7T3L(D)	CUSTOMER : UPPTCL
A	FOR APPROVAL	09.01.11	N.A.	S.E.	GM	CONTRACTOR:	
REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED	CONSULTANT: LOI. NO. : 100-ESDC(E)/SD-643/ EASUN DTD: 02.02.2011	THIS SHT 2 NEXT SHT 3
						DWG. TITLE : 132/33KV TRANSFORMER C & R PANEL	ERL REF. : 1ZCP1733 SCALE : NTS(TOT. SHT 28



B	AS BUILT	16.04.11	S.E	S.E	GM	EASUN REYROLLE LTD	DWG.NO : ER1733 GA 773L(D)	CUSTOMER : UPPTCL
A	FOR APPROVAL	09.01.11	N.A.	S.E	GM	HOSUR, TAMILNADU INDIA - 635126	SUBSTATION: SHIT. TITLE : IV CT CIRCUIT	CONTRACTOR:
REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED	ERL REF. : ZCP1733	DWG. TITLE : 132/33KV TRANSFORMER C & R PANEL	CONSULTANT: LOI. NO. : 100-ESDC(E)/SD-643/ EASUN DTD: 02.02.2011 THIS SHIT 3 NEXT SHIT 4 SCALE : NTS TOT. SHIT 28

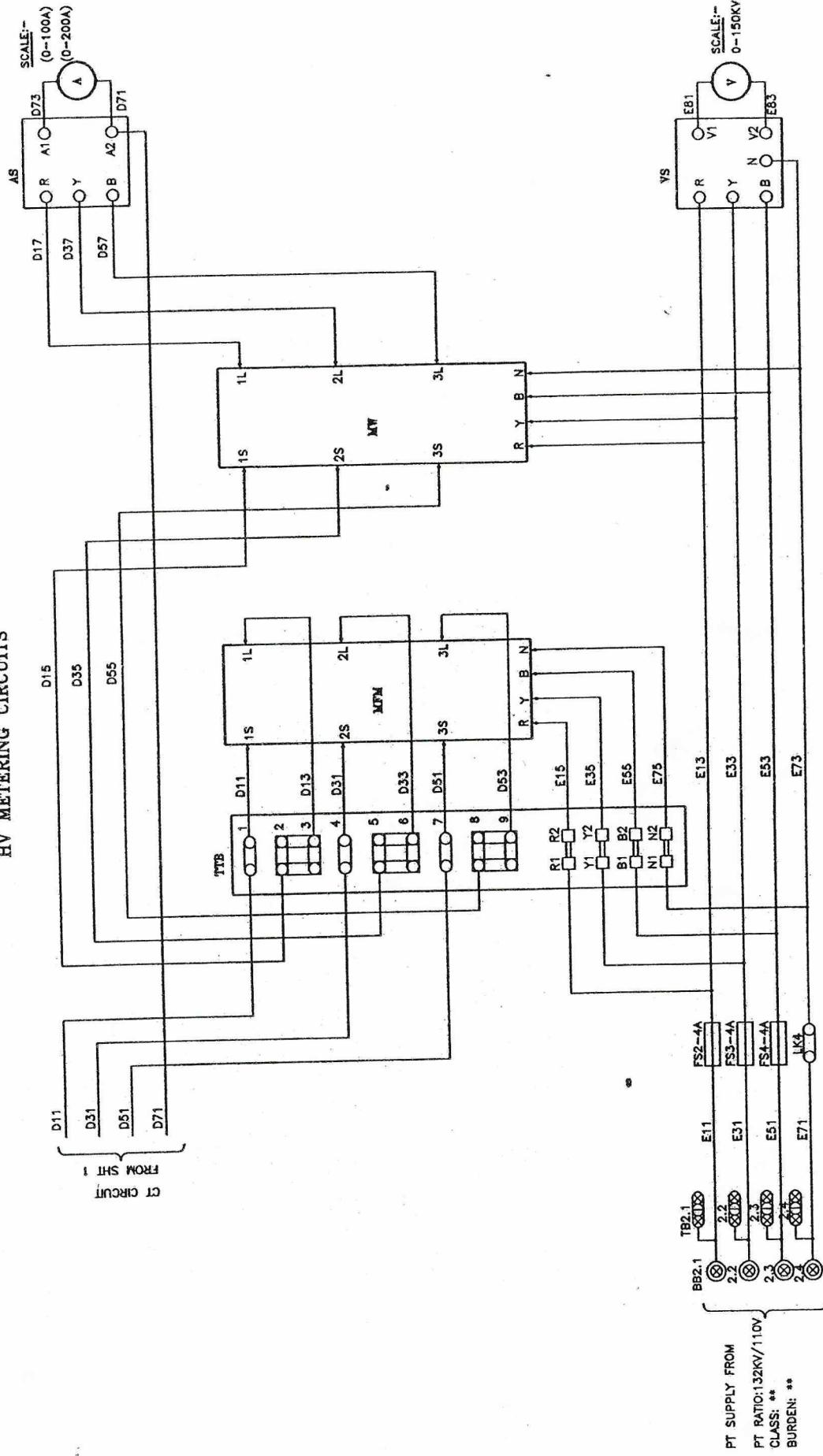


REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED
B	AS BUILT FOR APPROVAL	16.04.11 09.01.11	S.E. N.A.	S.E. S.I.E.	GM GM
A	EASUN REYROLLE LTD				
	HOSUR, TAMILNADU INDIA - 635126				

DWG. NO : ERL733 GA 773(D) CUSTOMER : UPPCL  
 SUBSTATION: CONTRACTOR:  
 SHT. TITLE: CONSULTANT:  
 AC & DC DISTRIBUTION CIRCUIT  
 LOI. NO. : 100-ESDC(E)/SD-643/  
 DWG. TITLE : 102/SSKV TRANSFORMER  
 C & R PANEL  
 ERL REF. : ZCP-1733

