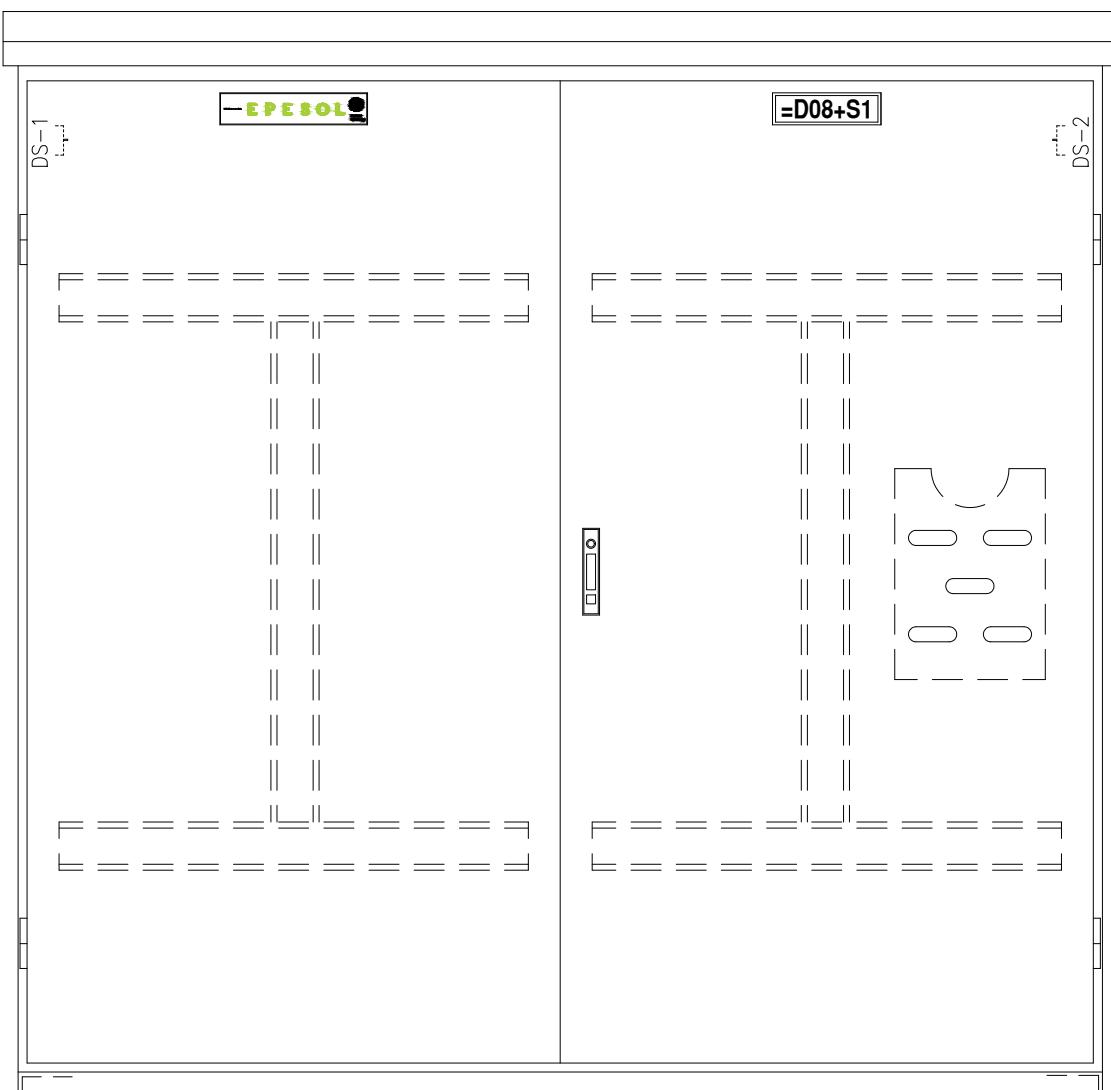


# LAYOUT DIAGRAM OF 220kV LOCAL CONTROL CUBICLE TYPE =D08+S1

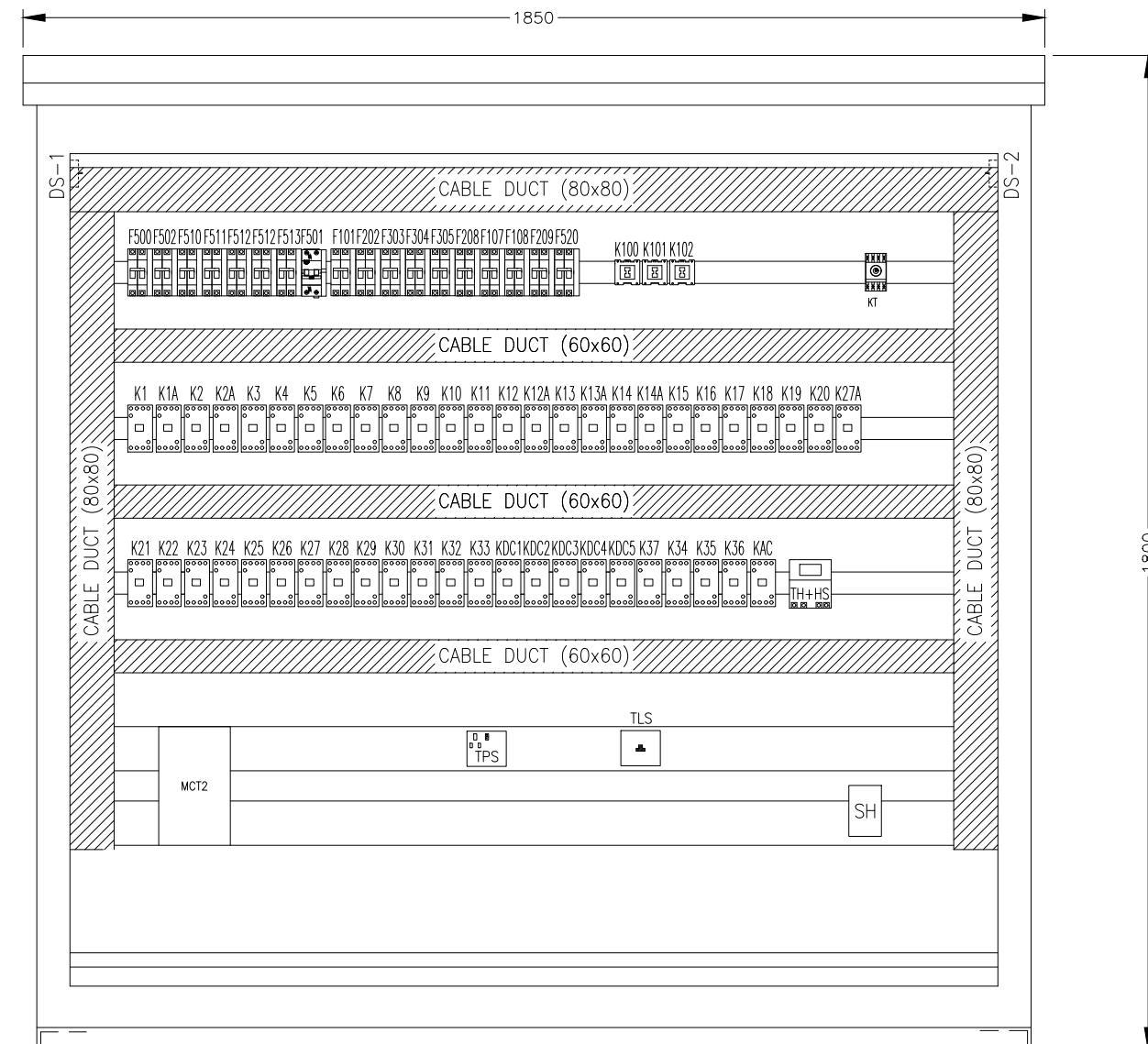
APPROVED	CHECKED	DRAWN	PROJECT:  EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: COVER SHEET 220kV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81588 DATE: 07.03.2019	SHT: 01 OF 04 AS BUILT REV: 0
NAH 	MSS 	MUR 		 <b>EPESOL Pvt. Ltd.</b> 71-B Garden Block, New Garden Town, Lahore, Pakistan		

A



FRONT VIEW

B

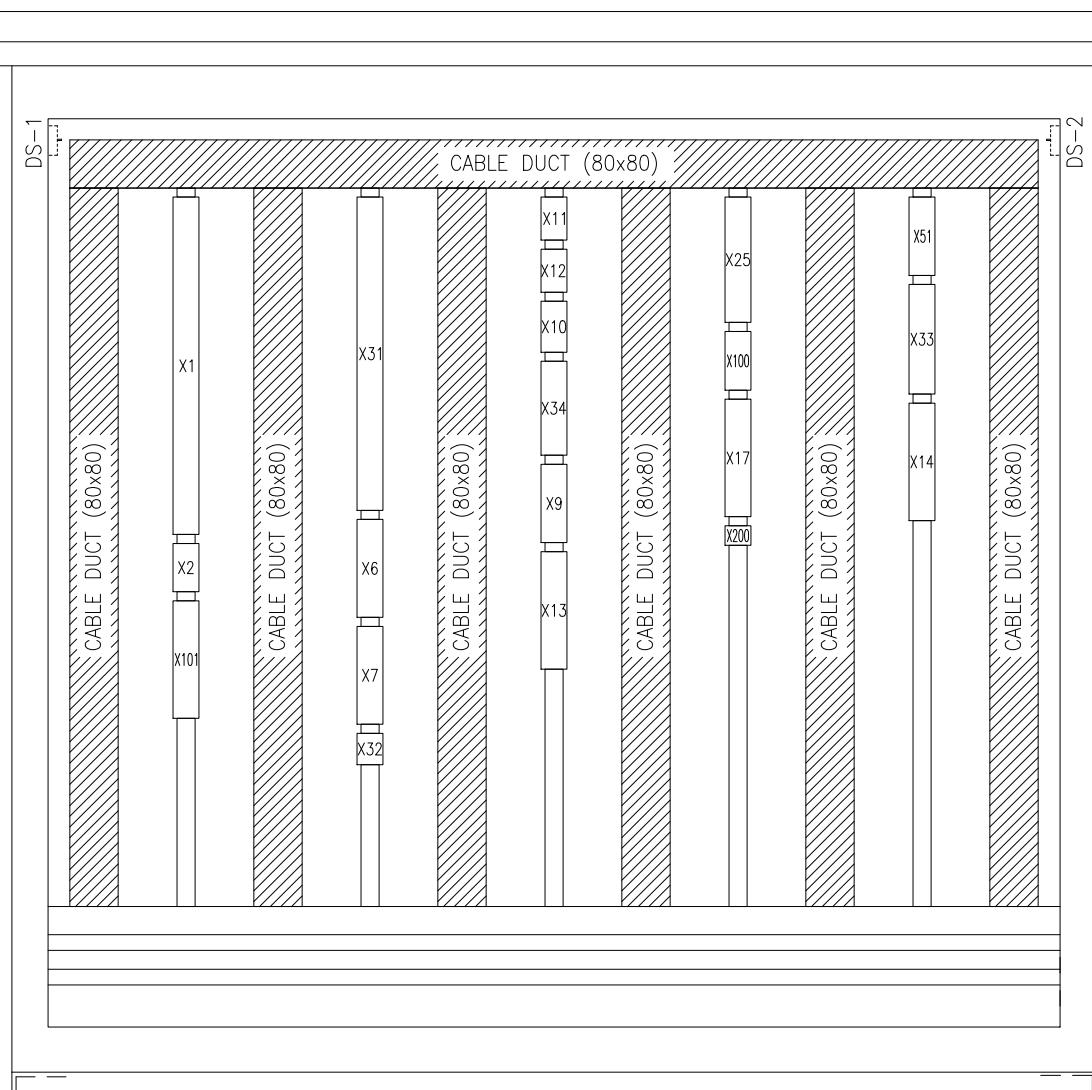


FRONT VIEW WITHOUT DOOR

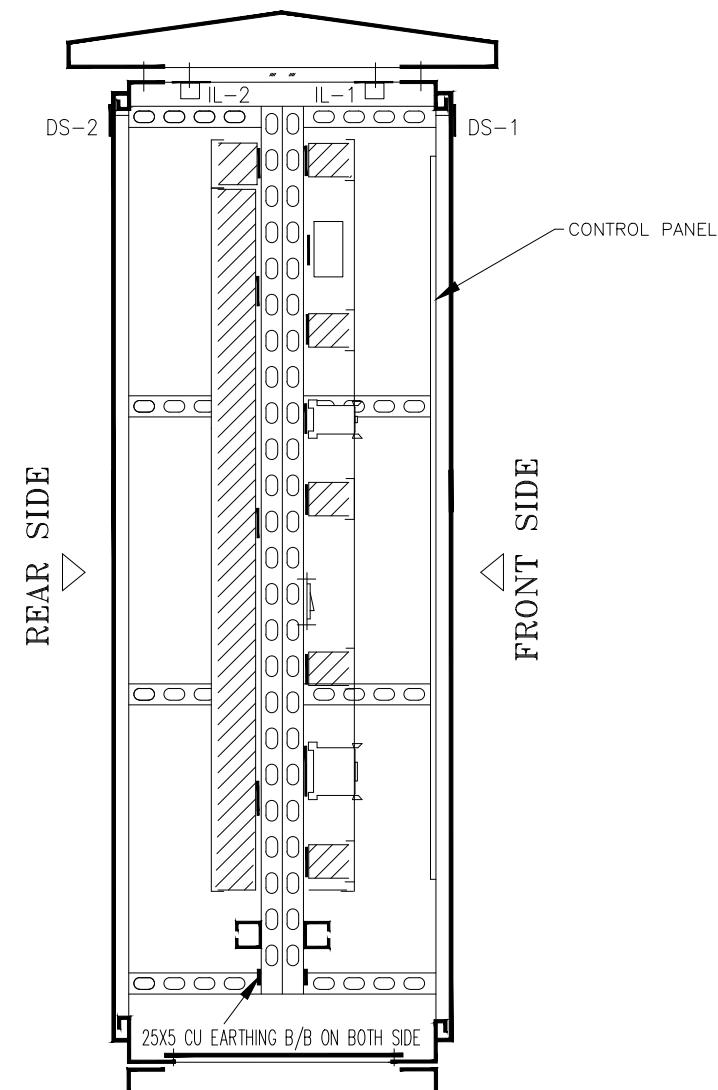
NOTES

1. 1800x510x1800 mm
2. EARTHING STRAP 16mm<sup>2</sup>
3. COLOR: RAL7032
4. PROTECTION CLASS: IP54

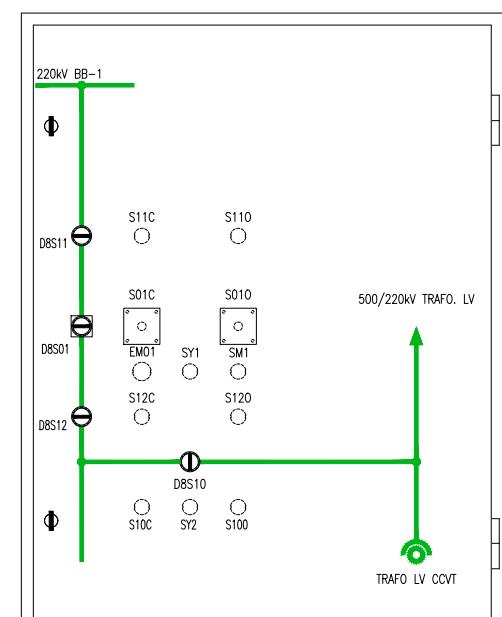
APPROVED	CHECKED	DRAWN	PROJECT:	TITLE:	DWG# EPE/ENU-18/D81588		SHT: 02 OF 04
NAH [Signature]	MSS [Signature]	MUR [Signature]	EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	LAYOUT DIAGRAM 220kV LOCAL CONTROL CUBICAL TYPE =D08+S1	 <b>EPE SOL Pvt. Ltd.</b> 71-B Garden Block, New Garden Town, Lahore, Pakistan		



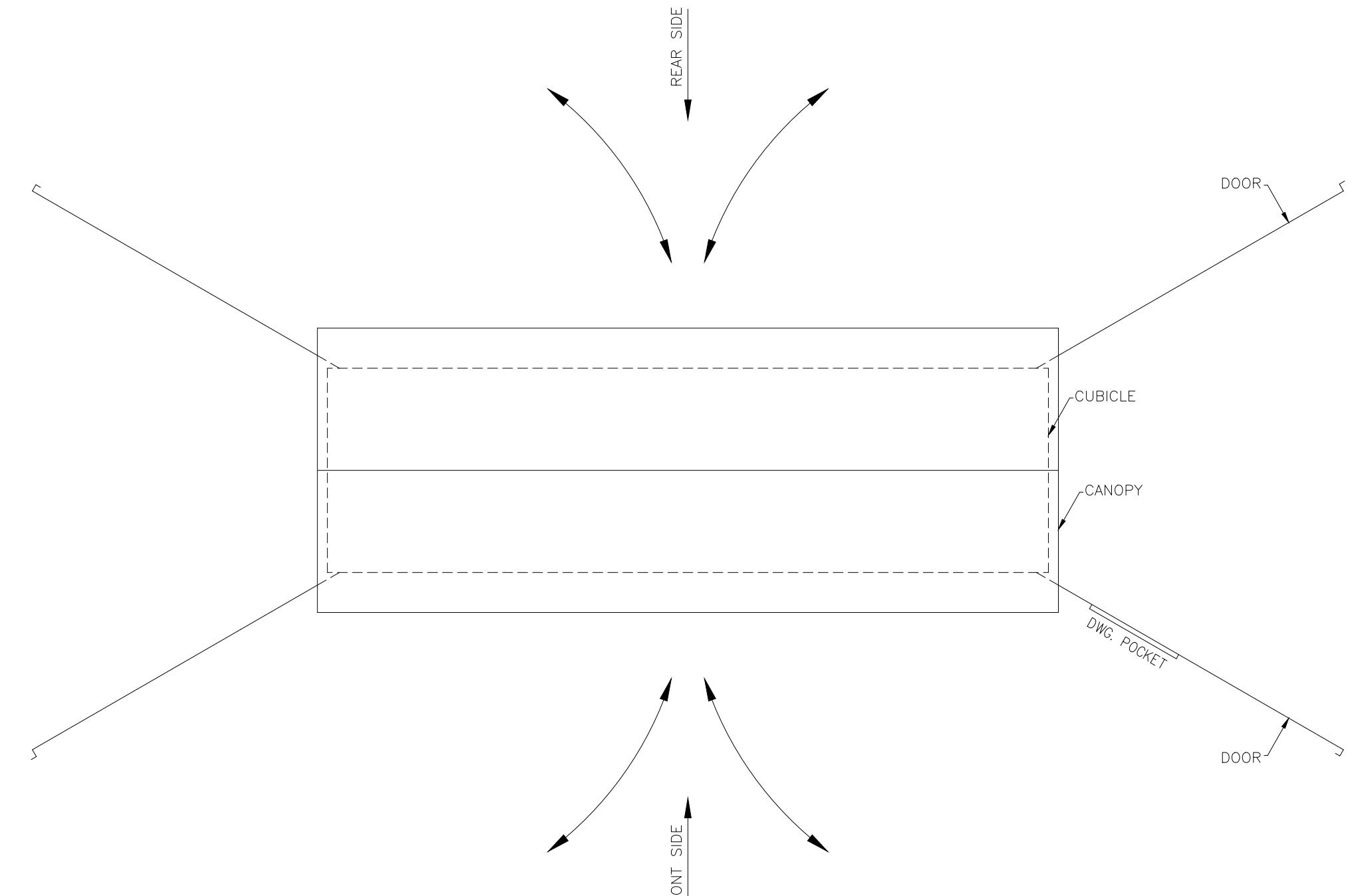
REAR VIEW WITHOUT DOOR



SECTION AB

CONTROL PANEL  
FRONT VIEWNOTES

1. 220kV MIMIC COLOR GREEN



TOP VIEW  
DOOR OPENING DETAIL

APPROVED	CHECKED	DRAWN	PROJECT:	TITLE:	DWG#	SHT:
NAH	MSS	MUR	EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	LAYOUT DIAGRAM 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPE SOL Pvt Ltd 71-B Garden Block, New Garden Town, Lahore, Pakistan	EPE/ENU-18/D81588 04 OF 04
					DATE: 07.03.2019	AS BUILT REV: 0