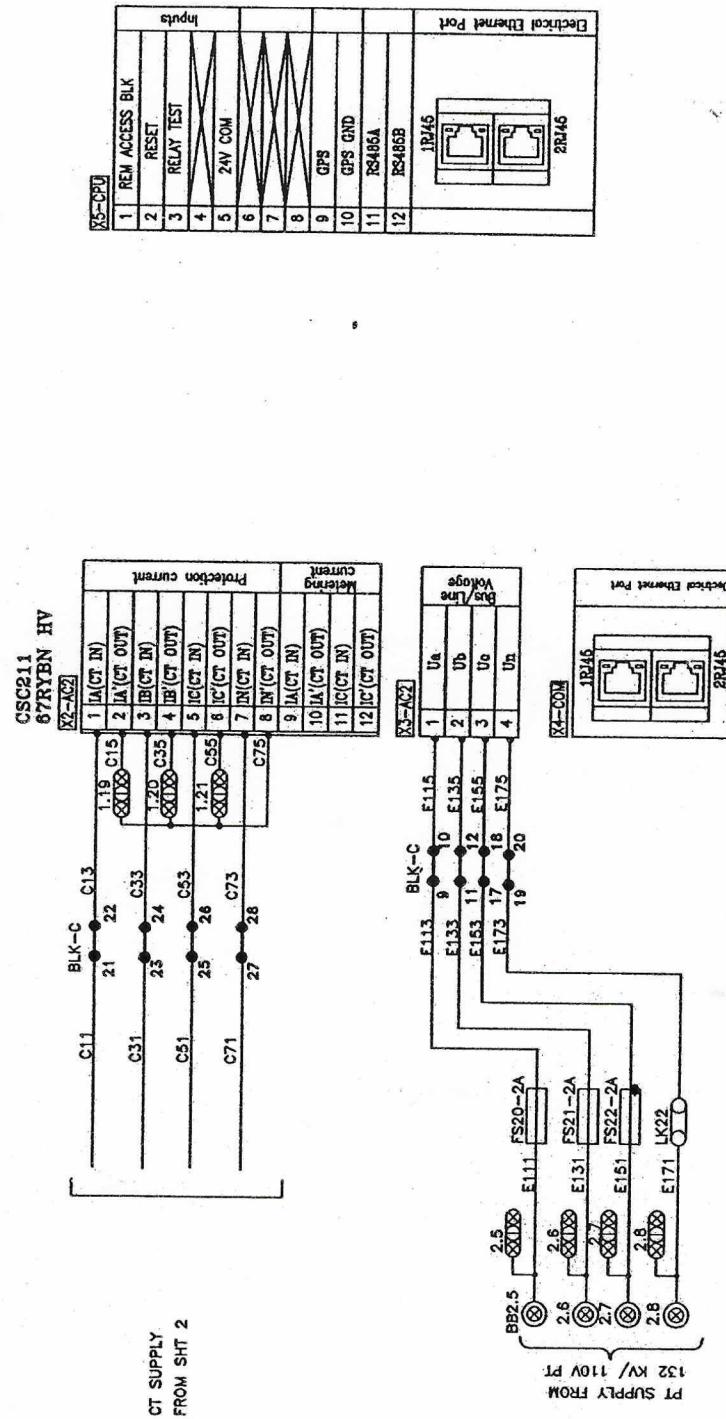
THIS SHT 4  
 NEXT SHT 5

HV METERING CIRCUITS



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HV DIR. OVER CURRENT AND EARTH FAULT PROTECTION



**NOTE:** OPEN FROM EITHER

**OPEN DELTA VOLTAGE IS DERIVED INTERNALLY FROM THE MAIN PT. HENCE NO NEED TO GIVE EXTERNAL OPEN DELTA VOLTAGE**

NOTE

- 4) ELECTRICAL ETHERNET PORT PROVIDED IN X4-COM MODULE IS NOT FOR END USER.  
THIS IS FOR MANUFACTURER USE.

5)  - DUMMY TERMINAL

		EASUN REYROLLE LTD		DWG.NO : ER1733 GA 773L(D)	CUSTOMER : UPTCL
		SUBSTATION:		CONTRACTOR:	
		SHT. TITLE :		CONSULTANT:	
		DIR. O/C & E/P PROTN. CT.		LOI. NO. : 100-ESDC(E)/SD-641/	
REV	DESCRIPTION	DATE	DESIGNED CHECKED APPROVED	DWG. TITLE : 132/33KV TRANSFORMER C & R PANEL	EASUN DTD: 02/02/2011 ERL. REF. : ZCP1733 SCALE : NTS TO SHT NEXT SHT 5B THIS SHT 5A PREV SHT 2B
B	AS BUILT	16.04.11	S.E	GM	
A	FOR APPROVAL	09.01.11	N.A	S.E	

HV DIR. OVER CURRENT AND EARTH FAULT PROTECTION

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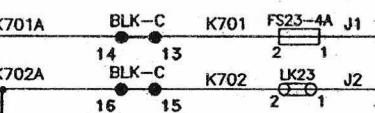
E

110V DC  
SUPPLY FROM  
SHT 5D

CSC211  
67RYBN-HV

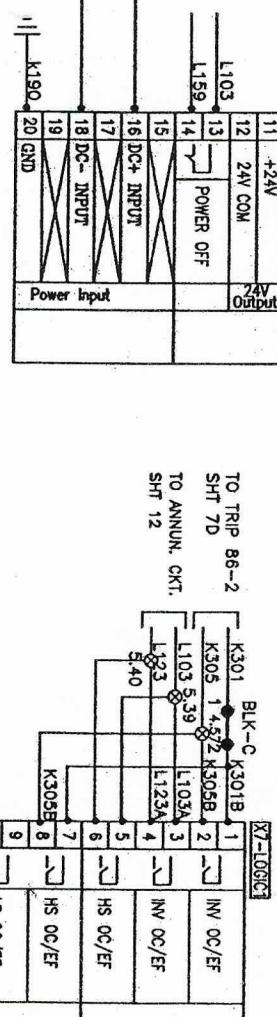
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OL (CURRENT)
CBF ALARM
VT FAIL
OPERATION
HARDWARE ALARM



TO ANNUN. CKT.  
SHT 13

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20	->



TO ANNUN. CKT.  
SHT 13

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16	->
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20	->

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DWG. NO :

ERL733 GA 773(D)

CUSTOMER :

UPPTCL

SUBSTATION:

CONTRACTOR:

CONSULTANT:

DIR. O/C & E/F PROTIN. CKT.

LOL. NO. :

100-ESDC(E)SD-643/

THIS SHT. SB

ERL REF. #ZCP1733

NEXT SHT. SC

SCALE : NTS

IOT. SHT. 28

C & R PANEL

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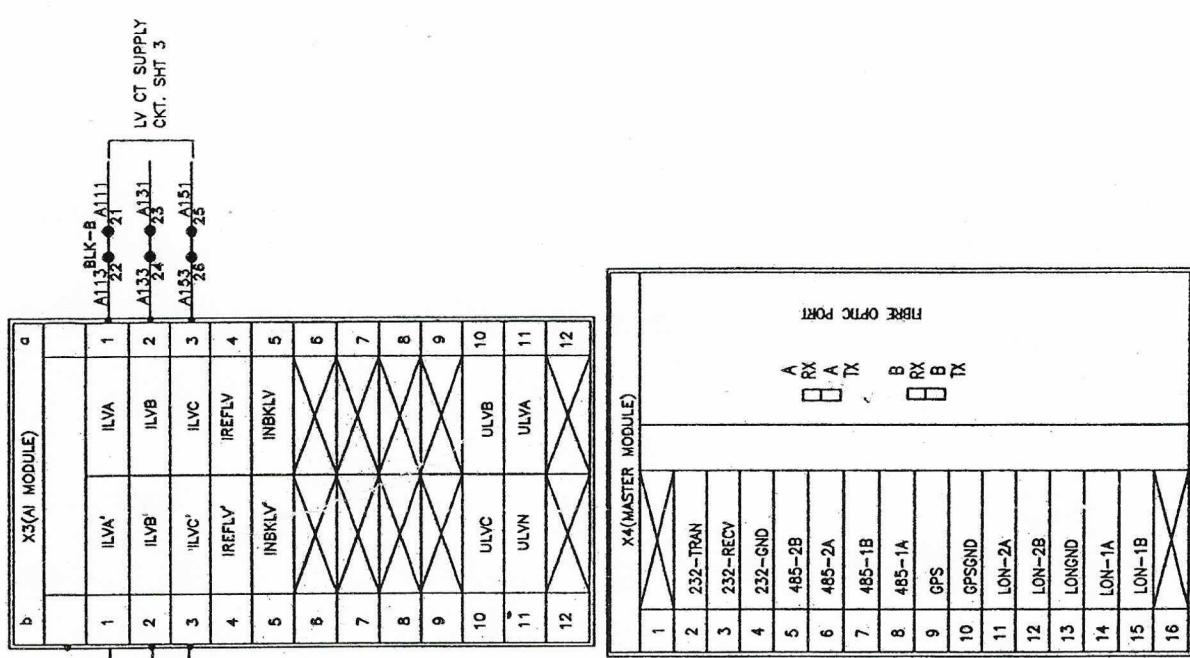
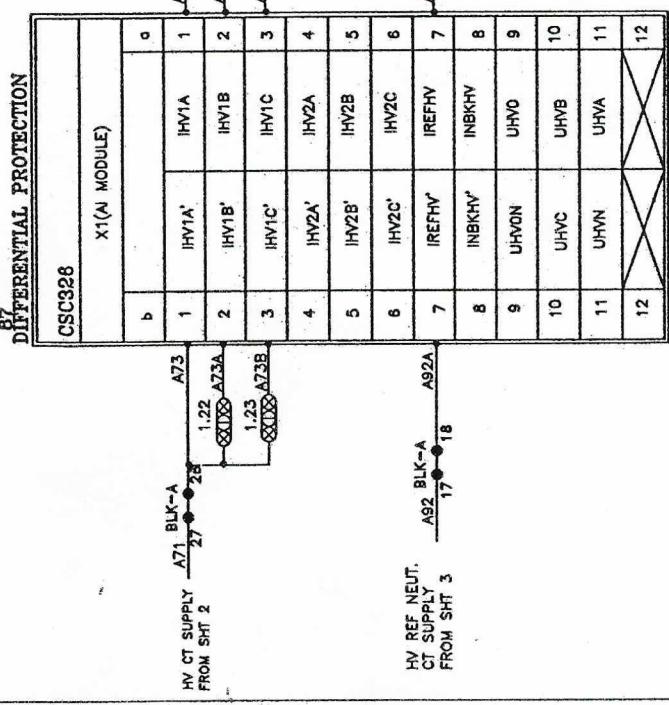
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KK

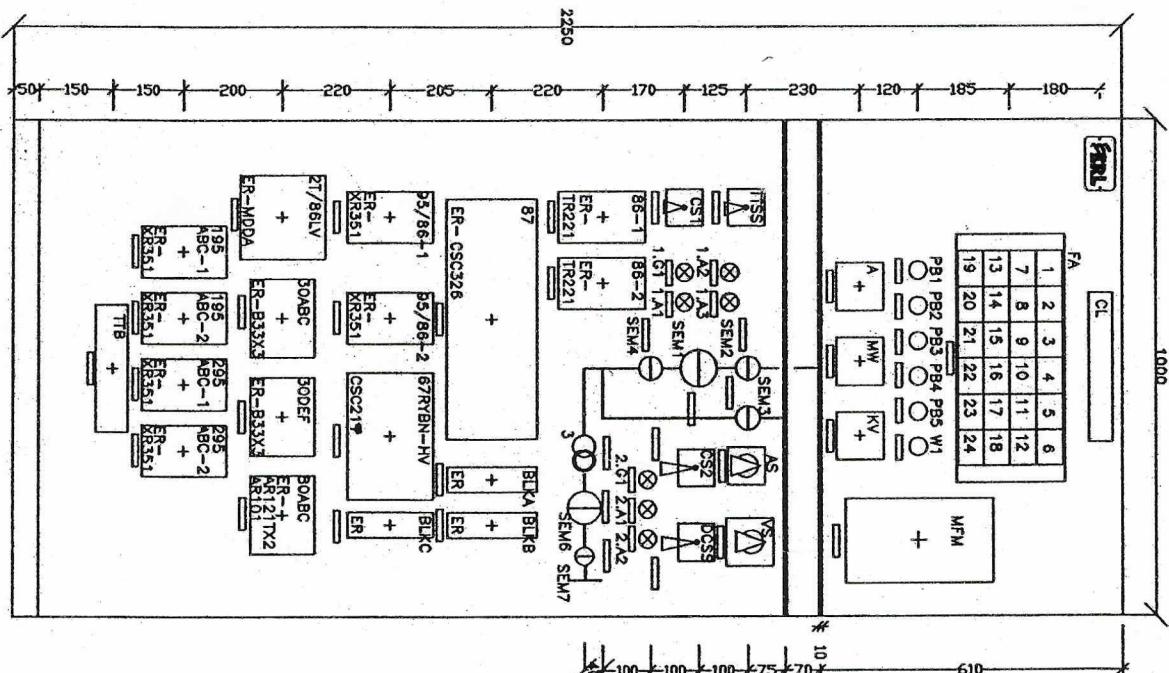
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MM</

**DIFERENTIAL PROTECTION**



<b>EASUN REYROLLE LTD</b>		<b>DWG.NO : ERI733 GA 7T3L(D)</b>	<b>CUSTOMER : UPTCL</b>
<b>SUBSTATION:</b>		<b>CONTRACTOR:</b>	
<b>SHT. TITLE :</b>		<b>CONSULTANT:</b>	
<b>B</b>	<b>AS BUILT</b>	<b>16.04.11</b>	<b>100-ESDC(E)/SD-643/</b>
<b>A</b>	<b>FOR APPROVAL</b>	<b>09.01.11</b>	<b>THIS SHT 5C</b>
<b>REV</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>NEXT SHT 5D</b>
			<b>ERL REF. : 132/3KV TRANSFORMER</b>
			<b>C &amp; R PANEL</b>
			<b>SCALE : 1:500</b>
			<b>ERL REF. : 132/3KV TRANSFORMER</b>
			<b>SCALE : 1:500</b>



### MOUNTED INSIDE

- 1 NO CUBICLE ILLUMINATION LAMP WITH DOOR OPERATED SWITCH
- 1 NO SPACE HEATER WITH ON/OFF SWITCH
- 1 NO 15A SOCKET WITH ON/OFF SWITCH
- 1 NO BELL
- 1 NO Hooter

CIRCUIT LABEL	132/33KV TRFO. C & R PANEL
TOTAL QTY.	37 NOS.
AUX. DC VOLTAGE	110V DC
PANEL TYPE	SIMPLEX

REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED
B	AS BUILT	16.04.11	S.E	S.E	GM
A	FOR APPROVAL	23.12.10	N.A	S.E	GM
	REVISION	DATE	DESIGNED	CHECKED	APPROVED

EASUN REYROLLE LTD  
HOSUR, TAMILNADU  
INDIA - 635126

DWG. NO : ER1733 GA 773L(D) CUSTOMER : UPPCL

SUBSTATION: CONTRACTOR:

SHT. TITLE : FRONT VIEW

CONSULTANT:

GENERAL ARRANGEMENT

LOI NO :

THIS SHT

1086-ESDC(E)/SD-643/

NEXT SHT

EASUN DTD: 08.12.2010

SCALE : NTS TOT. SHT

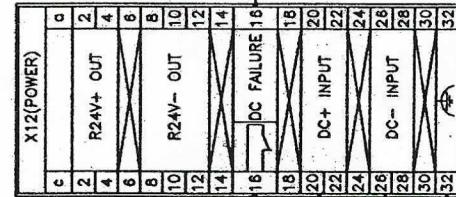
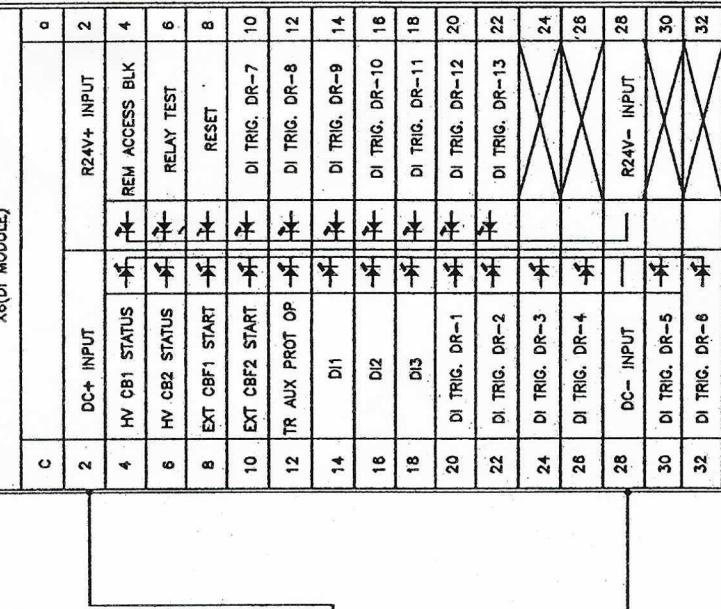
DWG. TITLE : 132/33KV TRANSFORMER