# LIST OF APPARATUS OF 220kV LOCAL CONTROL CUBICLE TYPE =D08+S1

APPROVED	CHECKED	DRAWN	PROJECT:	TITLE:	COVER SHEET	DWG#	SHT:
NAH	MSS	MUR	EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	220kV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPE SOL Pvt Ltd 71-B Garden Block, New Garden Town, Lahore, Pakistan	EPE/ENU-18/D81589	01 OF 04

1	2	3	4	5	6	7	8			
SR.	ITEM DESIGNATION	DESCRIPTION			QTY	TYPE	MAKE	COUNTRY OF ORIGIN	ORDERING INFORMATION	SHEET NO
A	1 F500, F502, F503	AC MCB, DOUBLE POLE, 6A, 240 VAC, WITH 1 C/O CONTACT			3	G60	GE	HUNGARY/POLAND	G62C06 + CAH(1)	A
	2 F510, F511, F512,	AC MCB, DOUBLE POLE, 10A, 240 VAC, WITH 1 C/O CONTACT			4	G60	GE	HUNGARY/POLAND	G62C10 + CAH(1)	
	F513									
	3 F520	AC MCB, DOUBLE POLE, 16A, 240 VAC, WITH 1 C/O CONTACT			1	G60	GE	HUNGARY/POLAND	G62C16 + CAH(1)	
B	4 F501	ELCB, DOUBLE POLE, 16A, 30mA, 240 VAC, WITH 1 C/O CONTACT			1	DM100	GE	HUNGARY/POLAND	DM100C16/030 + CAH(1)	B
	5 F101,F202,F303,F304, F305,F106,F108	DC MCB, DOUBLE POLE, 10A, 220 VDC, WITH 1 C/O CONTACT			7	EP100	GE	HUNGARY/POLAND	EP102UCC10 + CAH(1)	
	6 F107,F209	DC MCB, DOUBLE POLE, 16A, 220 VDC, WITH 1 C/O CONTACT			2	EP100	GE	HUNGARY/POLAND	EP102UCC16 + CAH(1)	
c	7 K1 TO K33,K37,KDC1,KDC2 KDC3,KDC4,KDC5	AUXILIARY RELAY, 220VDC, WITH 4 C/O CONTACTS			44	PRC	GE	HUNGARY/POLAND	PRC4M40DCML	c
	8 K100, K101,K102	AUXILIARY RELAY, 220VDC, WITH 3NO+3NC CONTACTS			3	MCR	GE	HUNGARY/POLAND	MCRC022ATWN	
	9 K34, K35, K36, KAC	AUXILIARY RELAY, 240 VAC, WITH 4 C/O CONTACTS			4	PRC	GE	HUNGARY/POLAND	PRC4M40ANL	
	10 SY1, SY2	2-POSITION SELECTOR SWITCH KEY TYPE FOR LOCAL-OFF-REMOTE MODE, WITH 4NO+4NC CONTACT, COLOR BLACK			2	YS-AK	YONGSUNG	SOUTH KOREA	YS-AK-2-2-44-D	
D	11 SM1	2-POSITION SELECTOR SWITCH KEY TYPE FOR SERVICE/MAINTENANCE SELECTION, WITH 4NO+4NC CONTACT, COLOR BLACK			1	YS-AK	YONGSUNG	SOUTH KOREA	YS-AK-2-2-44-D	D
	12 S01C, S010	TWO POSITION AUTOMATIC SPRING RETURN SWITCH FOR CIRCUIT BREAKER CONTROL 220 VDC, WITH 2NO CONTACT, COLOR BLACK			2	YS-DNC	YONGSUNG	SOUTH KOREA	YS-DNC-22-3103-6-	
									4-A-0-20-B-W	
	13 S100, S110, S120	PUSH BUTTON, WITH 4NO CONTACT, COLOR GREEN			3	AS-AP1	YONGSUNG	SOUTH KOREA	YS-AP1-2-40-G-D-W	
E	14 S10C, S11C, S12C	PUSH BUTTON, WITH 4NO CONTACT, COLOR RED			3	AS-AP1	YONGSUNG	SOUTH KOREA	YS-AP1-2-40-R-D-W	E
	15 EM01	EMERGENCY PUSH BUTTON, WITH 8NO CONTACT, COLOR RED			1	AS-AP1	YONGSUNG	SOUTH KOREA	YS-AP1-3-80-R-D-W	
	16 IL1, IL2	CUBICLE LIGHTING, 5W, 240VAC			2	YS-Y8	YONGSUNG	SOUTH KOREA	YS-T8-30-5W	
	17 DS1, DS2	DOOR SWITCH WITH COVER			2	YSP33+YSMS	YONGSUNG	SOUTH KOREA	YSP3315GWB+YSMS-C	
F	18 D8S01	SEMAPHORE INDICATOR FOR CIRCUIT BREAKER POSITION INDICATION, 220 VDC, SQUARE TYPE			1	SPS-30S	FUJI	JAPAN	SPS-30S-DC22	F
	19 D8S10, D8S11, D8S12,	SEMAPHORE INDICATOR FOR ISOLATOR POSITION INDICATION, 220 VDC, ROUND TYPE			3	SPR-30S	FUJI	JAPAN	SPR-30S-DC22	
APPROVED	CHECKED	DRAWN	PROJECT:  EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: LIST OF APPARATUS 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	 E P E S O L P v t . L t d . 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81589	SHT: 02 OF 04			
NAH	MSS	MUR				DATE: 07.03.2019	AS BUILT	REV: 0		

1	2	3	4	5	6	7	8	
SR.	ITEM DESIGNATION	DESCRIPTION	QTY	TYPE	MAKE	COUNTRY OF ORIGIN	ORDERING INFORMATION	SHEET NO
A 20	MCT1, MCT2, MCT3	MATCHING CT FOR AVR, 1:1 RATIO, BURDEN 15VA, CLASS 0.2	3	-	-	-	-	
A 21	KT	TIMER RELAY, 220VDC, 60s, 2 C/O CONTACTS	1	AT8N	AUTONIC	SOUTH KOREA	AT8N-220VDC-60S	
A 22	TH+HS	THERMOSTAT AND HUMIDSTAT	1	ELH220	ELAB	PAKISTAN	ELH220	
B 23	SH	SPACE HEATER	1	ELH220	ELAB	PAKISTAN	ELH220	
B 24	TPS	240 VAC, 16A, THREE PIN SOCKET OUTLET	1	LEAR	CHINA			
B 25	X1	TERMINAL BLOCKS FOR CT CIRCUITS WITH SHORTING & DISCONNECTING FACILITY	70	SCB-6	CABUR	ITLAY		
B 26	X2	TERMINAL BLOCK FOR VT CIRCUIT INPUT	10	SCB-6	CABUR	ITLAY		
c 27	X101	TERMINAL BLOCKS FOR DC SUPPLY CIRCUITS	30	CBD-4	CABUR	ITLAY		
c 28	X31	TERMINAL BLOCKS FOR CONTROL CIRCUITS	80	CBD-4	CABUR	ITLAY		
c 29	X51	TERMINAL BLOCKS FOR CB CLOSING CIRCUITS	20	CBD-4	CABUR	ITLAY		
c 30	X6	TERMINAL BLOCKS FOR TRIP CIRCUIT-1	25	CBD-4	CABUR	ITLAY		
c 29	X7	TERMINAL BLOCKS FOR TRIP CIRCUIT-2	25	CBD-4	CABUR	ITLAY		
D 30	X32	TERMINAL BLOCKS FOR MOTOR DRIVE CIRCUITS	8	CBD-4	CABUR	ITLAY		
D 31	X33	TERMINAL BLOCKS FOR POSITION INDICATION	28	CBD-4	CABUR	ITLAY		
D 32	X11	TERMINAL BLOCKS FOR DISCONNECTOR CONTROL	11	CBD-4	CABUR	ITLAY		
E 33	X12	TERMINAL BLOCKS FOR DISCONNECTOR CONTROL	11	CBD-4	CABUR	ITLAY		
E 34	X10	TERMINAL BLOCKS FOR ISOLATOR CONTROL	13	CBD-4	CABUR	ITLAY		
E 35	X34	TERMINAL BLOCKS FOR CB ALARMS	24	CBD-4	CABUR	ITLAY		
F 36	X9	TERMINAL BLOCKS FOR ANNUNCIATION	20	CBD-4	CABUR	ITLAY		
F 37	X13	TERMINAL BLOCKS FOR EVENT RECORDER	30	CBD-4	CABUR	ITLAY		
F 38	X14	TERMINAL BLOCKS FOR SCADA	30	CBD-4	CABUR	ITLAY		
APPROVED	CHECKED	DRAWN	PROJECT:  EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: LIST OF APPARATUS 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	 E P E S O L P v t . L t d. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81589	SHT: 03 OF 04	
NAH Q.	MSS M. Sohail	MUR Iy				DATE: 07.03.2019	AS BUILT	REV: 0

1	2	3	4	5	6	7	8	
SR.	ITEM DESIGNATION	DESCRIPTION	QTY	TYPE	MAKE	COUNTRY OF ORIGIN	ORDERING INFORMATION	SHEET NO
A 39	X25	TERMINAL BLOCKS FOR SYNCH. SELECTION	32	CBD-4	CABUR	ITLAY		A
A 40	X100	TERMINAL BLOCKS FOR AC DISTRIBUTION CIRCUITS	15	CBD-4	CABUR	ITLAY		A
A 41	X17	TERMINAL BLOCKS FOR COMPARTMENT HEATING	30	CBD-4	CABUR	ITLAY		A
B 42	X200	TERMINAL BLOCKS FOR TELEPHONE	5	CBD-4	CABUR	ITLAY		B
B 43	TLS	TELEPHONE SOCKET	1		LOCAL			B
C								C
D								D
E								E
F								F
APPROVED	CHECKED	DRAWN	PROJECT:  EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: LIST OF APPARATUS 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPE SOL Pvt Ltd 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81589 DATE: 07.03.2019	SHT: 04 OF 04 AS BUILT REV: 0	
NAH Q.	MSS M.	MUR I.						

# SCHEMATIC DIAGRAM OF 220kV LOCAL CONTROL CUBICLE TYPE =D08+S1

APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE:	COVER SHEET 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 01 OF 37
NAH Q.	MSS M. Sohail	MUR Iy		EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan		DATE: 07.03.2019	AS BUILT

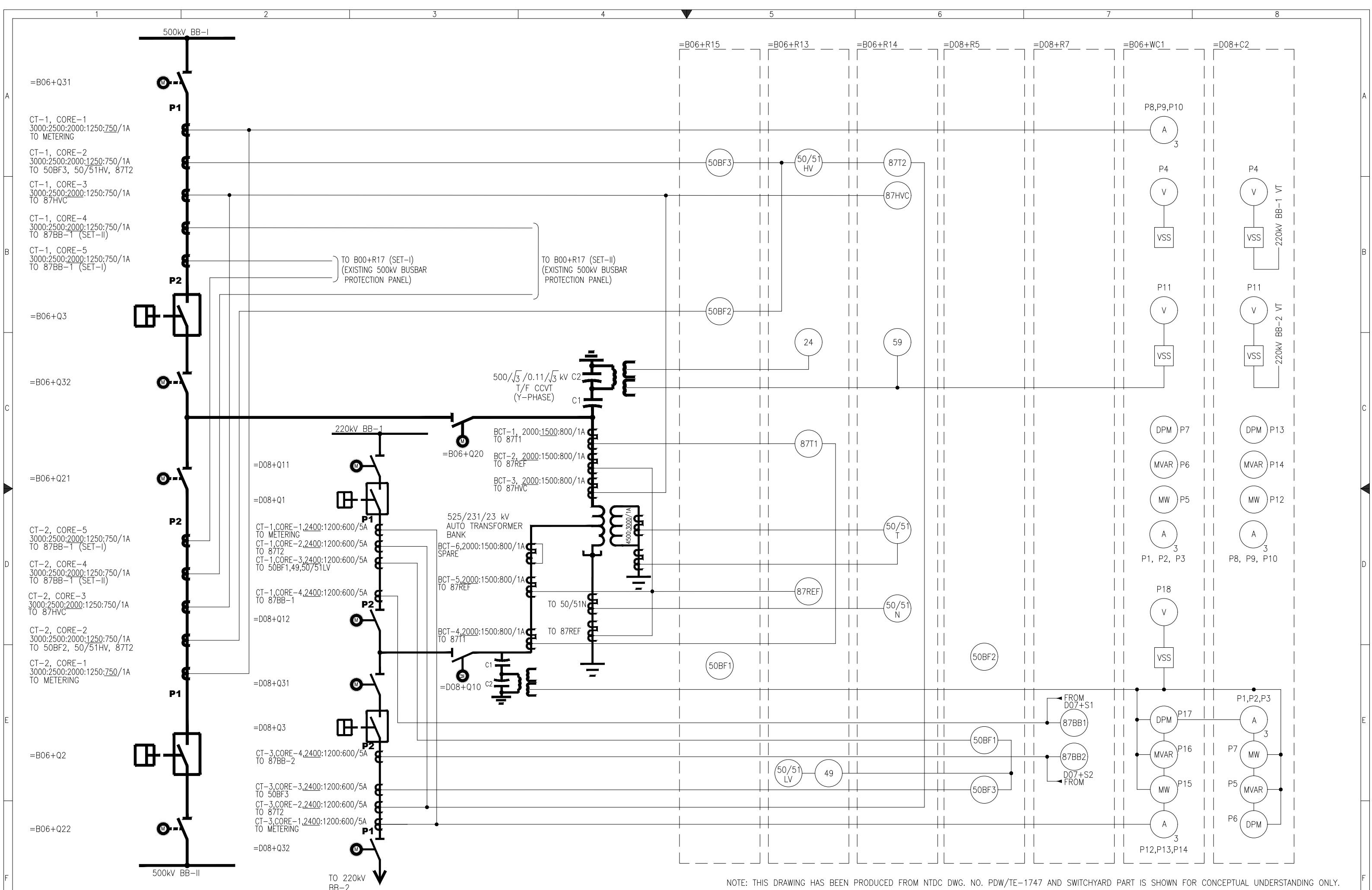
DESCRIPTION	SHEET NO	DESCRIPTION	SHEET NO
COVER SHEET	01	CB/DS STATUS	22
LIST OF CONTENTS	02	POSITION INDICATION FOR CONTROL PANEL	23
LIST OF SYMBOLS AND DESIGNATION	03	CB ALARMS	24
PROPOSED CT/VT CONNECTION	04	VT MCB TRIP	25
CT CIRCUIT	05	AC SUPPLY FAIL INDICATION CIRCUIT	26
CT CIRCUIT	06	SIGNALING FOR ANNUNCIATION	27
CT CIRCUIT	07	SIGNALING FOR ANNUNCIATION	28
CT CIRCUIT	08	SIGNALING FOR EVENT RECORDER	29
CT CIRCUIT	09	SIGNALING FOR EVENT RECORDER	30
VT CIRCUIT	10	SIGNALING FOR SCADA	31
DC SUPPLY DISTRIBUTION	11	SIGNALING FOR SCADA	32
CB AND DISCONNECTOR CONTROL	12	SYNC. SELECTION	33
=D08+Q1 CLOSING CIRCUIT	13	AC DISTRIBUTION CIRCUIT	34
=D08+Q2 TRIP CIRCUIT-1	14	AC DISTRIBUTION CIRCUIT	35
=D08+Q2 TRIP CIRCUIT-2	15	AC DISTRIBUTION CIRCUIT	36
MOTOR DRIVE CIRCUIT	16	SYNC. SELECTION	37
POSITION INDICATION CIRCUIT	17		
=D08+Q11 DISCONNECTOR CONTROL	18		
=D08+Q12 DISCONNECTOR CONTROL	19		
=D08+Q10 DISCONNECTOR CONTROL	20		
CB/DS STATUS	21		

APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: LIST OF CONTENTS 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 02 OF 37
NAH Q.	MSS M. Sohail	MUR Ilyas	 <b>EPESOL Pvt. Ltd.</b> 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	<b>AS BUILT</b>	REV: 0

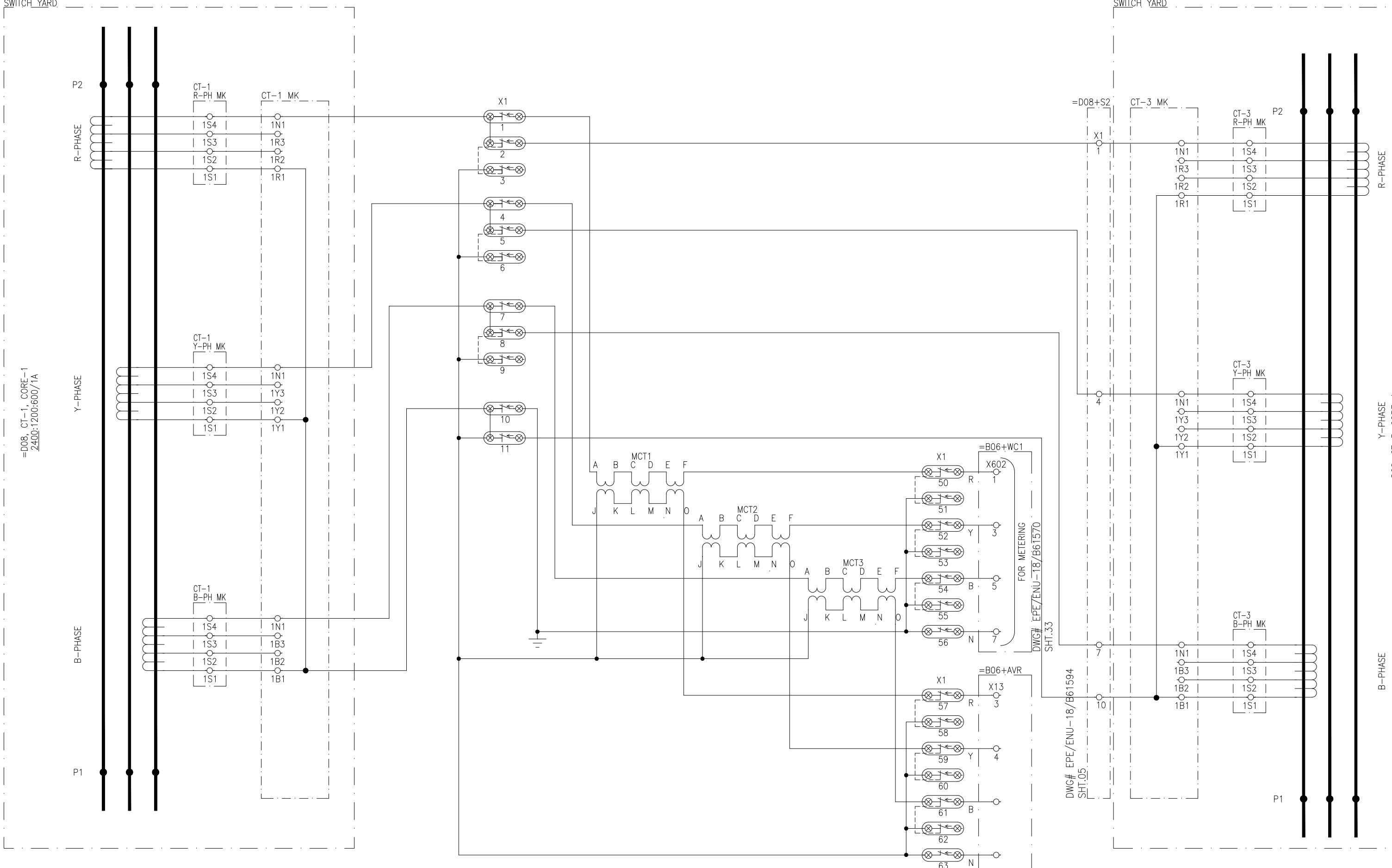
A  
B  
C  
D  
E  
F  
A  
B  
C  
D  
E  
F

LIST OF SYMBOLS AND DESIGNATIONS

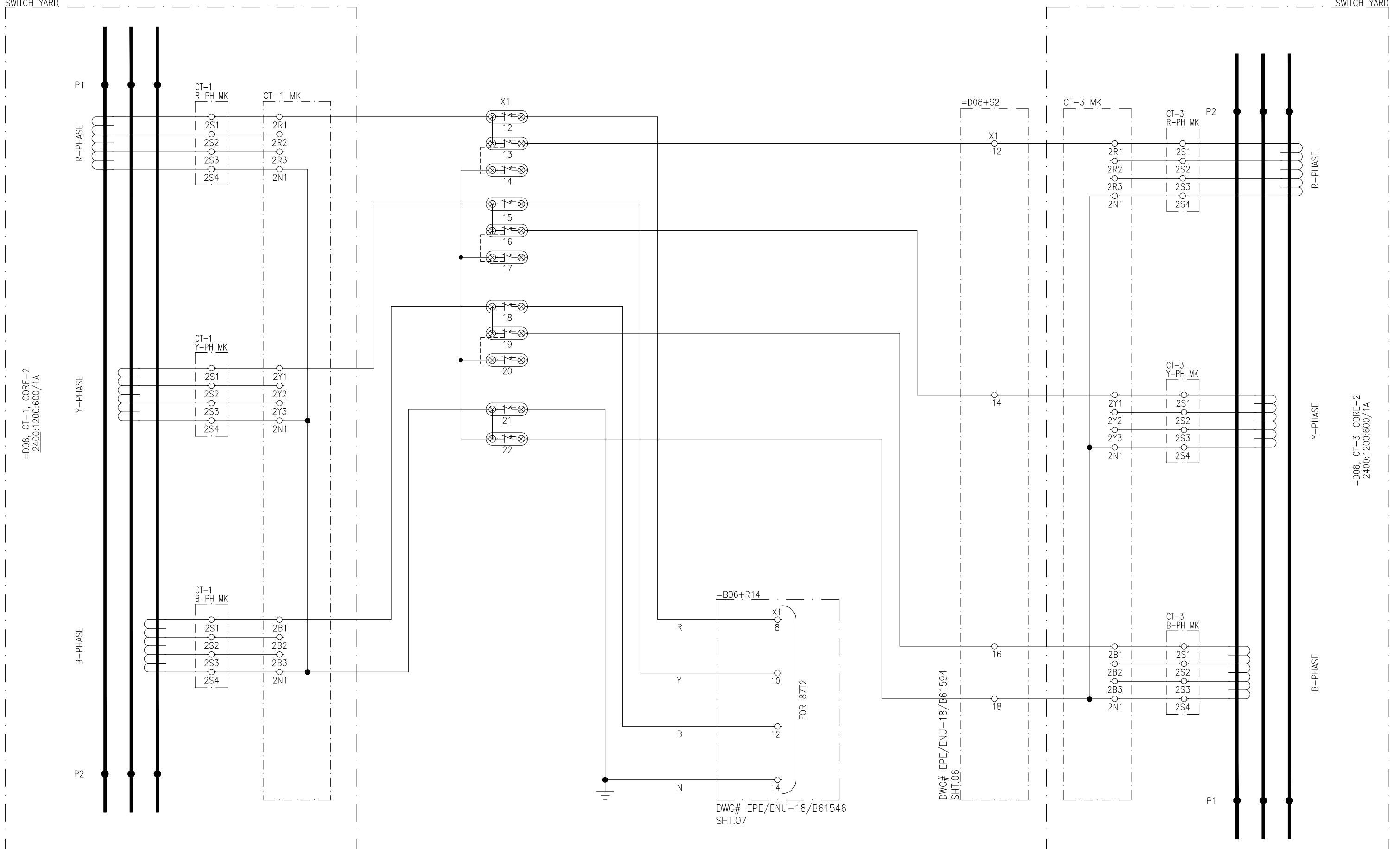
	MOTORIZED HV DISCONNECTOR	74-DC	DC CIRCUIT SUPERVISION RELAY
	HV CIRCUIT BREAKER	X	TERMINAL BLOCKS
	525/231/23 kV AUTO TRANSFORMER	K	AUXILIARY RELAY/CONTACTOR
	CAPACITOR VOLTAGE TRANSFORMER		
	RELAY PANEL TERMINAL BLOCK		
	CONTROL PANEL TERMINAL BLOCK		
	EARTH CONNECTION		
	NORMALLY CLOSED CONTACT		
	NORMALLY OPEN CONTACT		
	CHANGE OVER CONTACT		
	MINIATURE CIRCUIT BREAKER		
	INDICATING BULB/LED/CUBICLE LIGHT		
	220V SOCKET		
	SPACE HEATER		
	COIL		
	EQUIPMENT WITHIN PANEL		
	INDEPENDENT PANEL		
	INDEPENDENT PANEL		



APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: SINGLE LINE DIAGRAM 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 04 OF 37
NAH	MSS	MUR		<b>E P E S O L P v t . L t d .</b> 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT REV: 0

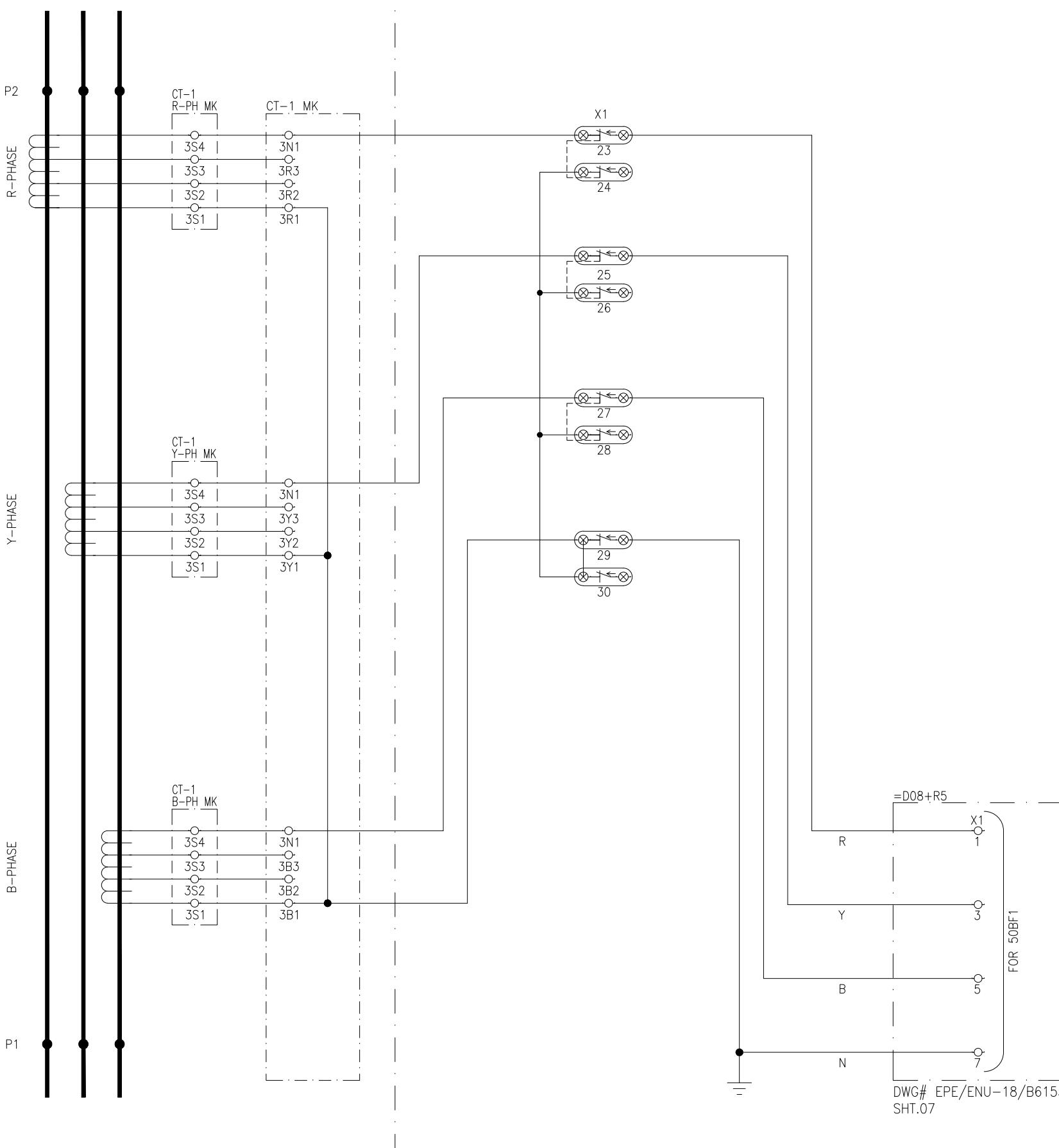


APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: CT CIRCUIT 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 05 OF 37
NAH	MSS	MUR		EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT REV: 0



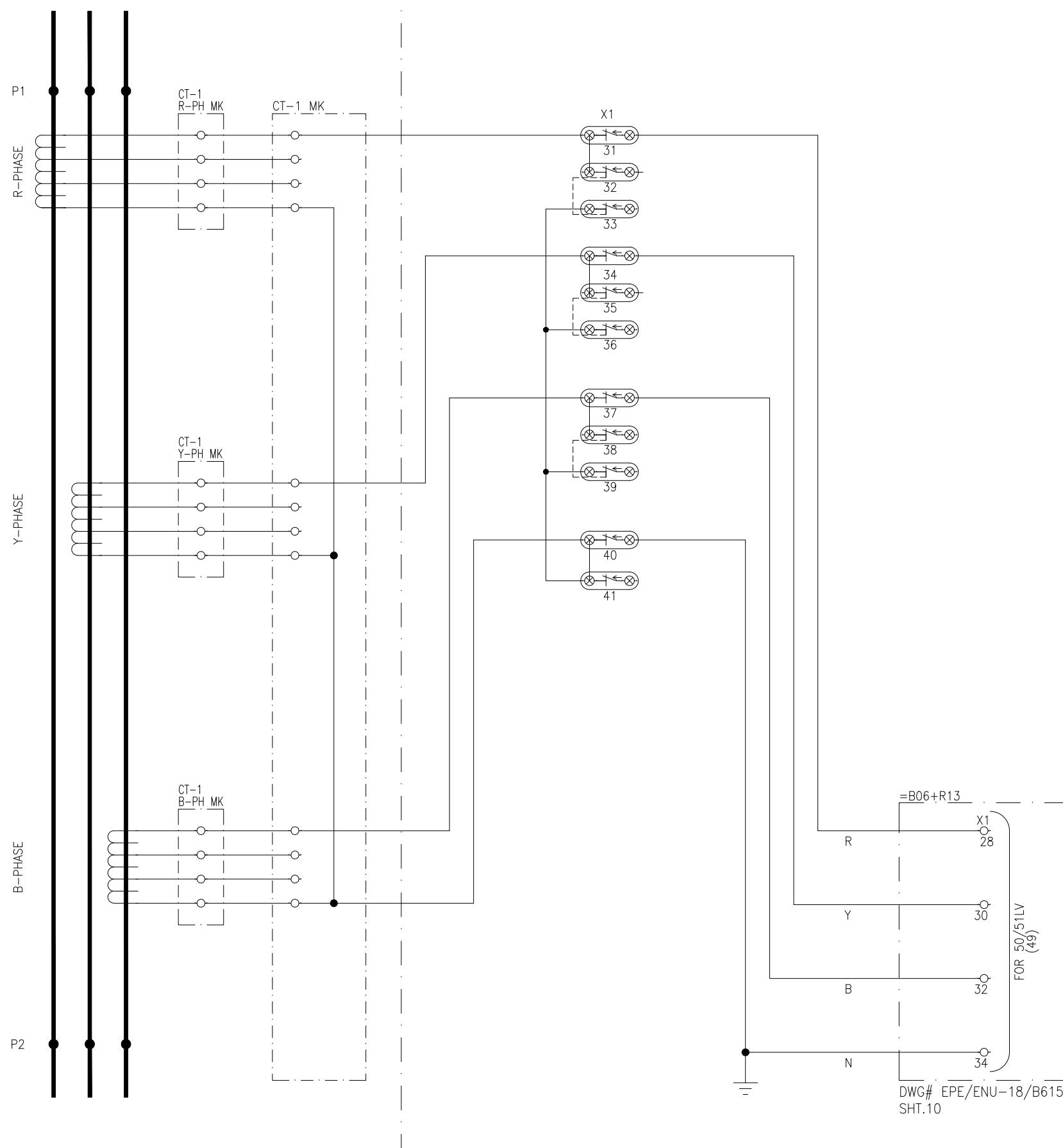
APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: CT CIRCUIT 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81590	SHT: 06 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]				DATE: 07.03.2019	AS BUILT REV: 0

## SWITCH YARD

=D08, CT-1, CORE-3  
2400:1200:600/A

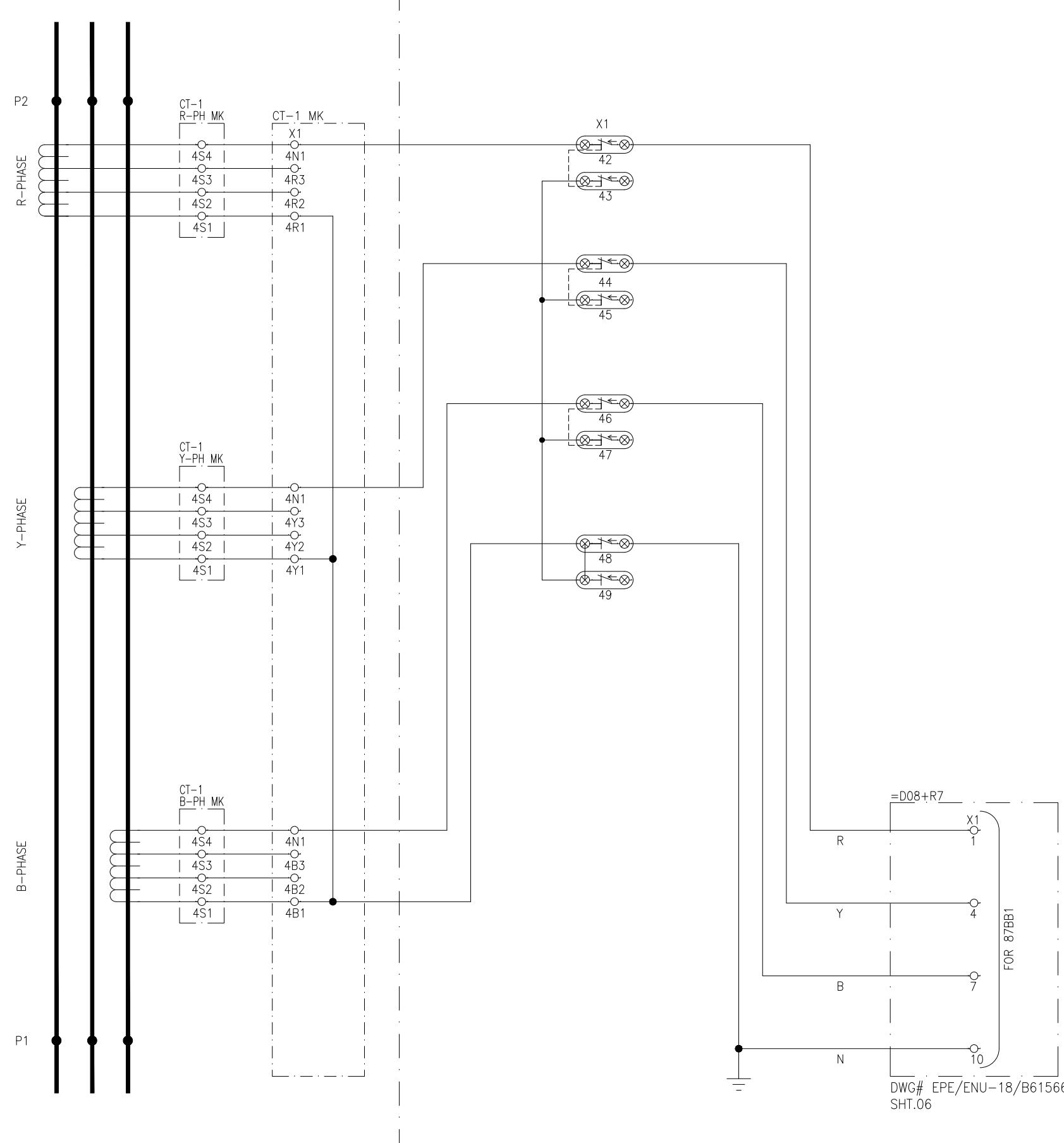
APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: CT CIRCUIT 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 07 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]		<b>EPESOL Pvt. Ltd.</b> 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT

## SWITCH YARD.

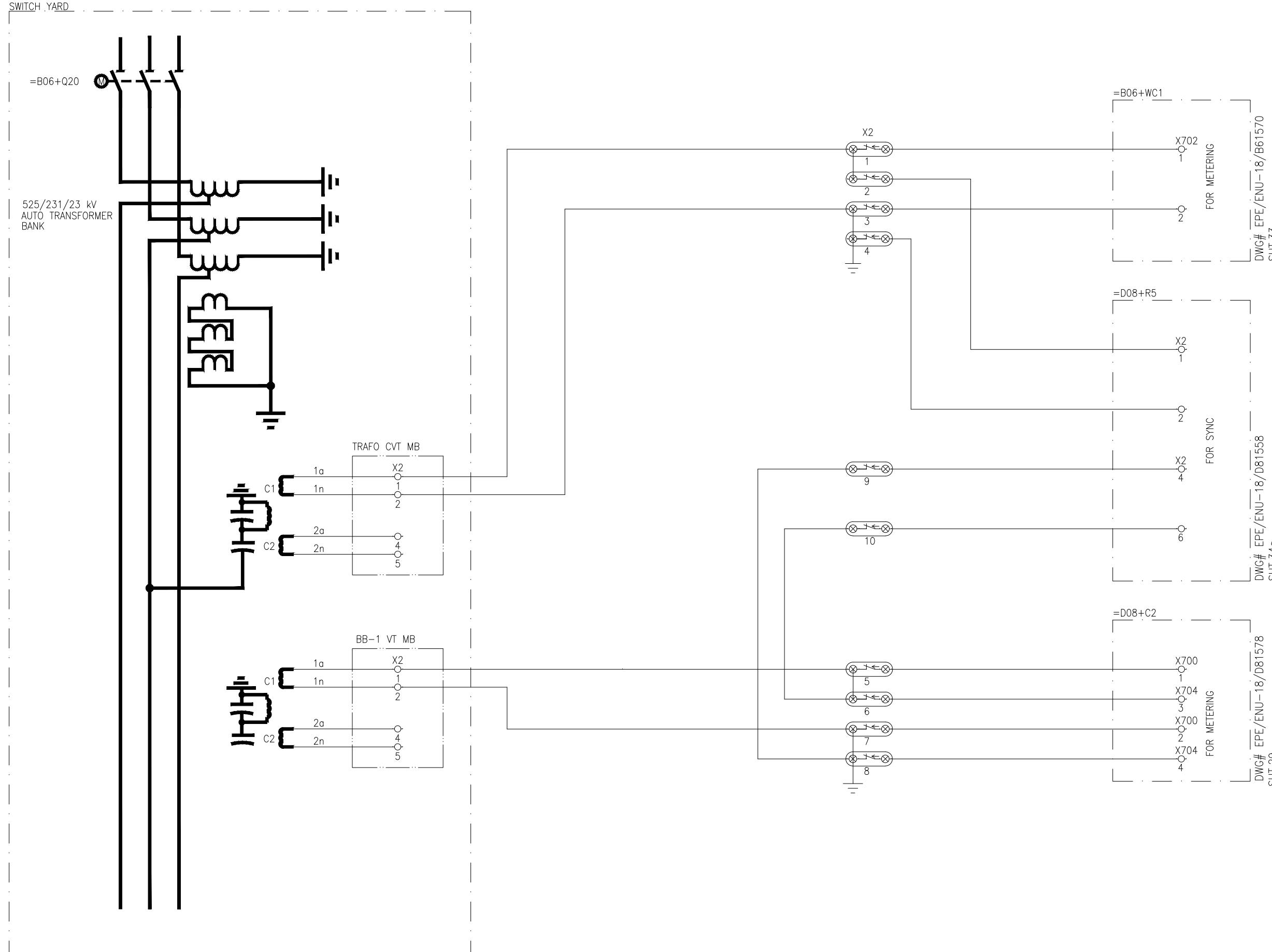
=D08, CT-1, CORE-4  
2400:1200:600/1A

APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: CT CIRCUIT 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 08 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]		<b>EPESOL Pvt. Ltd.</b> 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT

SWITCH YARD.