ERL REF. : ZCP1733

**87  
DIFFERENTIAL PROTECTION**

CSC326

X6(DI MODULE)



L159 TO ANNOUNCEMENT  
SHT 13

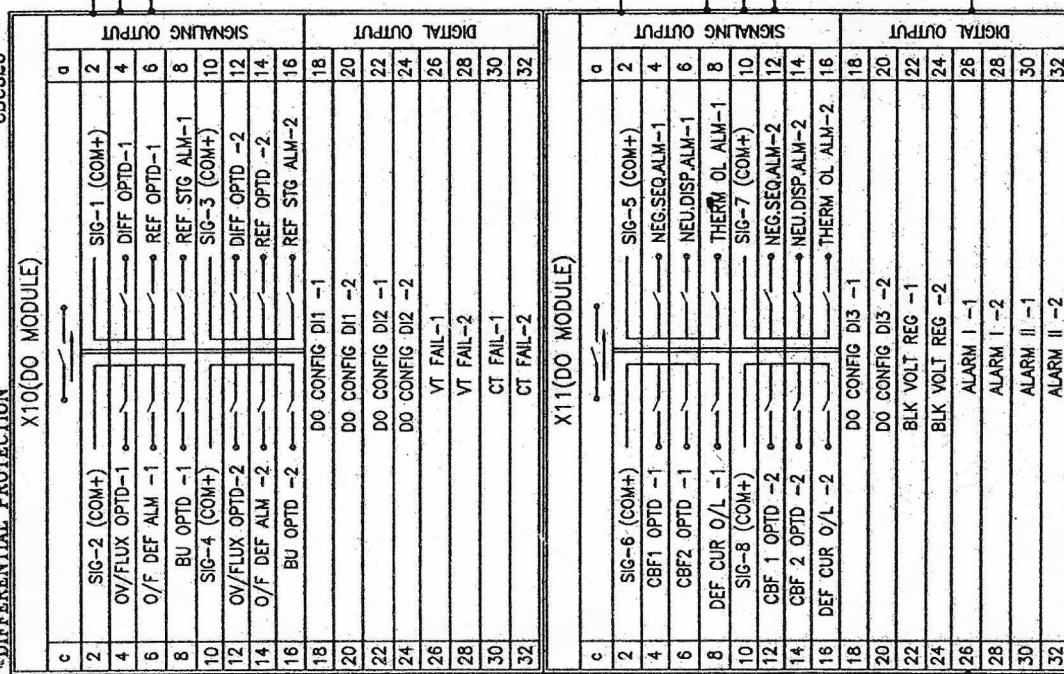
L103

K390

DWG.NO :	ER1733 GA 7T3L(D)	CUSTOMER :	UPPTCL
SUBSTATION:		CONTRACTOR:	
SHT. TITLE :		CONSULTANT:	
DIFFERENTIAL PROT. CKT.		LOI. NO. : 100-ESDCE(E)/SD-643/	THIS SHT SD
DWG. TITLE : 132/33KV TRANSFORMER		EASUN DID: 02/02/2011	NEXT SHT 5E
C & R PANEL		ERL REF. : ZCP1733	SCALE : NTS T.O. SHT 28