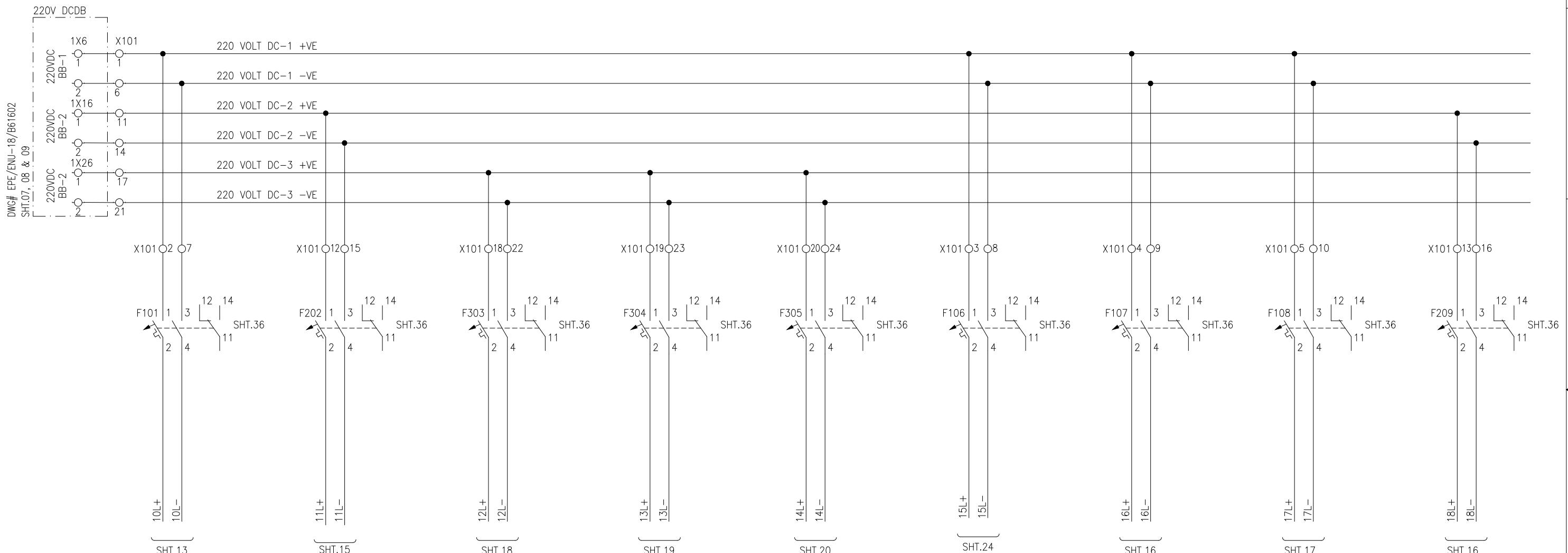
=D08, CT-1, CORE-5  
2400:1200:600/A

APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: CT CIRCUIT 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 09 OF 37
NAH	MSS	MUR		EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT



APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: VT CIRCUIT 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 10 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]		EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT REV: 0

1	2	3	4	5	6	7	8
CB CLOSING & TRIP CCT-1	CB TRIP CCT-2	DISCONNECTOR =D8+Q11 MOTOR SUPPLY	DISCONNECTOR =D8+Q12 MOTOR SUPPLY	DISCONNECTOR =D8+Q10 MOTOR SUPPLY	ALARMS SIGNALLING	CIRCUIT BREAKER MOTOR DRIVE	POSITION INDICATION
						SUPPLY-1	CIRCUIT BREAKER MOTOR DRIVE SUPPLY-2



### LEGEND

DES:	DESCRIPTION	TYPE	MAKE
F3XX	TWO POLE, 10Amp MCB,s	EP-100	GE

APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: DC SUPPLY DISTRIBUTION 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 11 OF 37
NAH	MSS	MUR		 EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT REV: 0

1

2

3

4

5

6

7

8

CIRCUIT BREAKER  
=D08+Q1

ON OFF

ISOLATOR  
=D08+Q11

ON OFF

ISOLATOR  
=D08+Q12

ON OFF

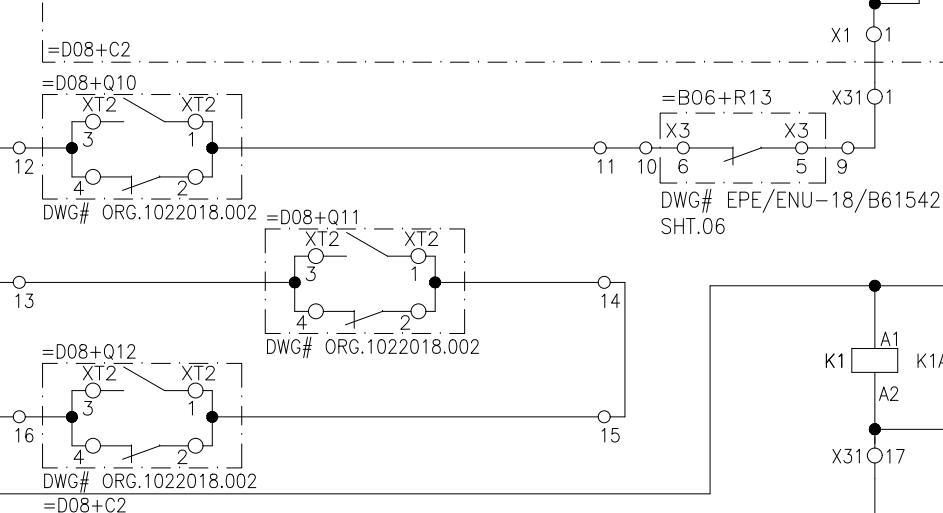
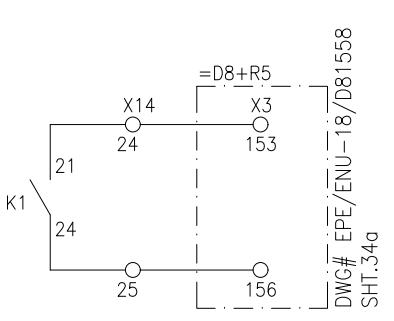
LINE ISOLATOR  
=D08+Q10

ON OFF

SCADA

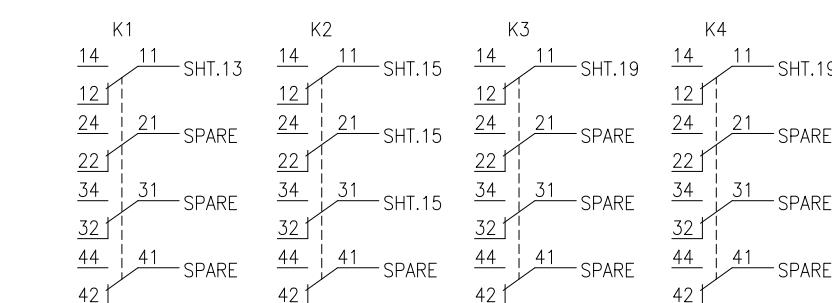
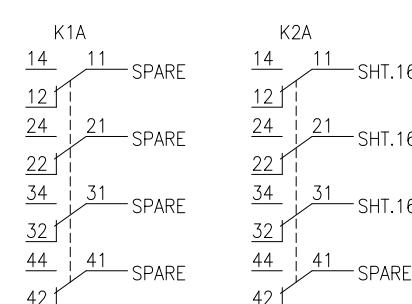
SCADA+

SCADA IFC

DWG# EPE/ENU-18/D81578  
SHT.09DWG# EPE/ENU-18/D81578  
SHT.09

SCADA IFC

SCADA-



LEGEND

DES:	DESCRIPTION	TYPE	MAKE
KX	MINIATURE RELAY	PRC	GE

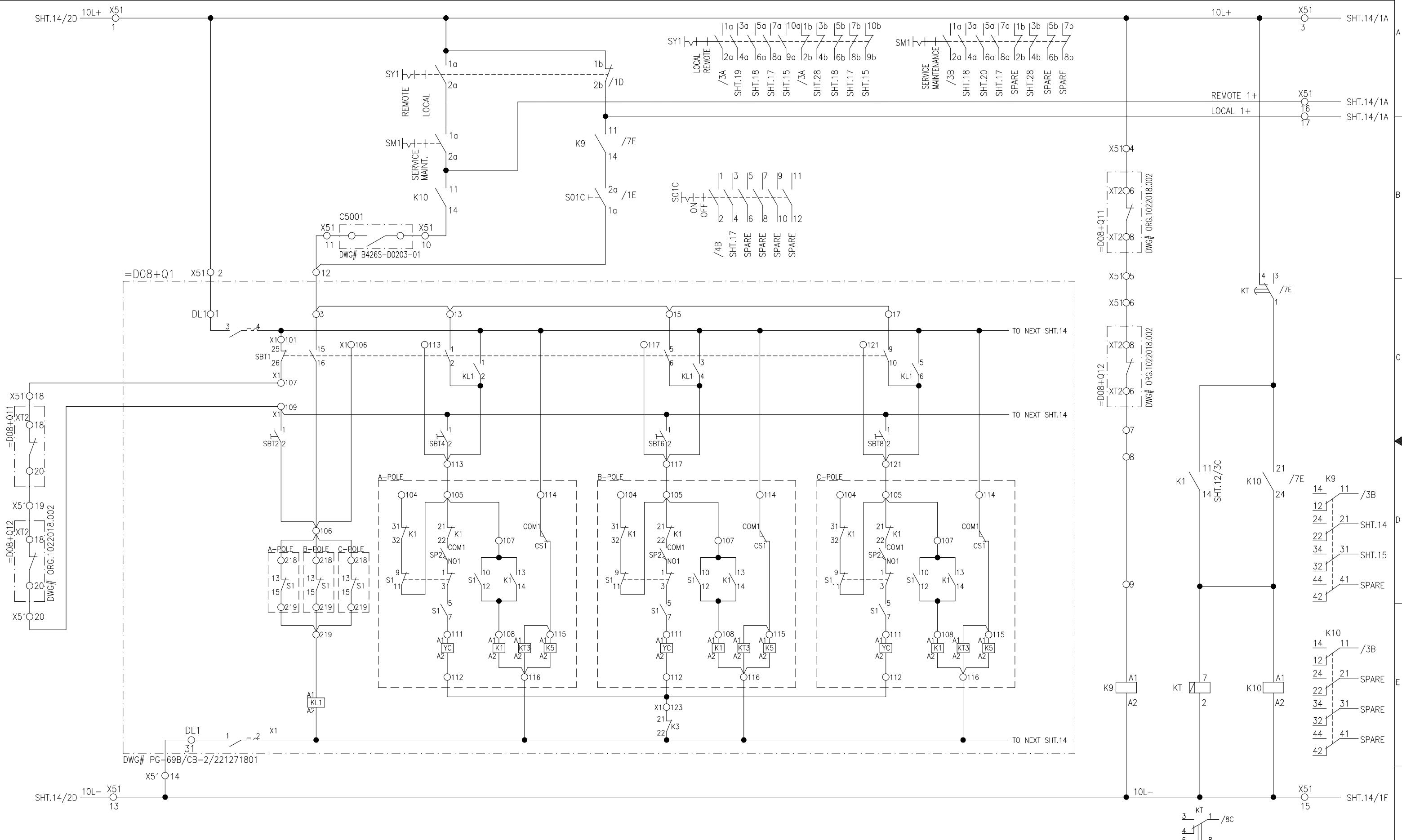
APPROVED CHECKED DRAWN

PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018  
FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELSTITLE:  
CB AND DISCONNECTOR CONTROL  
220KV LOCAL CONTROL CUBICAL TYPE =D08+S1EPESOL Pvt. Ltd.  
71-B Garden Block, New Garden Town, Lahore, Pakistan

DWG# EPE/ENU-18/D81590 SHT: 12 OF 37

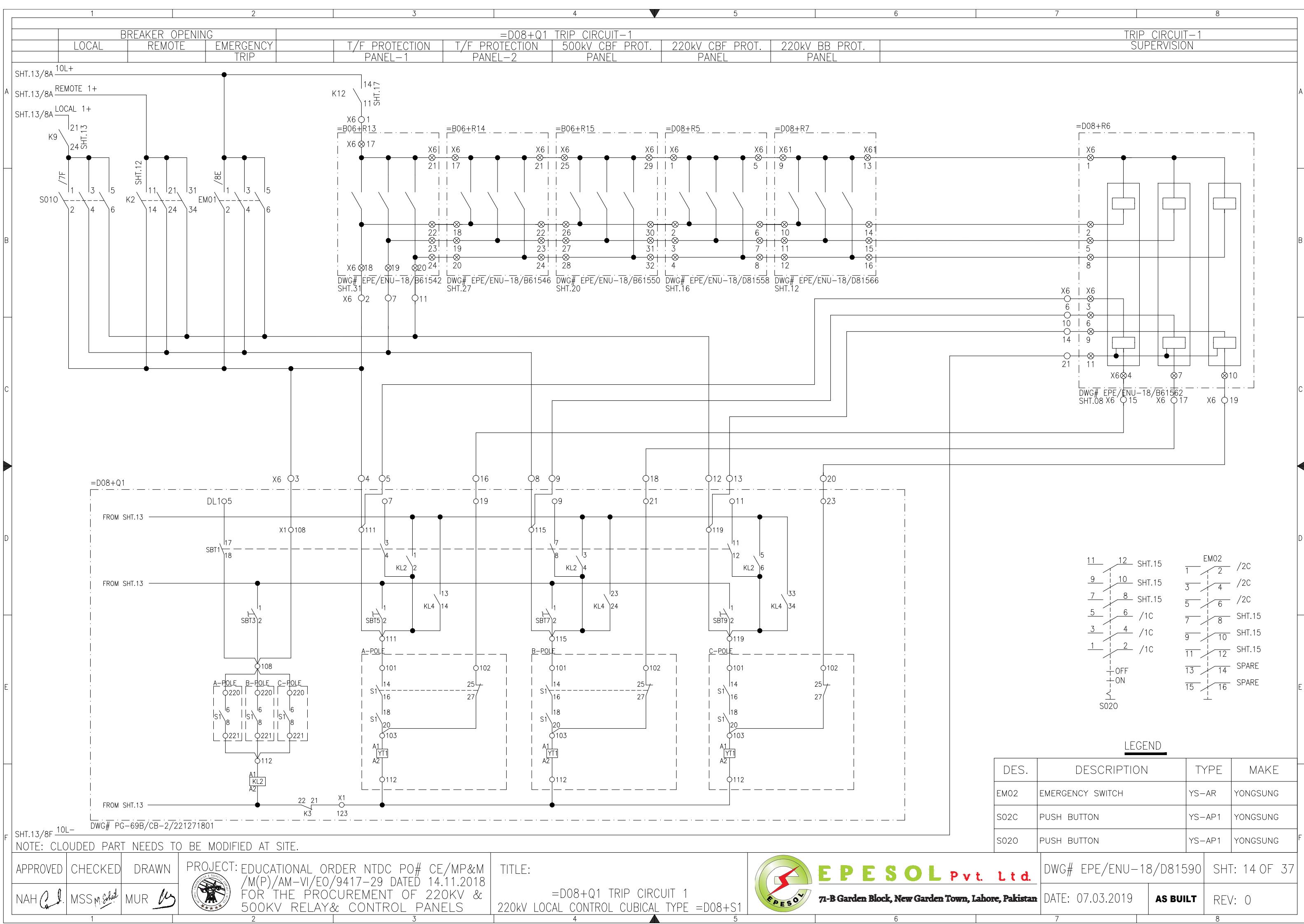
DATE: 07.03.2019 AS BUILT REV: 0

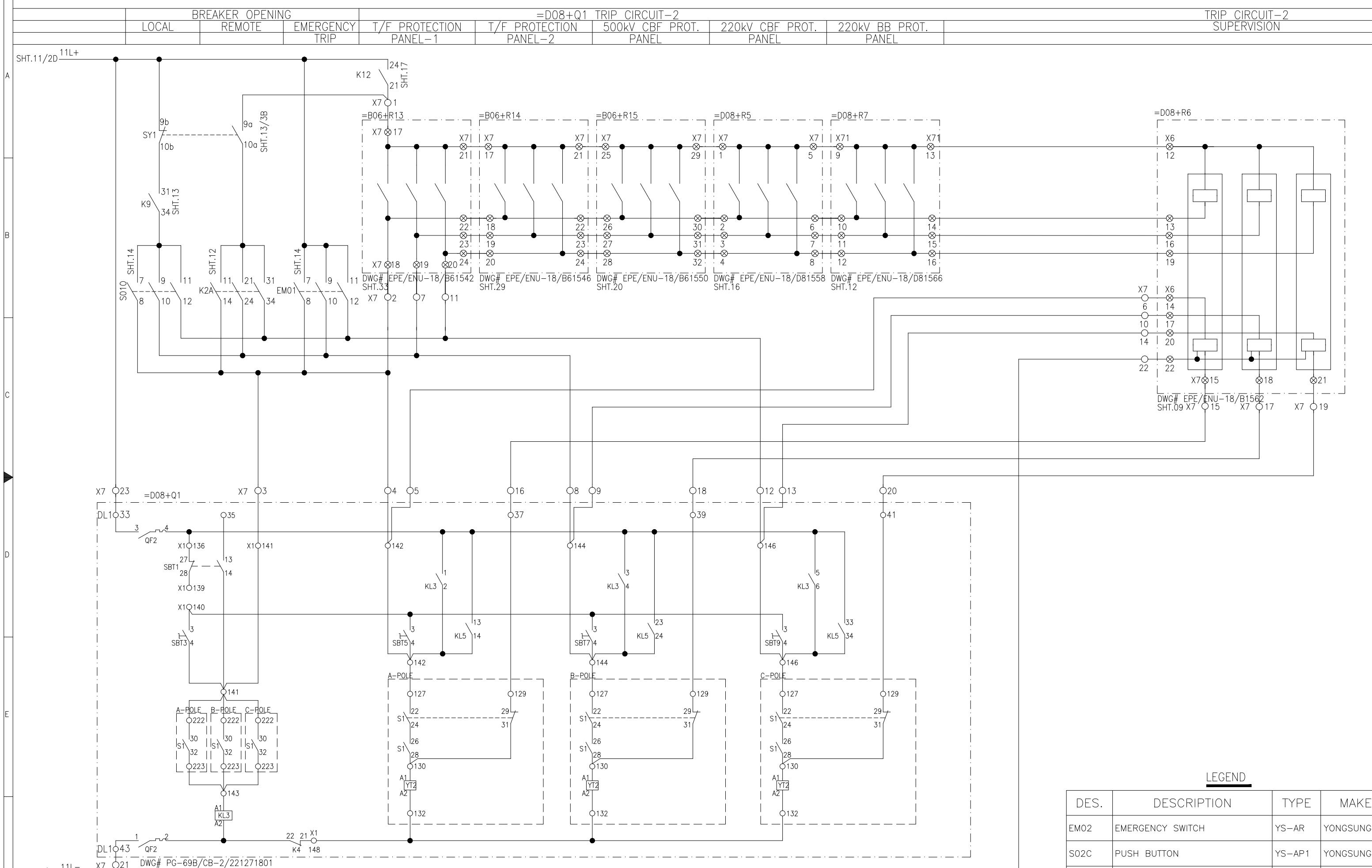
220kV CB CLOSING CIRCUIT-1  
REMOTE LOCAL



NOTE: CLOUDED PART NEEDS TO BE MODIFIED AT SITE.

APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: =D08+Q1 CLOSING CIRCUIT 220kV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 13 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]	 EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan		DATE: 07.03.2019	AS BUILT REV: 0



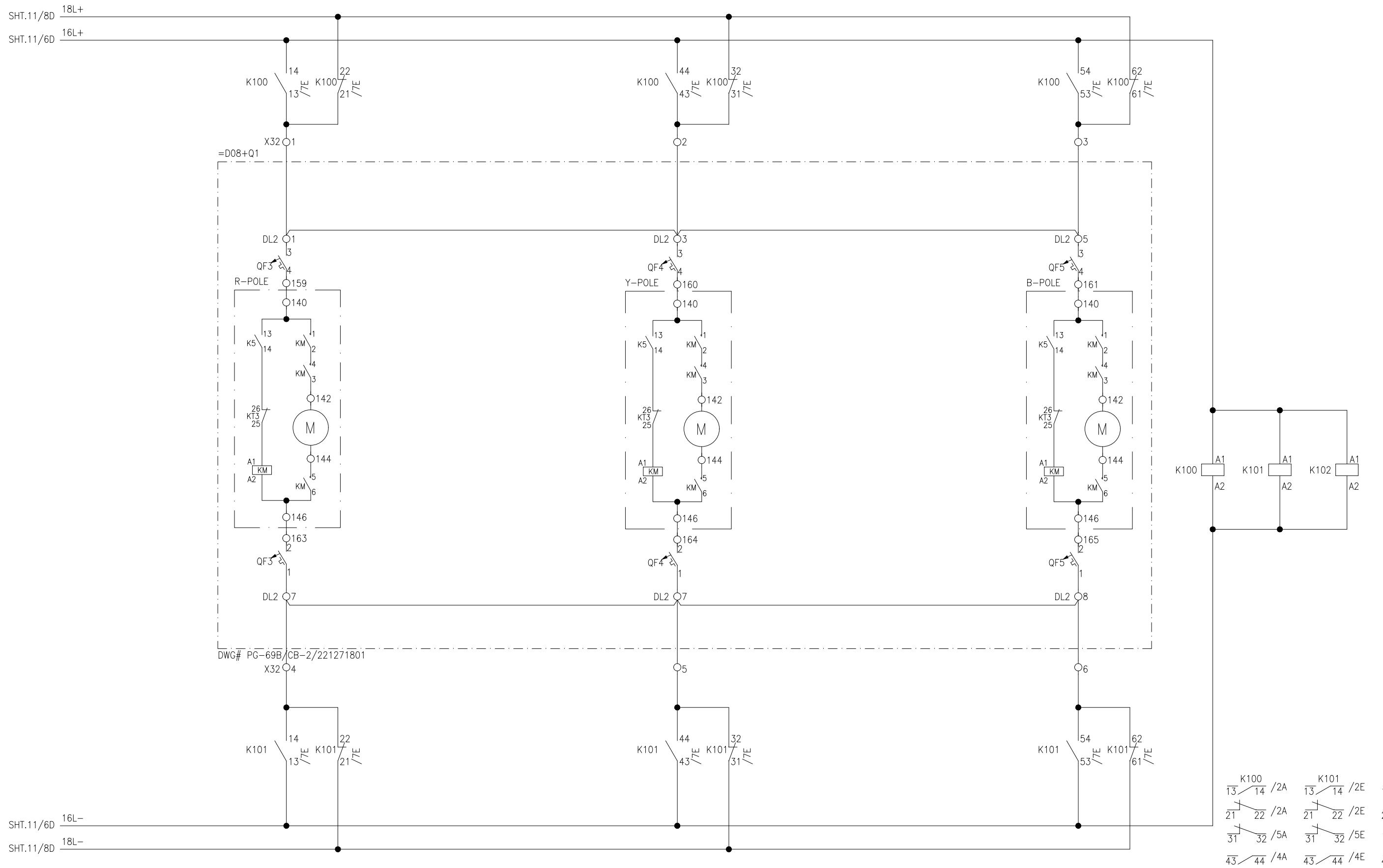


## CB MOTOR DRIVE CIRCUIT

Y-POLE

B-POLE

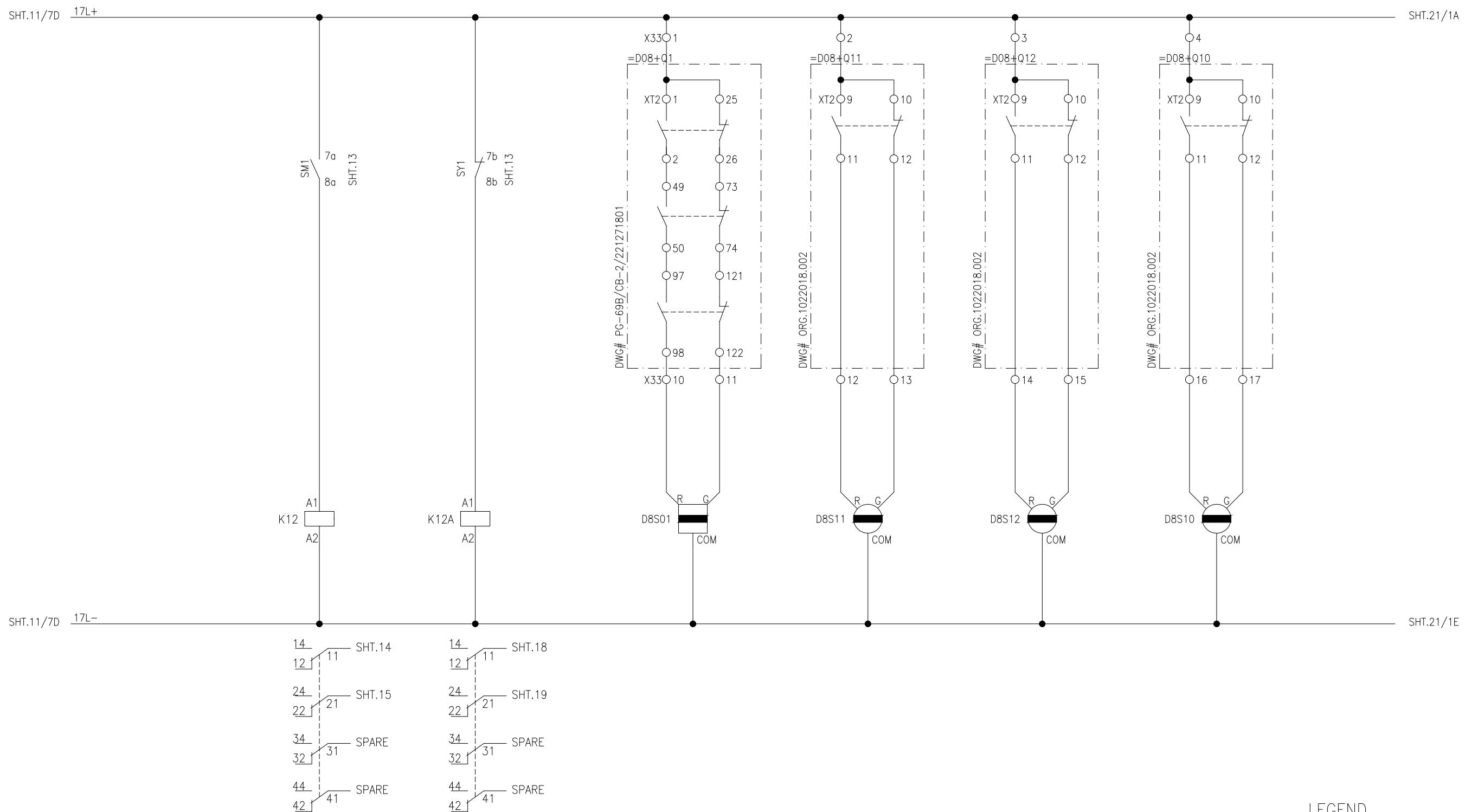
R-POLE



K100 /2A K101 /2E K102 /2E  
 13 14 /2A 13 14 /2E 13 14 /2E  
 21 22 /2A 21 22 /2E 21 22 SHT.36  
 31 32 /5A 31 32 /5E 31 32 SPARE  
 43 44 /4A 43 44 /4E 43 44 SPARE  
 53 54 /6A 53 54 /6E 53 54 SPARE  
 61 62 /7A 61 62 /7E 61 62 SPARE

APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: =D08+Q1 MOTOR DRIVE CIRCUIT 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPE SOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81590	SHT: 16 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]				DATE: 07.03.2019	AS BUILT REV: 0

CB / BUS DS / LINE DS  
IN SERVICE  
IN LOCAL  
MODE MODE

CB  
=D08+Q1DS  
=D08+Q11DS  
=D08+Q12DS  
=D08+Q10LEGEND

DES:	DESCRIPTION	TYPE	MAKE
=D08+S11,=D08+S12, =D08+S10	SEMOPHORE	SPR-30R	FUJI
DSS01	SEMOPHORE	SPR-30S	FUJI

NOTE: CLOUDED PART NEEDS TO BE MODIFIED AT SITE.

APPROVED: NAH [Signature]  
CHECKED: MSS [Signature]  
DRAWN: MUR [Signature]



PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS

TITLE:  
POSITION INDICATION CIRCUIT  
220KV LOCAL CONTROL CUBICAL TYPE =D08+S1

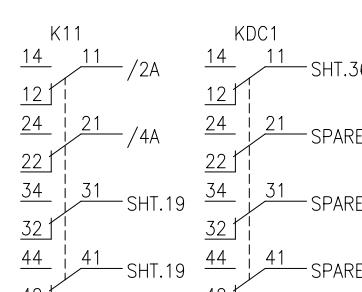
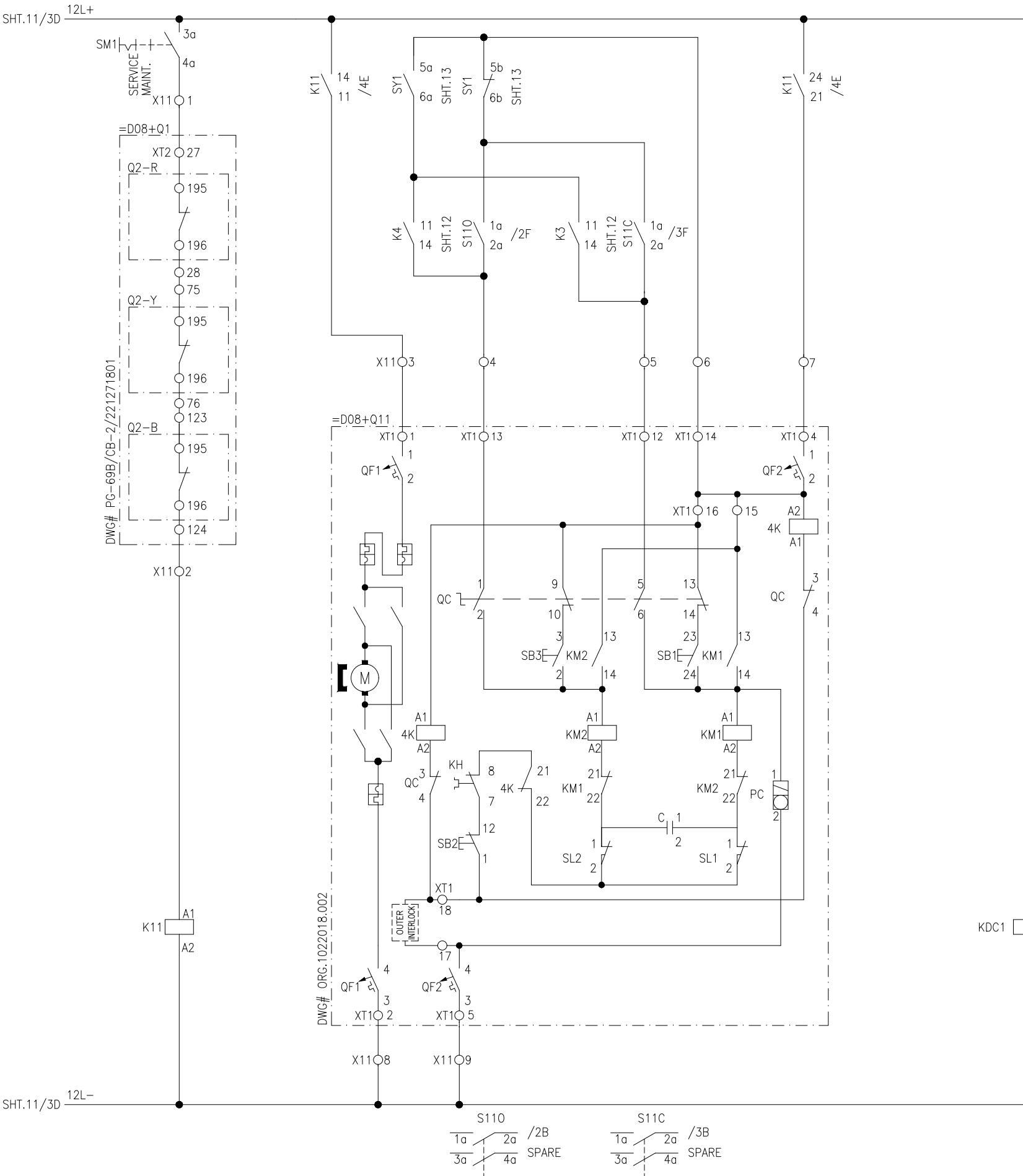


**EPESOL Pvt. Ltd.**  
71-B Garden Block, New Garden Town, Lahore, Pakistan

DWG# EPE/ENU-18/D81590 SHT: 17 OF 37  
DATE: 07.03.2019 AS BUILT REV: 0

## DISCONNECTOR =D08+Q11

INTERLOCKING MOTOR SUPPLY OPENING CLOSING



APPROVED	CHECKED	DRAWN
NAH [Signature]	MSS [Signature]	MUR [Signature]



PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018  
FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS

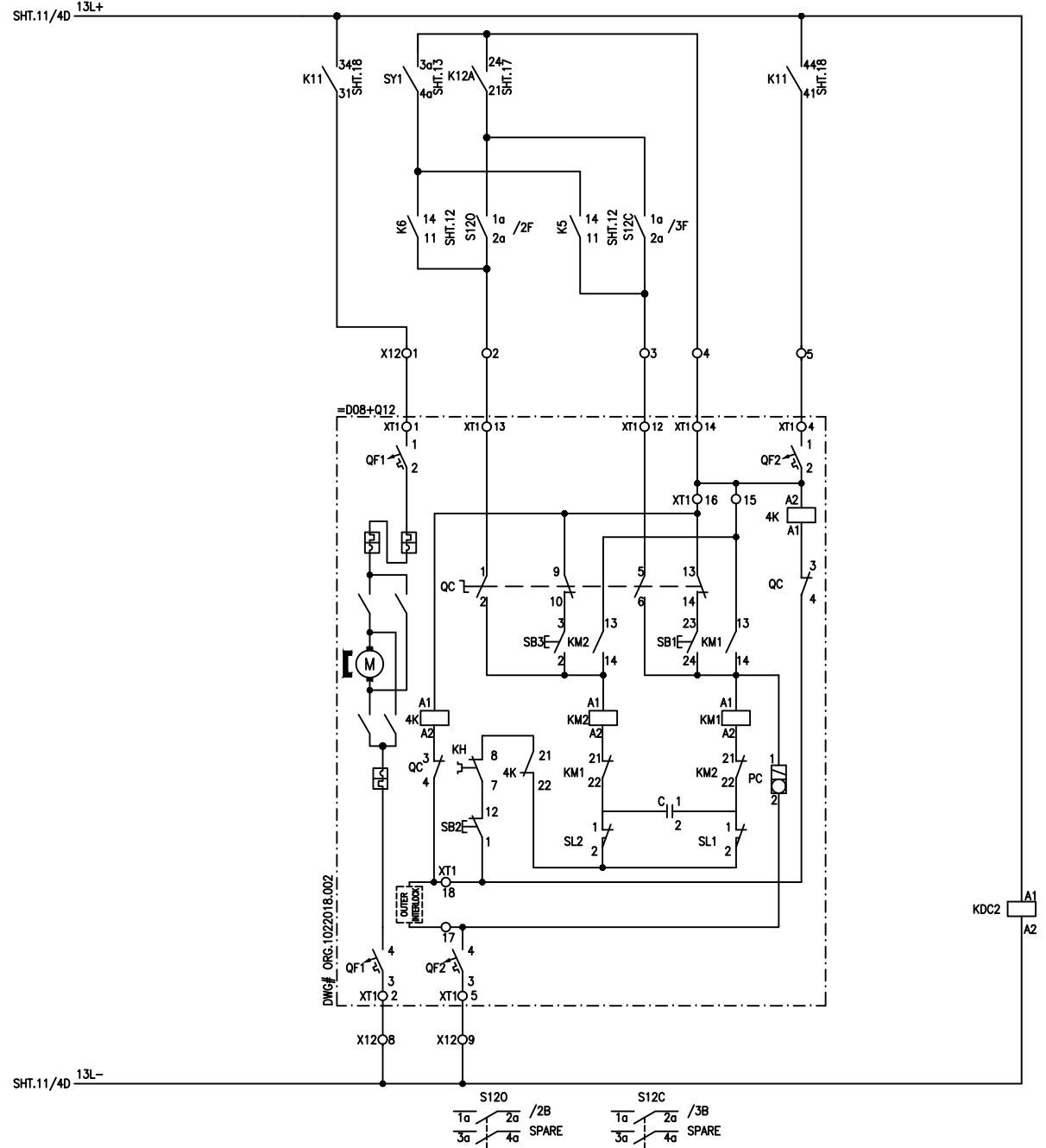
TITLE:  
=D08+Q11 DISCONNECTOR CONTROL  
220KV LOCAL CONTROL CUBICAL TYPE =D08+S1

E P E S O L P v t . L t d.  
71-B Garden Block, New Garden Town, Lahore, Pakistan

DWG# EPE/ENU-18/D81590 SHT: 18 OF 37  
DATE: 07.03.2019 AS BUILT REV: 0

## DISCONNECTOR =D08+Q12

INTERLOCKING MOTOR SUPPLY OPENING CLOSING



14 11 SHT.36  
12 21 SPARE  
22 31 SPARE  
34 41 SPARE  
32 42 SPARE

APPROVED	CHECKED	DRAWN
NAH	MSS	MUR



PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M  
/M(P)/AM-VI/EO/9417-29 DATED 14.11.2018  
FOR THE PROCUREMENT OF 220KV &  
500KV RELAY& CONTROL PANELS

TITLE:  
=D08+Q12 DISCONNECTOR CONTROL  
220KV LOCAL CONTROL CUBICAL TYPE =D08+S1



E P E S O L P r t . L t d .  
75-B Garden Block, New Garden Town, Lahore, Pakistan