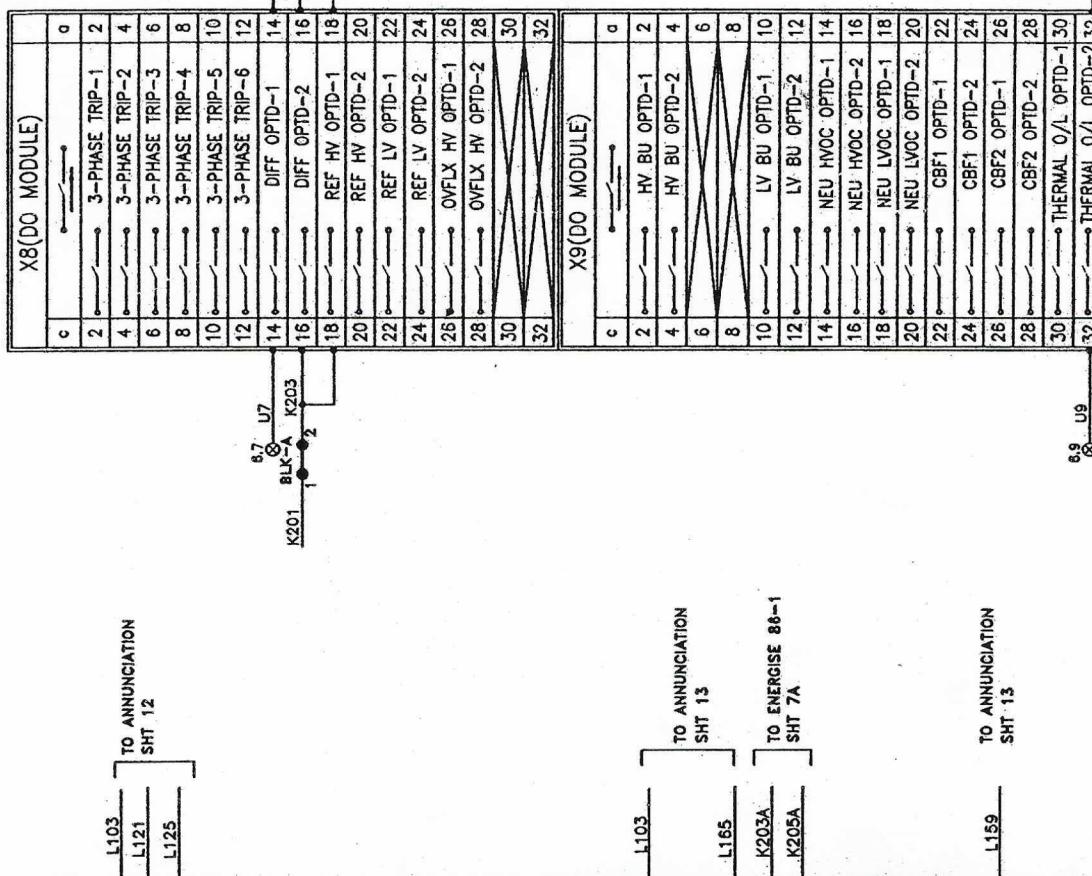
DIFFERENTIAL PROTECTION

range



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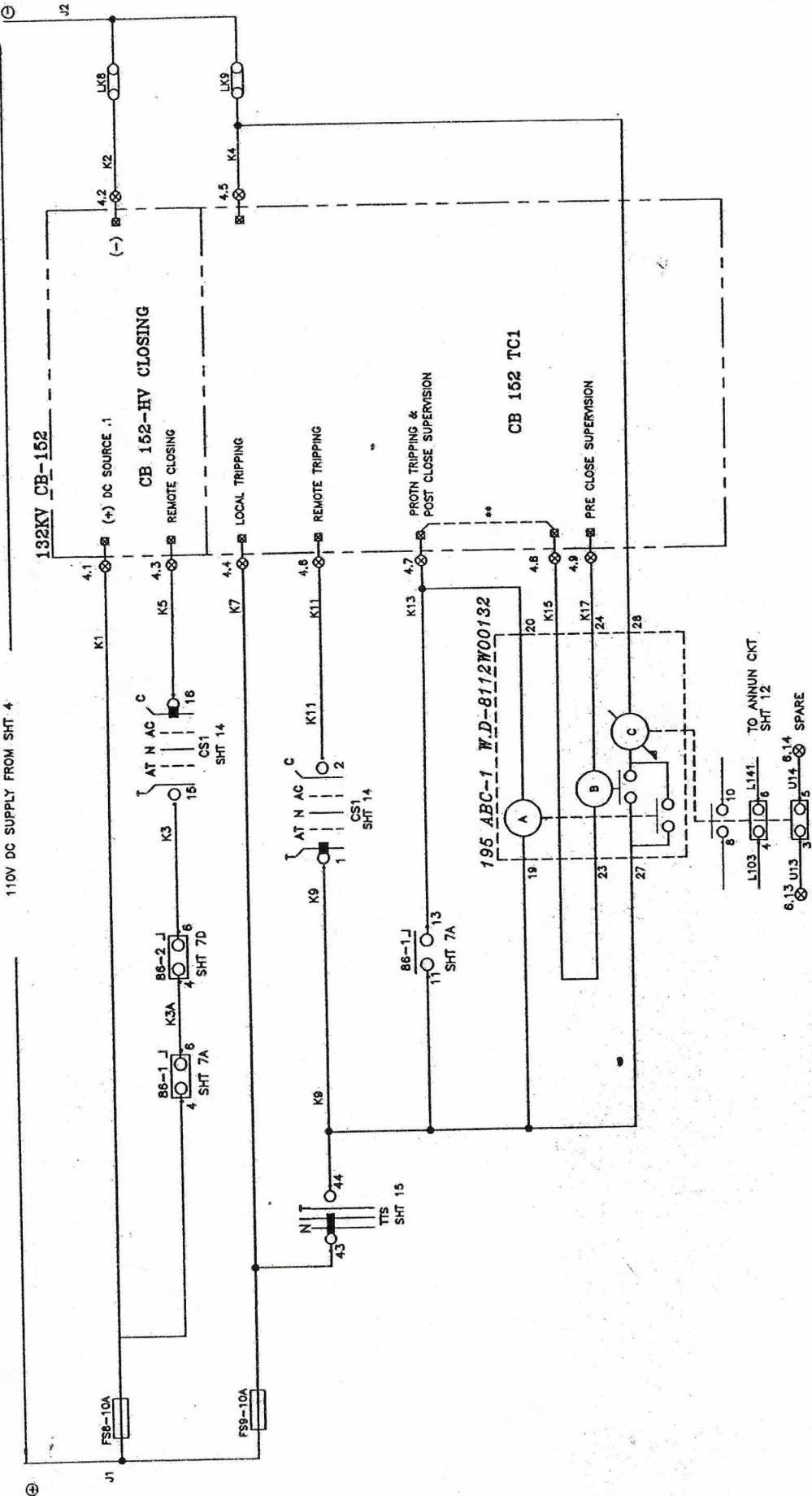
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**CUSTOMER :** UPTCL  
**CONTRACTOR:**  
**CONSULTANT:**  
**LOI. NO.:** 100-FSDC(E)/SD-643/  
**EASUN DTD:** 02.02.2011  
**ERL REF:** ZCP 7333  
**SCALF :** NTS TOT SHT 6  
**THIS SHT**  
**NEXT SHT**  
**5E**  
**28**

DWG. NO : ER1  
SUBSTATION:  
SHT. TITLE :  
DWG. TITLE : 132,  
DRAFT C &

EA  
SERIAL



TO AVOID TRIPPING ON MAIN AND TRANSFER BUS DURING  
TRANSFER ON LOAD, THIS NIT IN "T" POSITION ONLY

NOTE:-

MARKED \*\* THUS SHORTING TO BE DONE AT SITE BY CUSTOMER

DWG.NO : ER1733 GA 773(D)	CUSTOMER : UPPCL
SUBSTATION:	
SHT. TITLE : HV CB CLOSING & TC1 CKT.	CONTRACTOR:
LO. NO. : 100-ESDC(E)/SD-643/	CONSULTANT:
EASUN LTD. DTD. : 02.02.2011	THIS SHIT 6
NEXT SHIT 7	
ERL REF. : ZCP733	SCALE : NTS TOT. SHIT 28

⊕

110V DC SUPPLY FROM SHT 4

⊖

132KV CB-152

E

J3

FS10-10A

N  
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K33

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42

TTS

SHT 15

BS-1

12

SHT 7A

AT N AC

C

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CS1

4

K33A

4,13

REMOTE

TRIPPING

4,14

(+) DC SOURCE,2

4,12

K32

B

K10

J4

D

C

B

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19

20

K37

4,15

PRE CLOSE

SUPERVISION - TC2

4,16

24

K39

52 HV TC2

28

27

C

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L103

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TO ANNUN.CRT.

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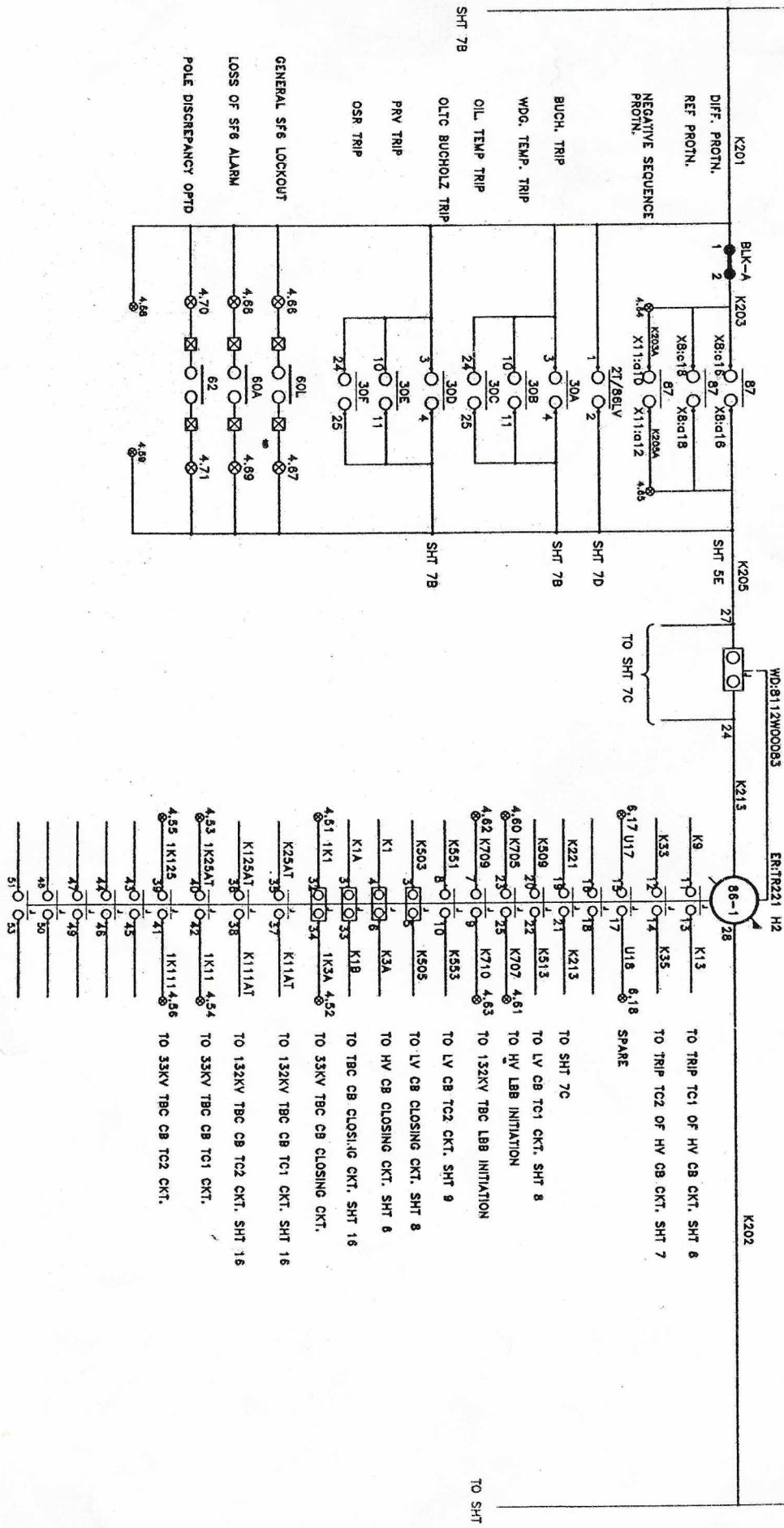
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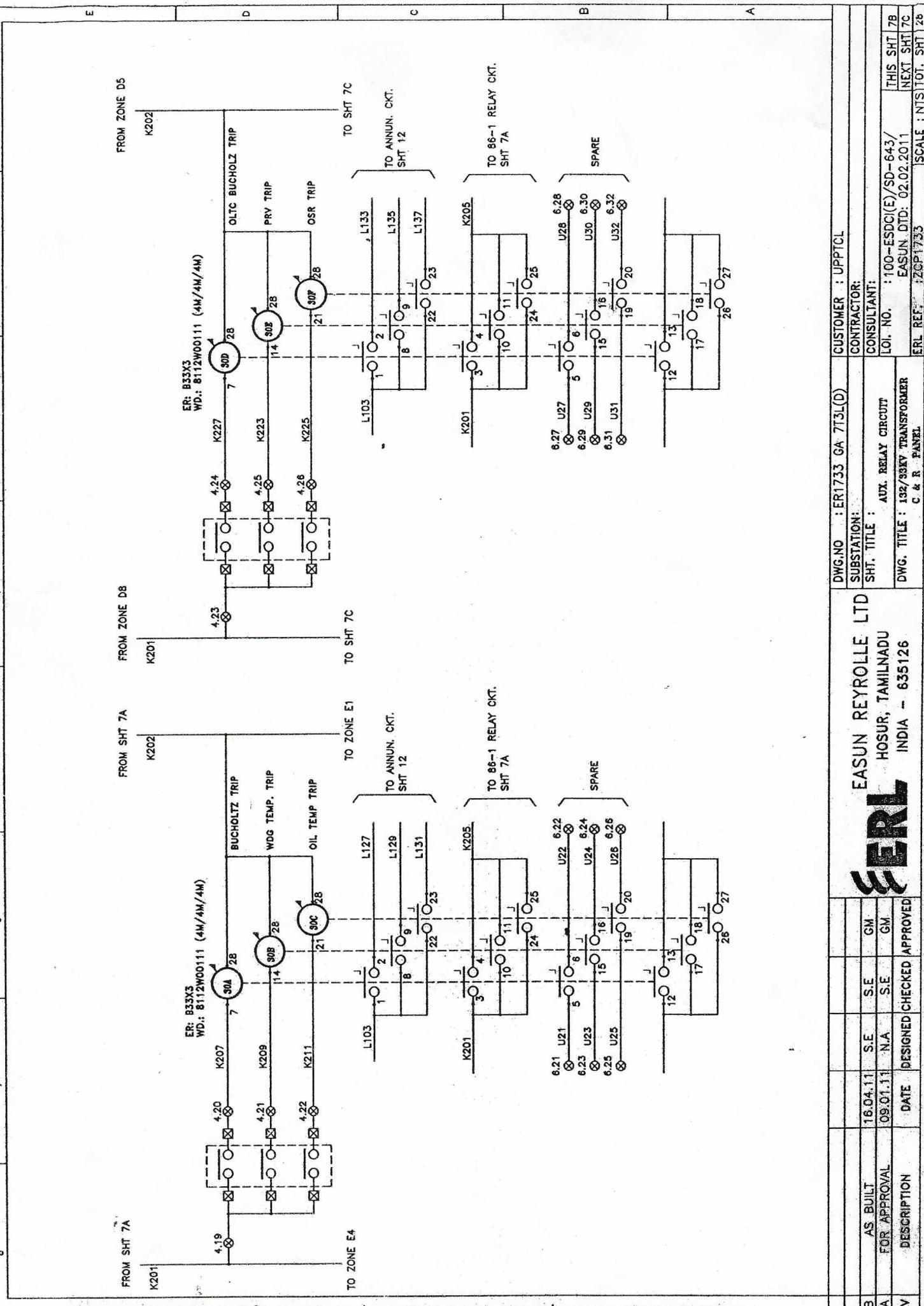
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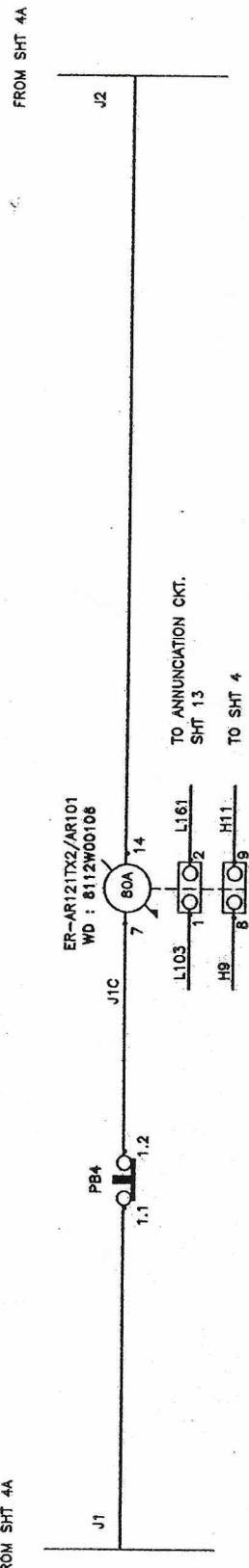
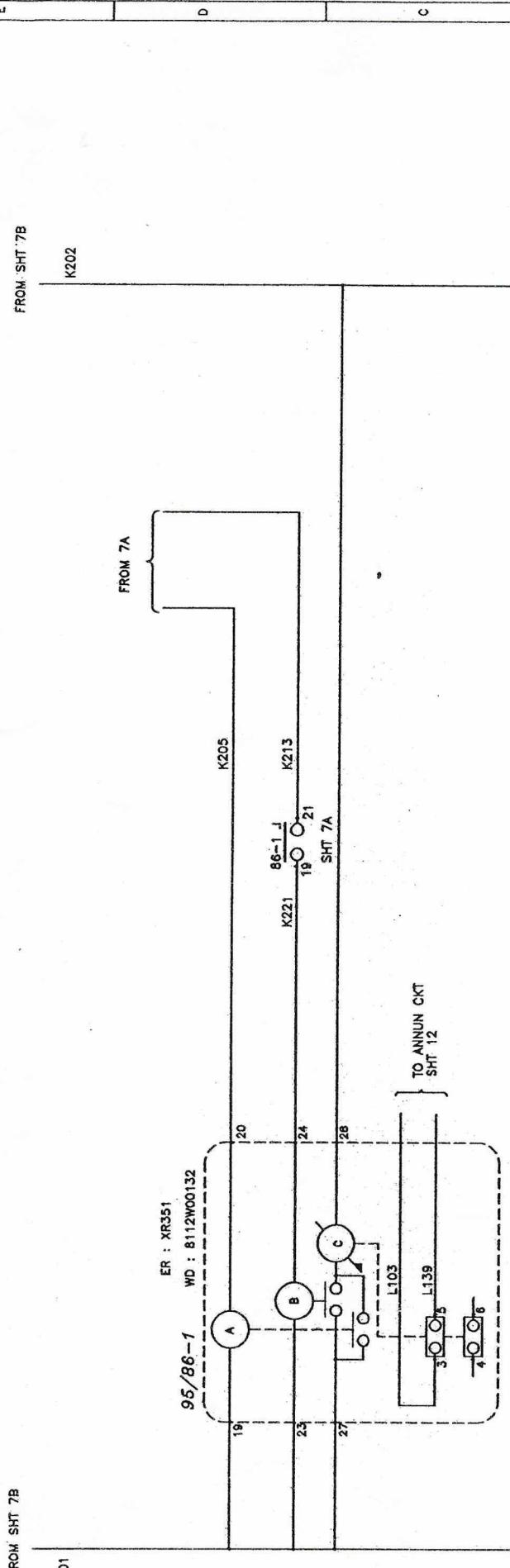
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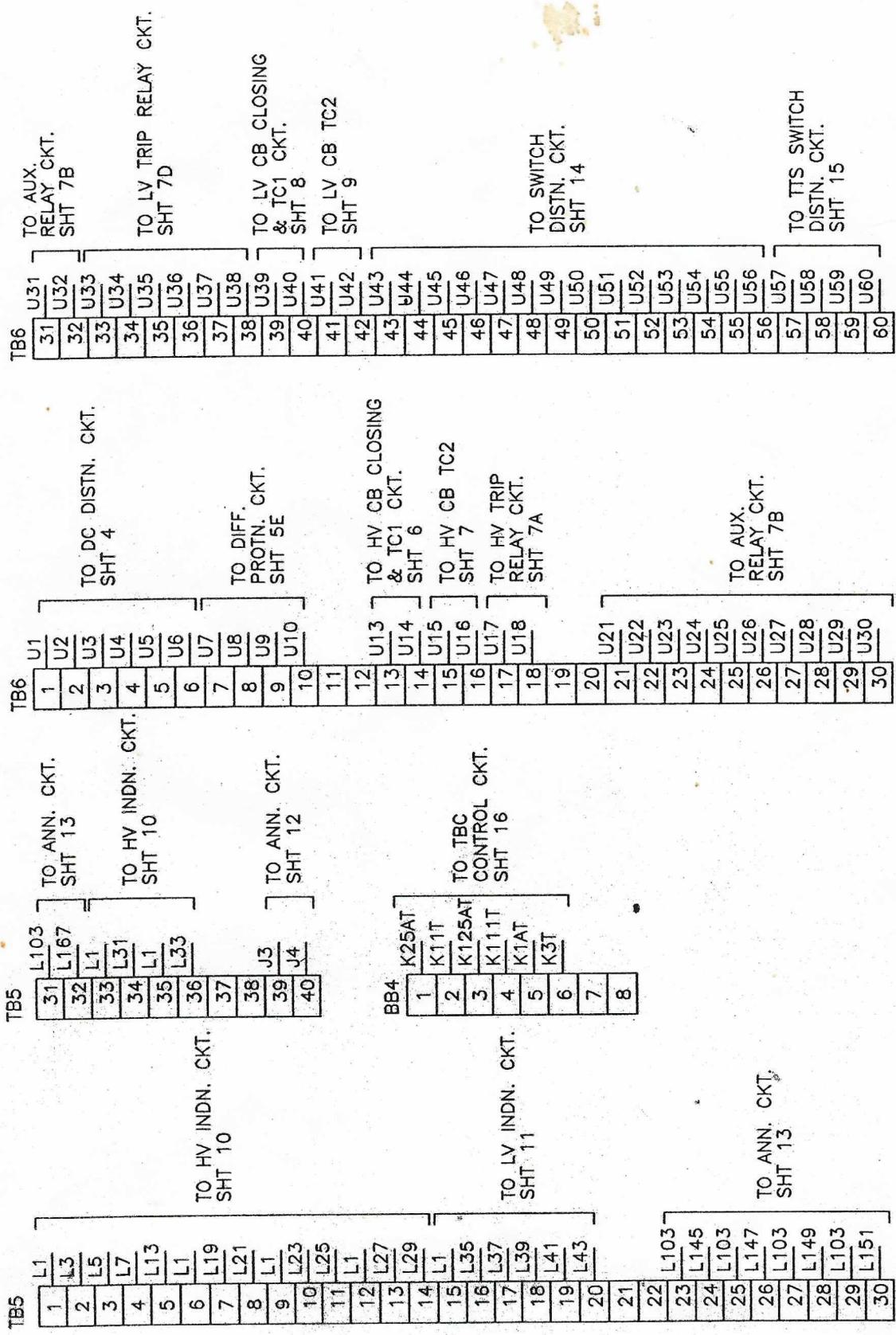