DWG# EPE/ENU-18/D81590	SHT: 19 OF 37
DATE: 07.03.2019	AS BUILT



CB =D08+Q1 STATUS

OPEN

CLOSE

DS =D08+Q11 STATUS

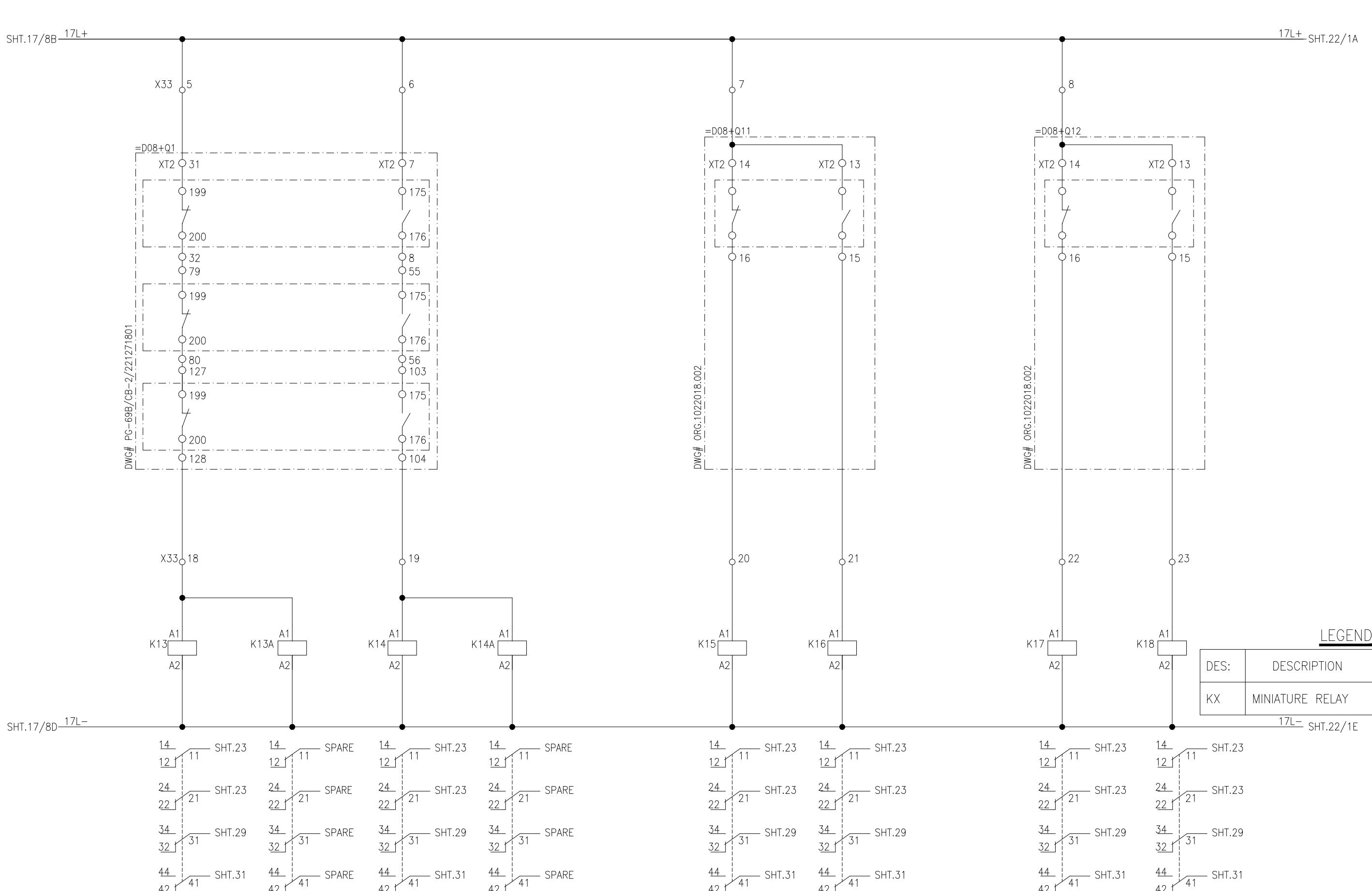
OPEN

CLOSE

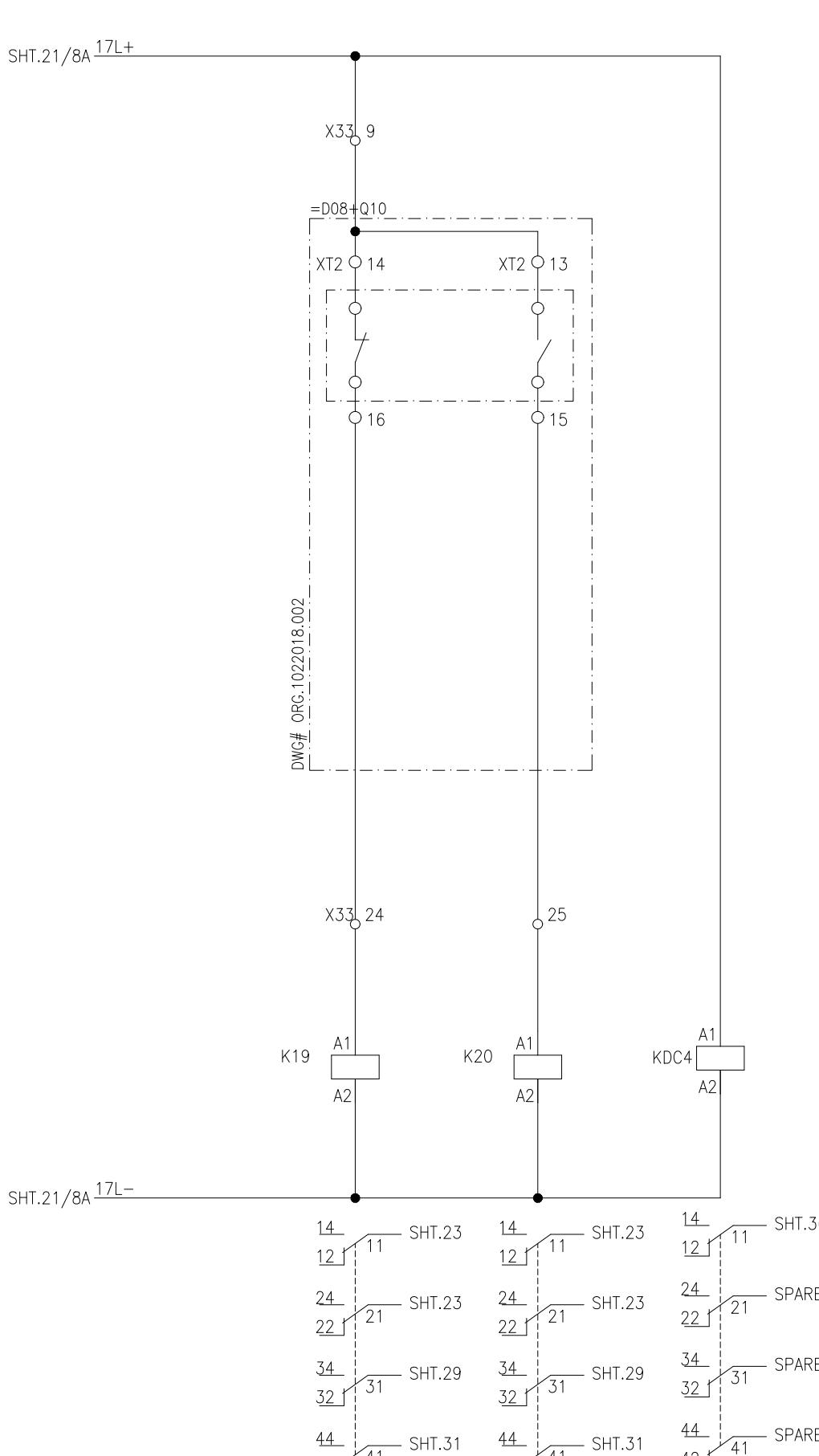
DS =D08+Q12 STATUS

OPEN

CLOSE



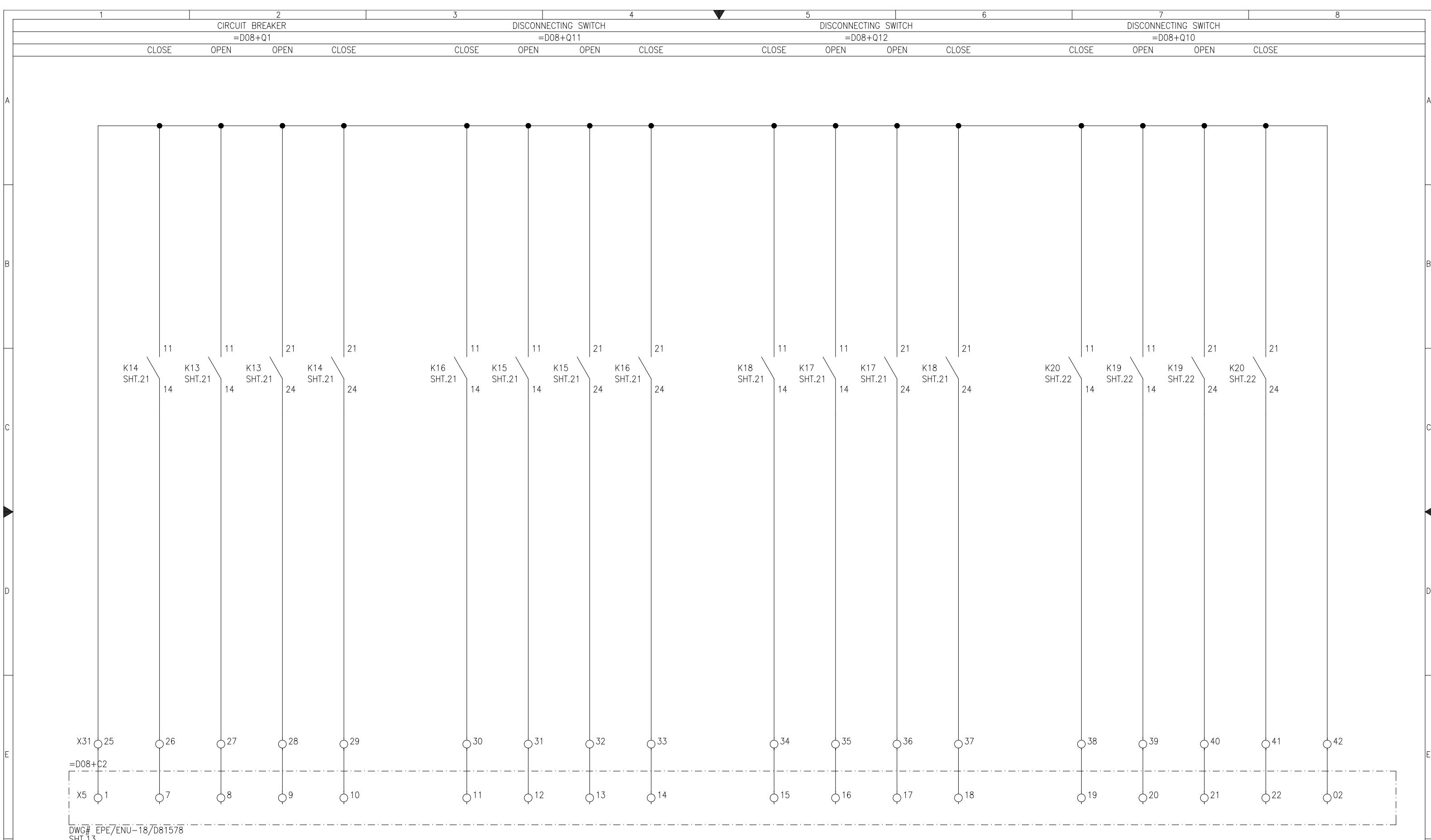
DS =D08+Q10 STATUS  
OPEN CLOSE



#### LEGEND

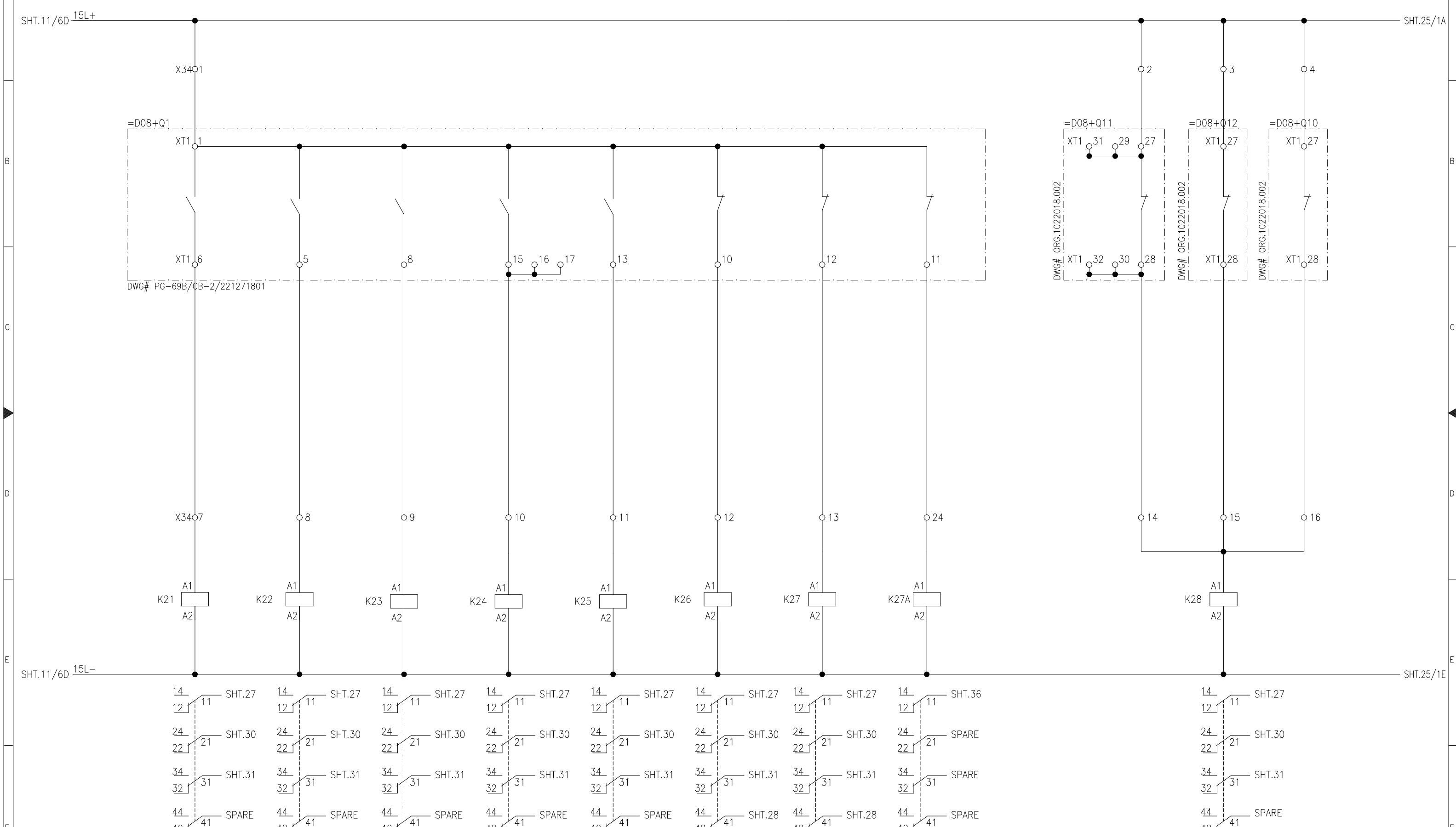
DES:	DESCRIPTION	TYPE	MAKE
KX	DC CONTACTOR	PRC	GE

APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: CB/DS STATUS 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 22 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]		 <b>E P E S O L P v t . L t d .</b> 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT

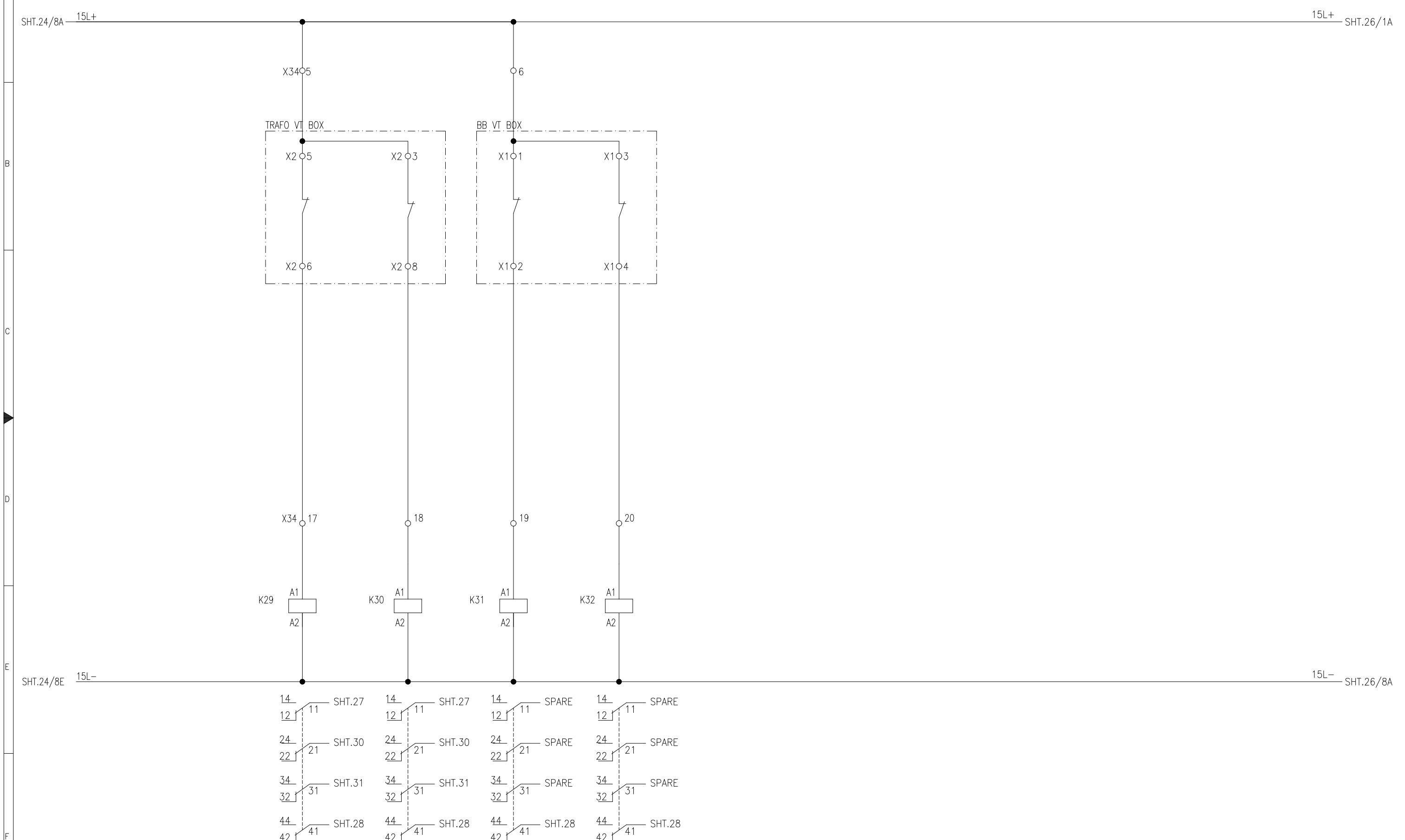


APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: POSITION INDICATION FOR CONTROL PANEL 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81590	SHT: 23 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]				DATE: 07.03.2019	AS BUILT

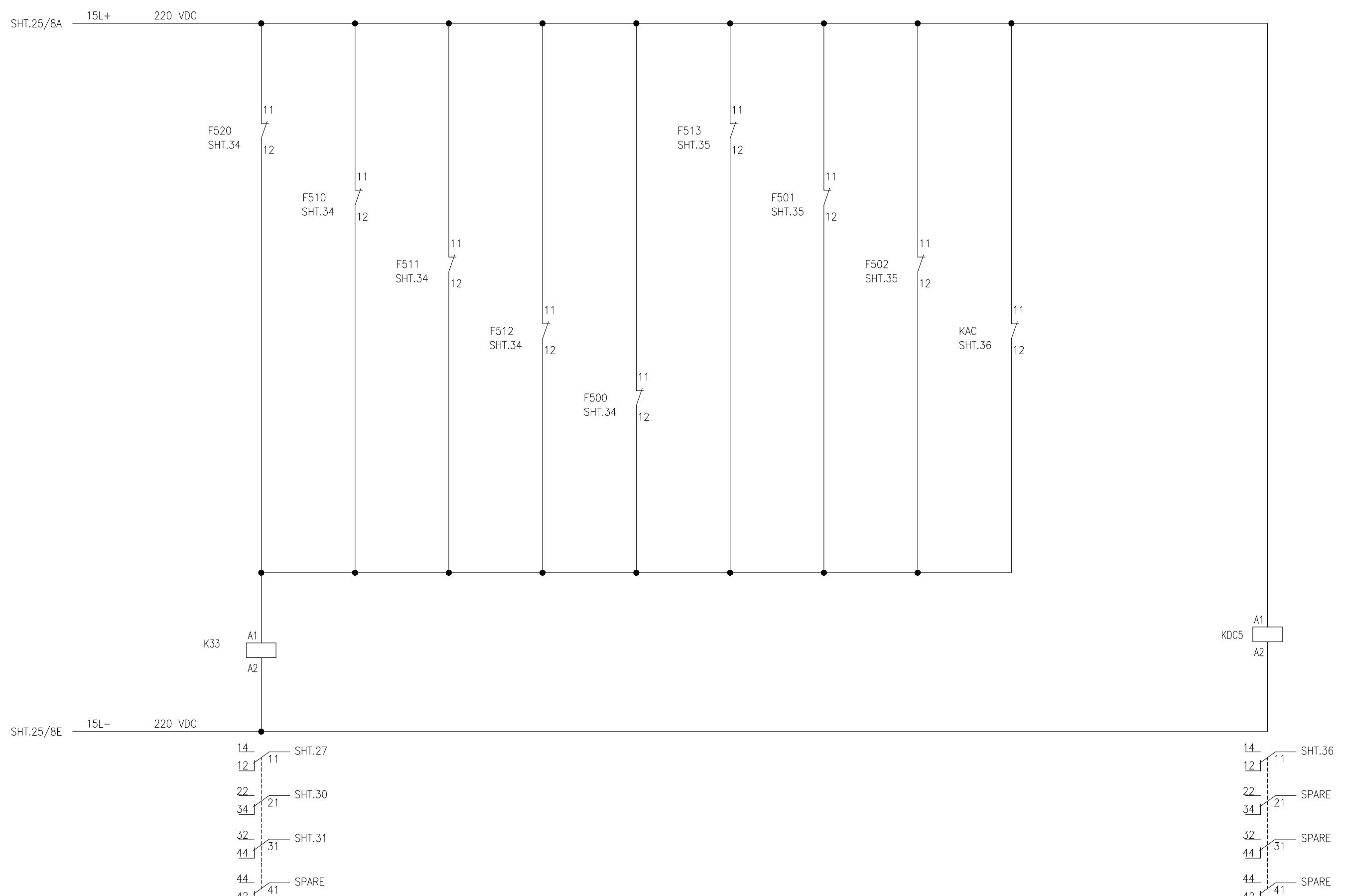
1	2	3	4	5	6	7	8
SF6 LOW PRESSURE ALARM	SF6 CB SPRING NOT CHARGED	LOW PRESSURE LOCKOUT	MOTOR RUN TIME MONITORING	POLE DISCREPANCY	CB CONTROL AT LOCAL	CB AC SUPPLY FAIL /HEATING FAULTY	CB MOTOR CONTROL CIRCUIT MCB TRIP
						DS AC MCB TRIP	



APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: CB ALARMS 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81590	SHT: 24 OF 37
NAH	MSS	MUR				DATE: 07.03.2019	AS BUILT

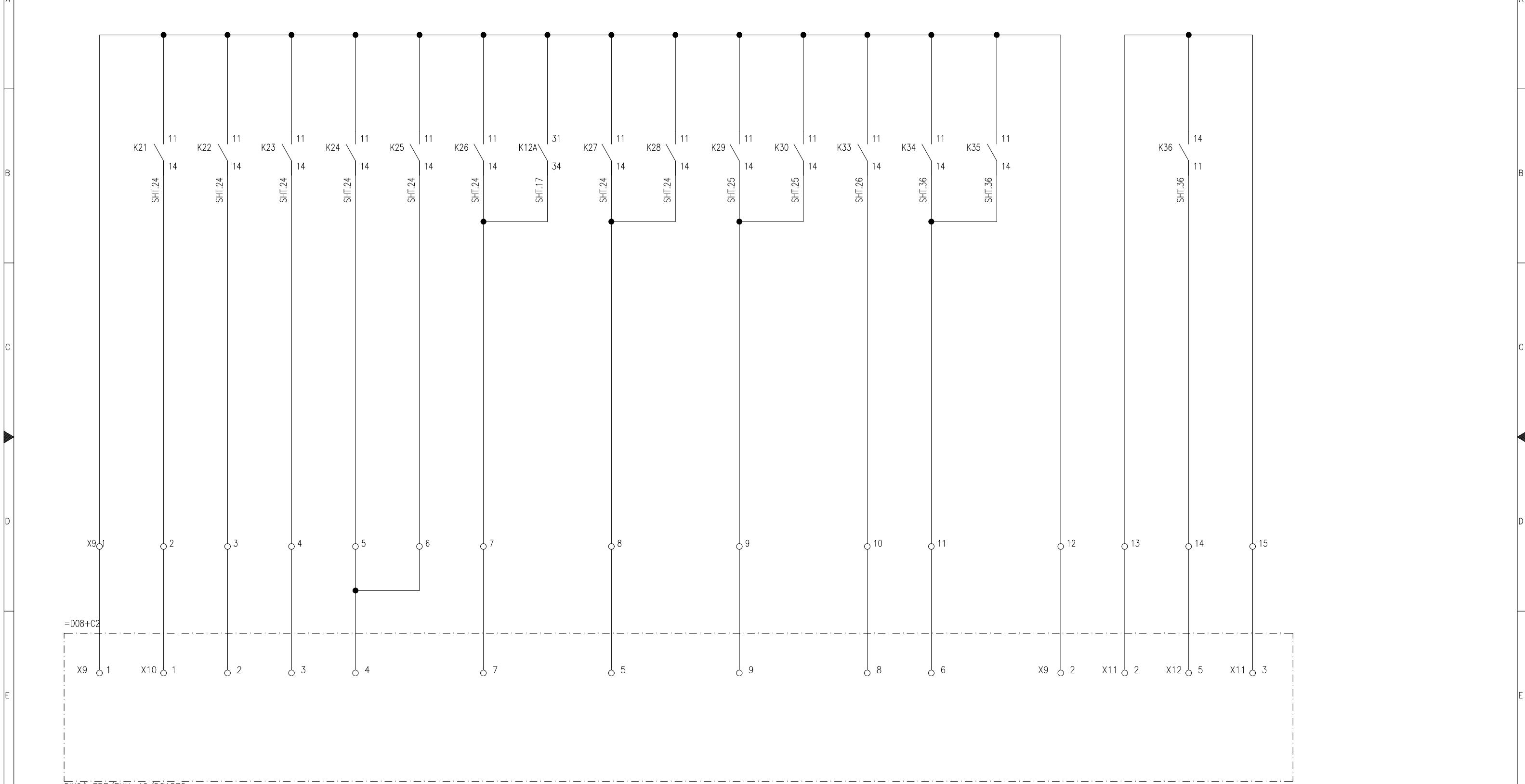


APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: AC SUPPLY FAIL INDICATION CIRCUIT 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 25 OF 37
NAH	MSS	MUR		<b>EPESOL Pvt. Ltd.</b> 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT

AC MCB  
TRIP

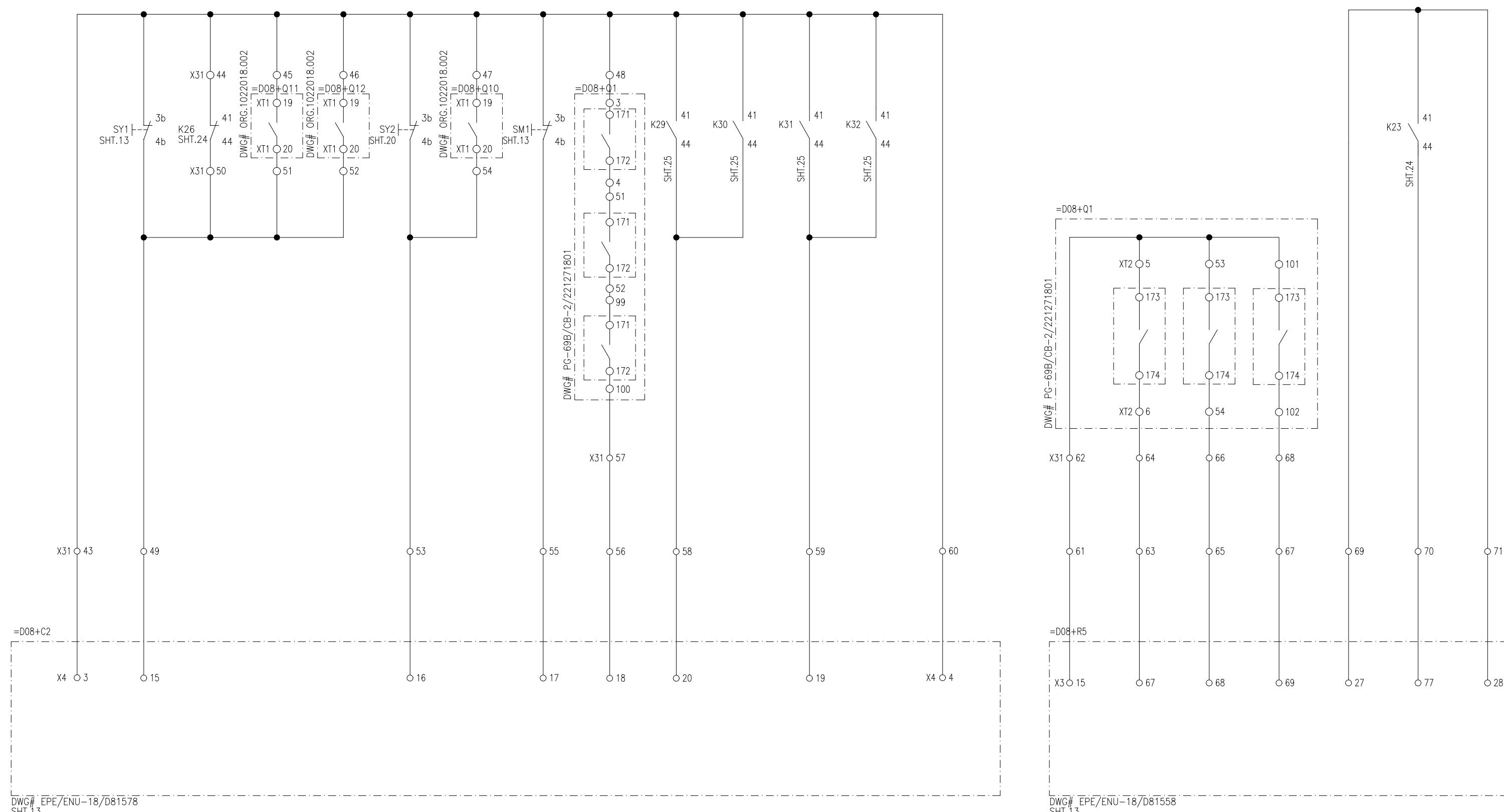
APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: VT MCB TRIP 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPE SOL Pvt Ltd 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81590	SHT: 26 OF 37
NAH Q.	MSS M. Sohail	MUR B				DATE: 07.03.2019	AS BUILT

1	2	3	4	5	6	7	8
SF6 LOW PRESSURE ALARM	SF6 LOW CB SPRING NOT CHARGED	MOTOR PRESSURE LOCKOUT	ENFORCED RUN TIME MONITORING	CB CONTROL TRIPLE POLE AT LOCAL	AC SUPPLY FAIL /HEATING FAULTY DS AC FAIL	TRAFO VT MCB TRIP PROT.	M.K AC MCB TRIP
PRESSURE ALARM	CB SPRING NOT CHARGED	MOTOR PRESSURE LOCKOUT	ENFORCED RUN TIME MONITORING	CB CONTROL TRIPLE POLE AT LOCAL	AC SUPPLY FAIL /HEATING FAULTY DS AC FAIL	TRAFO VT MCB TRIP PROT.	M.K AC MCB TRIP
						METERING	CIRCUIT CB DS

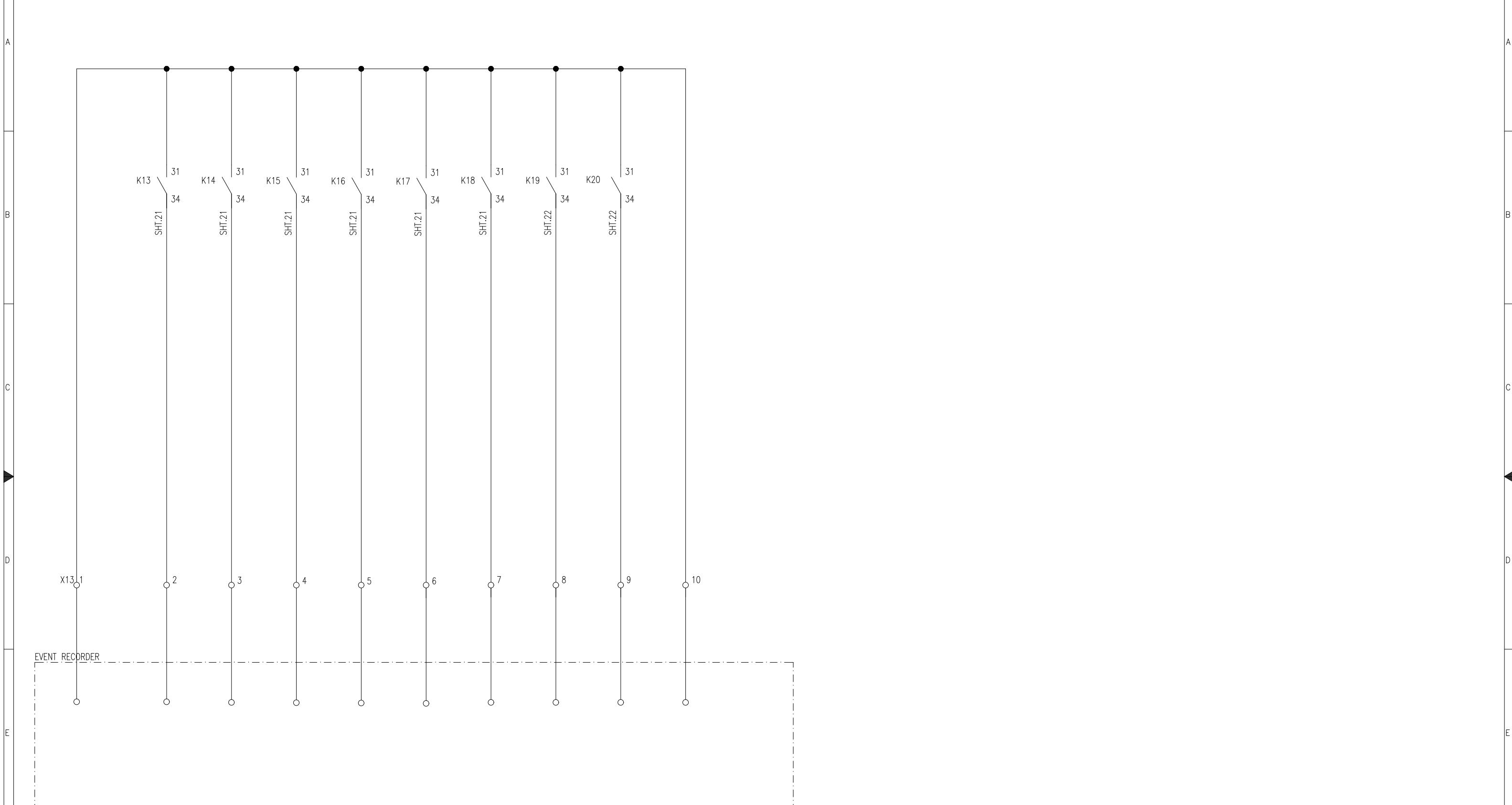


DWG# EPE/ENU-18/D81578  
SHT.18

APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: SIGNALING FOR ANNUNCIATION 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	E P E S O L P v t . L t d. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81590	SHT: 27 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]				DATE: 07.03.2019	AS BUILT

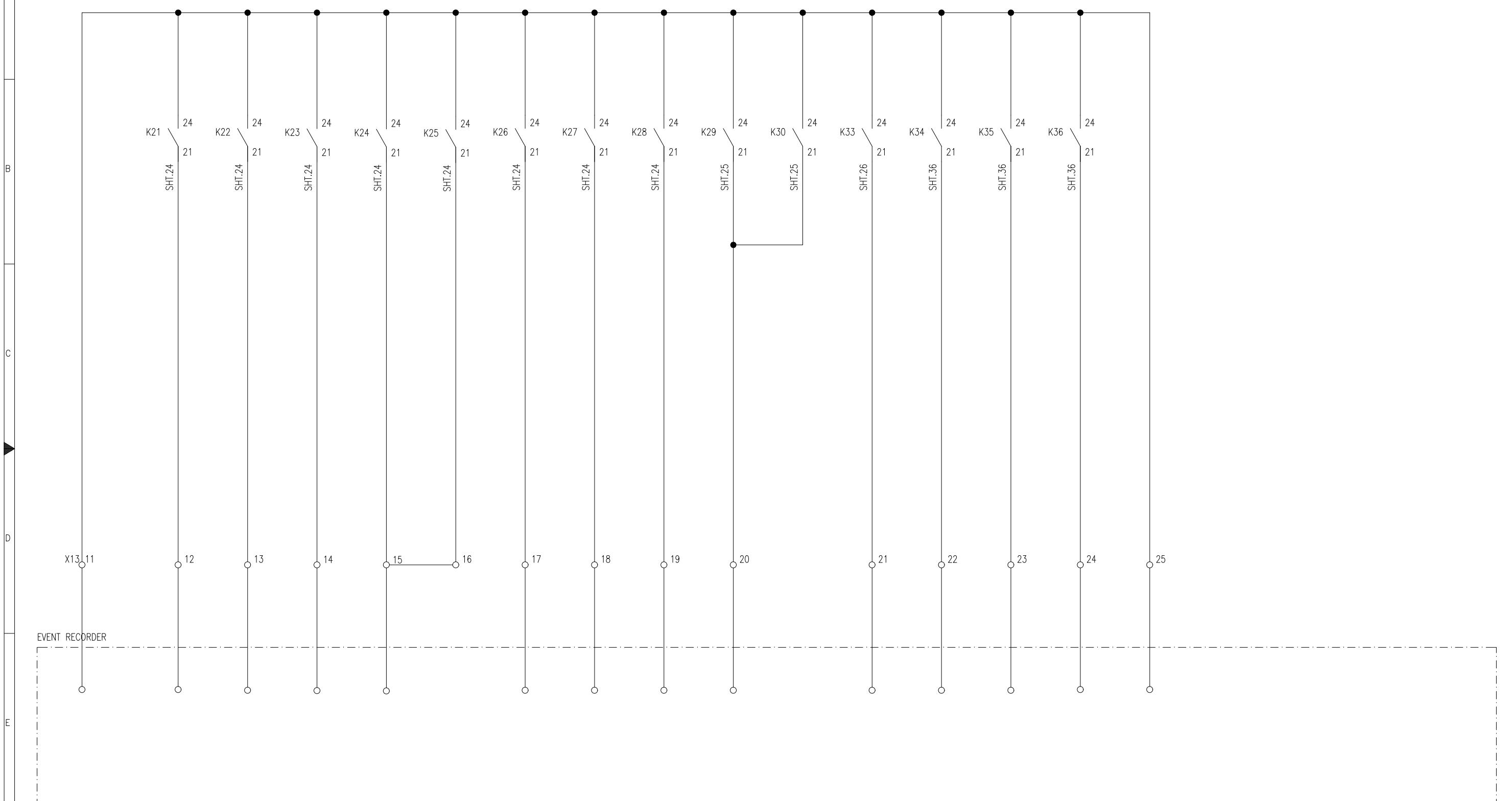


1	2	3	4	5	6	7	8
CIRCUIT BREAKER		ISOLATOR	ISOLATOR	ISOLATOR			
Q1	Q11	Q12	Q10				
OPEN	CLOSE	OPEN	CLOSE	OPEN	CLOSE	OPEN	CLOSE