				DWG. NO. : ERL733 GA 7T31(D)	CUSTOMER : UPPCL
SUBSTATION:				CONTRACTOR:	
SHT. TITLE :				CONSULTANT:	
B	AS BUILT	16.04.11	S.E	S.E	GM
A	FOR APPROVAL	09.01.11	N.A	S.E	GM
REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED
<b>EASUN REYROLLE LTD</b>					
HOSUR, TAMILNADU					
INDIA - 635126					
DWG. TITLE : 132/33KV TRANSFORMER					
DWG. REF. : C & R PANEL					
ERL REF. : ZCP1733					
SCALE : NTS TOT. SHT 28					
LOI. NO. : 100-ESDC(E)/SD-643 /				THIS SHT	7A
EASUN DTD: 02.02.2011				NEXT SHT	7B



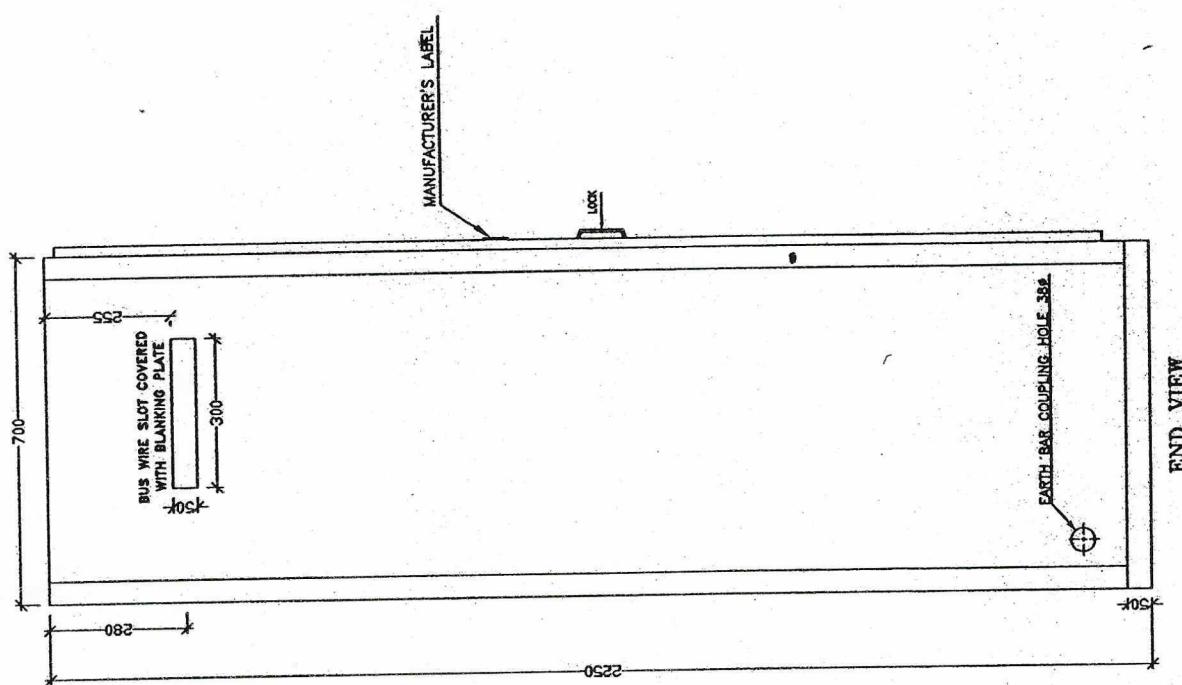
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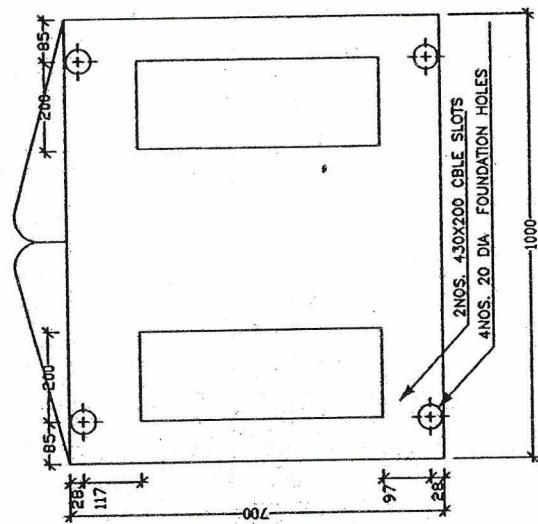


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REV.	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED	EASUN REYROLLE LTD HOSUR, TAMILNADU INDIA - 635126	DWG. NO : ER1733 GA 773L(D) SUBSTATION : SHT. TITLE : TB SCHEDULE	CUSTOMER : UPPCL CONTRACTOR: CONSULTANT: LOI. NO. : 100-ESDC(E)/SD-643/ EASUN DTG : 02.02.2011 NEXT SHT. NIL ERL REF. : ZCP1733
B	AS BUILT	16.04.11	S.E	S.E	GM			
A	FOR APPROVAL	09.01.11	N.A.	S.E.	GM			



END VIEW



FOUNDATION DETAILS

NOTE:-  
SUFFICIENT NO. OF PERFORATIONS PROVIDED  
FOR CABLE GLANDS OF VARIOUS SIZES.

DWG.NO :	ER1733 GA 773L(D)	CUSTOMER :	UPPCL
SUBSTATION:		CONTRACTOR:	
SHFT. TITLE :	END VIEW &	CONSULTANT:	
FOUNDATION DETAILS		LOI NO :	1086-ESDC(E)/SD-643/ EASUN DTID: 08.12.2010
DWG. TITLE : 132/33KV TRANSFORMER		THIS SHT	2
CONTROL & RELAY PANEL ERL REF.:		NEXT SHT	3
REV	DESCRIPTION	DATE	SCALE : ZCP/733

**ERL**  
EASUN REYROLLE LTD  
HOSUR, TAMILNADU  
INDIA - 6335126

REV	DESCRIPTION	DATE	DESIGNED CHECKED APPROVED
B	AS BUILT	16.04.11	S.E. S.E.
A	FOR APPROVAL	23.12.10	N.A. S.E.
REV			







**Easun Reyrolle Limited**  
**BILL OF MATERIAL**

PANEL REF.	GA REF.	DESCRIPTION	MAKE/SPECIFICATION	QTY
	1.A3	INDICATING LAMP FOR CB GAS PRESSURE LOE FOR HV	MAKE: VAISHNO TYPE: LED AUX. SUPPLY: 110V DC COLOUR: AMBER	1
	AS	AMMETER SELECTOR SWITCH	MAKE: SWITRON 4 POS OFF,R,Y,B	1
	VS	VOLTMETER SELECTOR SWITCH	MAKE: SWITRON 6 POS RY,YB,RB,RN,YN,BN	1
	DCSS	DC SOURCE SELECTOR SWITCH	MAKE: SWITRON TYPE: STAY PUT (18 WAY) POSITION: 3 POSITION (DC1/DC2/IND)	1



**Easun Reyrolle Limited**  
BILL OF MATERIAL

PANEL REF.	GA REF.	DESCRIPTION	MAKE/SPECIFICATION	QTY
	TTSS	TRIP TRANSFER SWITCH	MAKE: SWITRON TYPE: STAY PUT (30 WAY) POSITION: 3 POSITION (N/T) LOCKABLE IN NORMAL POSITION 4-NORMAL, 8-NOR-INTER, 9-INTER-TRANS, 2-INTER, 7-TRANS	1
	SEM 1 SEM 3 SEM 4	SEMAPHORE INDICATORS FOR ISOLATORS 129A, 129T, 129L FOR HV	MAKE: DEEPL TYPE: NTC22 AUX.SUPPLY: 110V DC	3 3
	SEM 7	SEMAPHORE INDICATORS FOR ISOLATOR 229L FOR LV	TYPE: HAND OPERATED	1
	SEM 2 SEM 6	SEMAPHORE INDICATORS FOR BREAKER 1.52, 2.52 FOR HV & LV	MAKE: DEEPL TYPE: NTC22L AUX.SUPPLY: 110V DC	2 2
	CS1 CS2	CIRCUIT BREAKER CONTROL SWITCH FOR HV & LV	MAKE: SWITRON 3 POS., 16WAYS, SPRING RETURN TO NEUTRAL POSN.: TRIP-NEUTRAL - CLOSE WITH SEQ LOCK	2
	87	NUMERICAL DIFFERENTIAL PROTECTION RELAY	ER-CSC326 CT SEC. : 1A, 2 WINDING AUX. SUPPLY : 110V DC IEC PROTOCOL  1)INSTANTANEOUS DIFFERENTIAL PROTECTION 2)REF PROTECTION FOR HV & LV 3)OVER FLUX PROTECTION FOR HV & LV 4)DEFINITE & IDMTL O/C PROTECTION FOR HV & LV 5)DEFINITE & IDMTL NEUTRAL CURRENT PROTECTION FOR HV & LV 6)NEUTRAL DISPLACEMENT PROTECTION FOR HV & LV 7)THERMAL OVERLOAD PROTECTION 8)POLE DISCREPANCY PROTECTION FOR HV & LV 9)OVERLOAD PROTECTION FOR HV & LV 10)NEGATIVE PHASE SEQUENCE IMBALANCE DETECTION FOR HV & LV 11)CB STATUS SUPERVISION FOR HV & LV 12)DISTURBANCE RECORDER 13)EVENT RECORDER 14)FRONT RS232, REAR RS485 & FIBRE OPTIC PORT	1
	67RYBN-HV	DIRECTIONAL NUMERICAL O/C & E/F RELAY WITH FOR HV	ER-CSC211 SIZE : 4U X 19/2" 1A, 110V AC AUX. SUPPLY : 110V DC  1)OVERLOAD PROTECTION 2)UNDER & OVER VOLTAGE PROTECTION 3)THERMAL OVER LOAD PROTECTION 4)CIRCUIT BREAKER FAILURE PROTECTION 5)VT SUPERVISION 6)DISTURBANCE RECORDER 7)EVENT RECORDER 8)RS485 COMMUNICATION PORT 9)ELECTRICAL ETHERNET PORT	1
	2T/86-LV	TIMER OF LV TRIP RELAY	MAKE: ER TYPE: MDDA CASE SIZE : 2/3V AUX.SUPPLY: 110V DC CONTACT: 4 NO W.D.NO : H2441W70012 SETTING: 0.1TO 9.9 SC	1
	95/86-1 95/86-2	TRIP SUPERVISION RELAY FOR HV & LV	MAKE: ER TYPE: XR 351 CASE SIZE: E4 AUX.SUPPLY: 110V DC CONTACTS: 2NO,2NC W.D. : 8112W00132	2
	30ABC, 30DEF	AUXILIARY RELAY FOR TRANSFORMER TRIP FUNCTIONS	MAKE: ER TYPE: B33x3 CASE SIZE: 3N AUX.SUPPLY: 110V DC CONTACTS: 4NO W.D. : 8112W00111	2