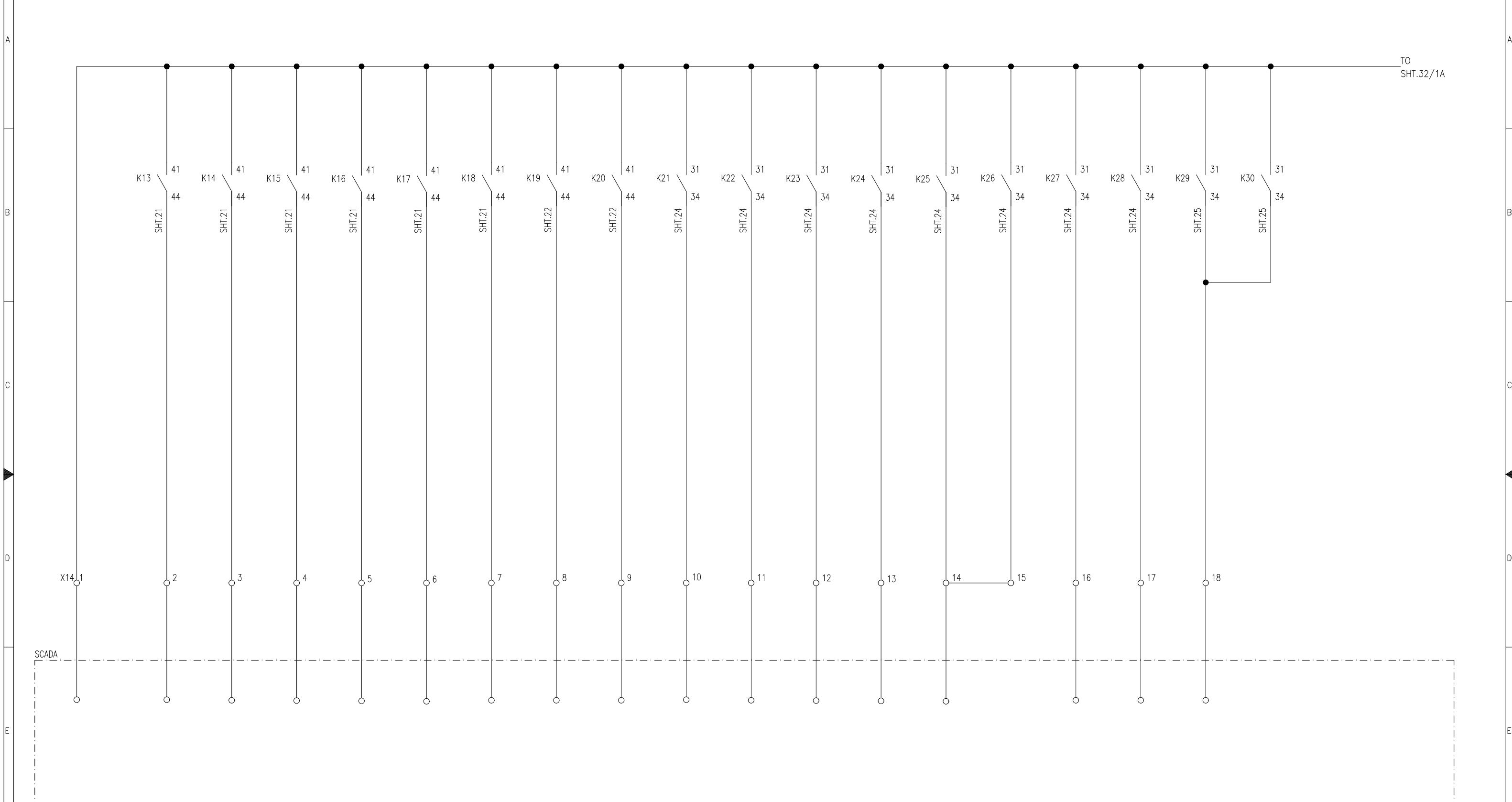
APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: SIGNALING FOR EVENT RECORDER 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 29 OF 37
NAH	MSS	MUR		 <b>E P E S O L</b> Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT

1	2	3	4	5	6	7	8
SF6 LOW PRESSURE ALARM	SF6 LOW CB SPRING NOT CHARGED	MOTOR PRESSURE LOCKOUT	ENFORCED RUN TIME MONITORING	CB CONTROL TRIPLE POLE OPERATION	CB AC MCB AT TRIP LOCAL	DS AC MCB TRIP	TRAFO VT MCB TRIP PROT. METERING
							CB MOTOR DS MOTOR
							M.K AC MCB CIRCUIT MCB CIRCUIT MCB M.K DC



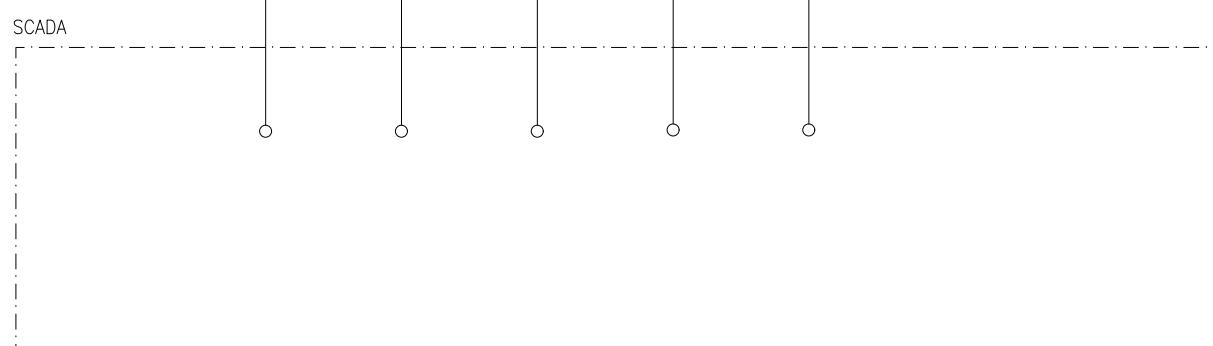
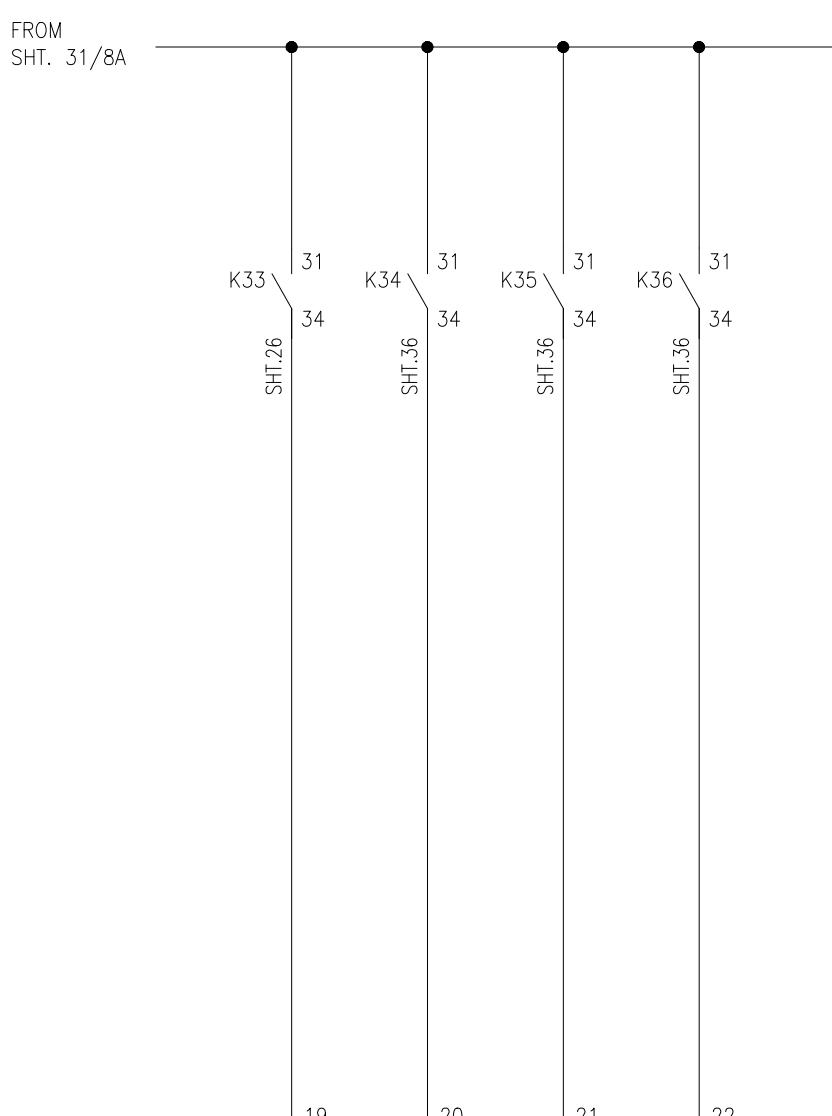
APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: SIGNALING FOR EVENT RECORDER 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81590	SHT: 30 OF 37
NAH [Signature]	MSS [Signature]	MUR [Signature]				DATE: 07.03.2019	AS BUILT

1	2	3	4	5	6	7	8
CIRCUIT BREAKER	ISOLATOR	ISOLATOR	ISOLATOR	SF6 LOW PRESSURE	MOTOR	ENFORCED CB CONTROL	CB AC MCB DS AC MCB TRAFO VT MCB TRIP
Q2	Q21	Q22	Q20	CB SPRING	PRESSURE	TRIPLE POLE AT LOCAL	TRIP TRIP PROT. METERING
OPEN	CLOSE	OPEN	CLOSE	OPEN	CLOSE	MONITORING	OPERATION

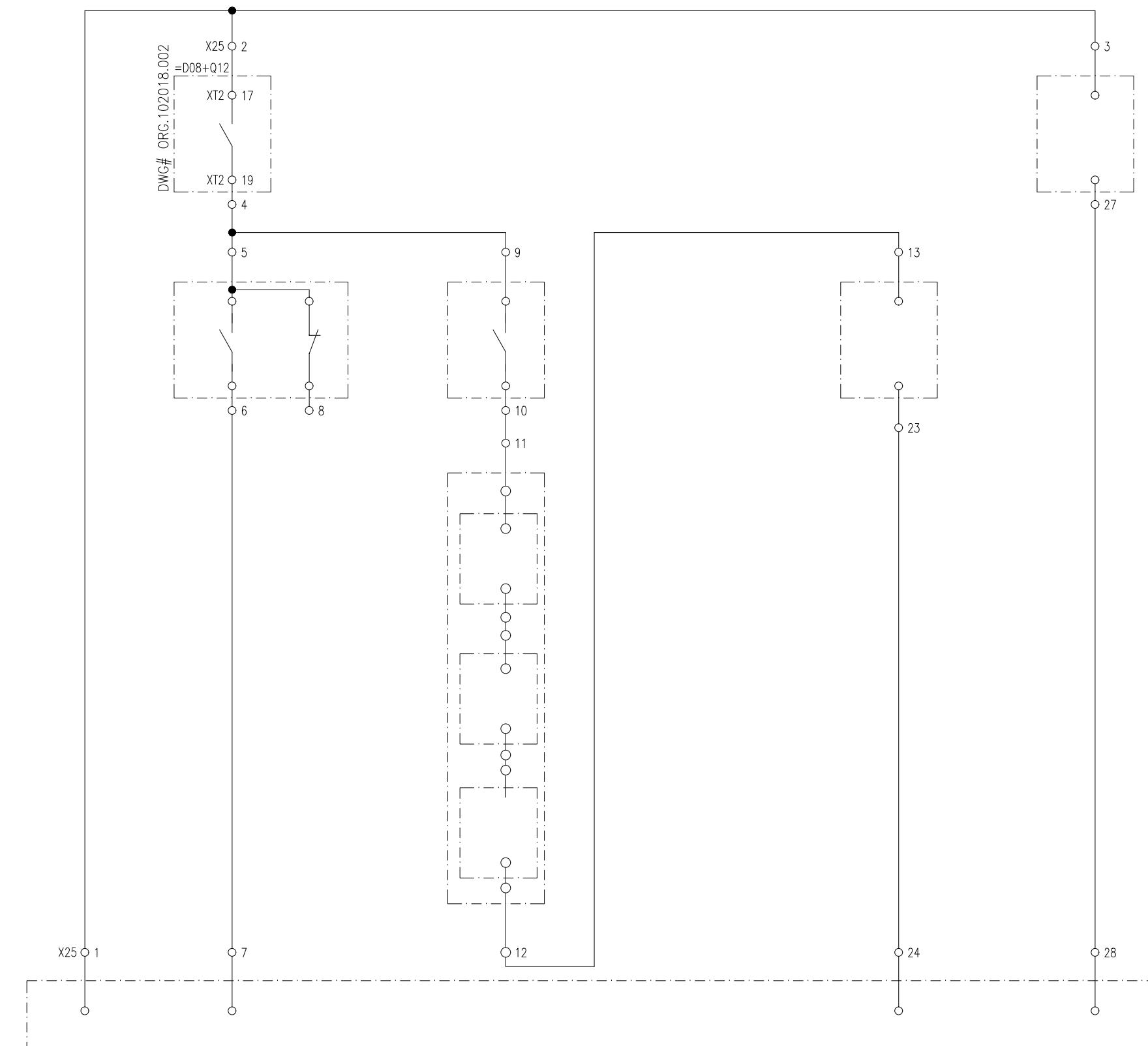


APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: SIGNALING FOR SCADA 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	EPE SOL Pvt Ltd 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/D81590	SHT: 31 OF 37
NAH	MSS	MUR				DATE: 07.03.2019	AS BUILT

M.K AC MCB CIRCUIT MCB CIRCUIT MCB M.K DC MCB  
TRIP TRIP TRIP TRIP

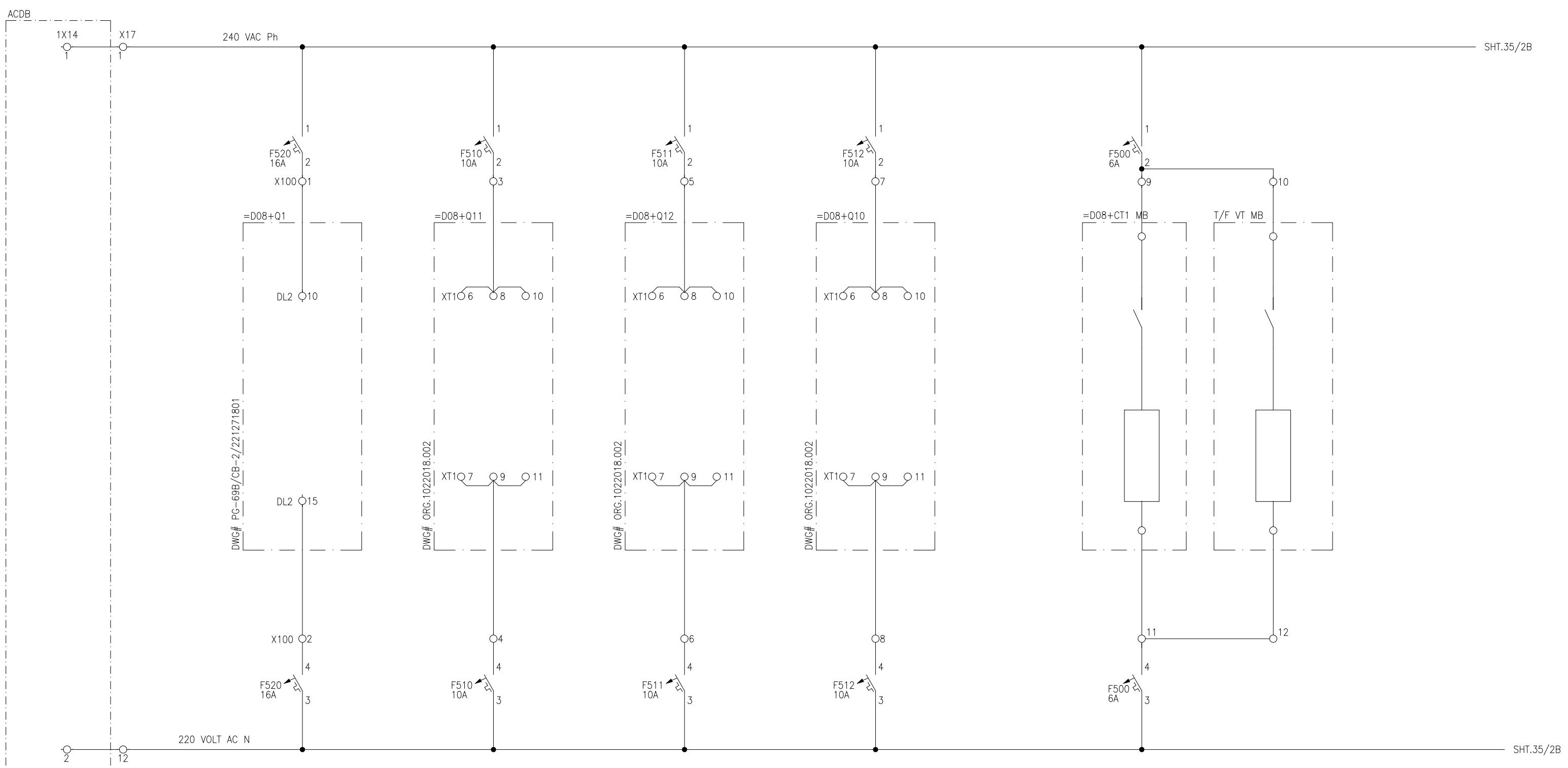


APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: SIGNALING FOR SCADA 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 32 OF 37
NAH Q.	MSS M. Sohail	MUR Iy		EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT



APPROVED	CHECKED	DRAWN	PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS	TITLE: SYNC. SELECTION 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1	DWG# EPE/ENU-18/D81590	SHT: 33 OF 37
NAH Q.	MSS M. Sohail	MUR B		EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DATE: 07.03.2019	AS BUILT

1 2 3 4 5 6 7 8

CIRCUIT BREAKER  
AC SUPPLYDISCONNECTOR SWITCH  
=D08+Q11DISCONNECTOR SWITCH  
=D08+Q12DISCONNECTOR SWITCH  
=D08+Q10CT BOX  
HEATINGVT BOX  
HEATINGDWG# EPE/ENU-18/B61598  
SHT.09

NOTE: CLOUDED PART NEEDS TO BE MODIFIED AT SITE.

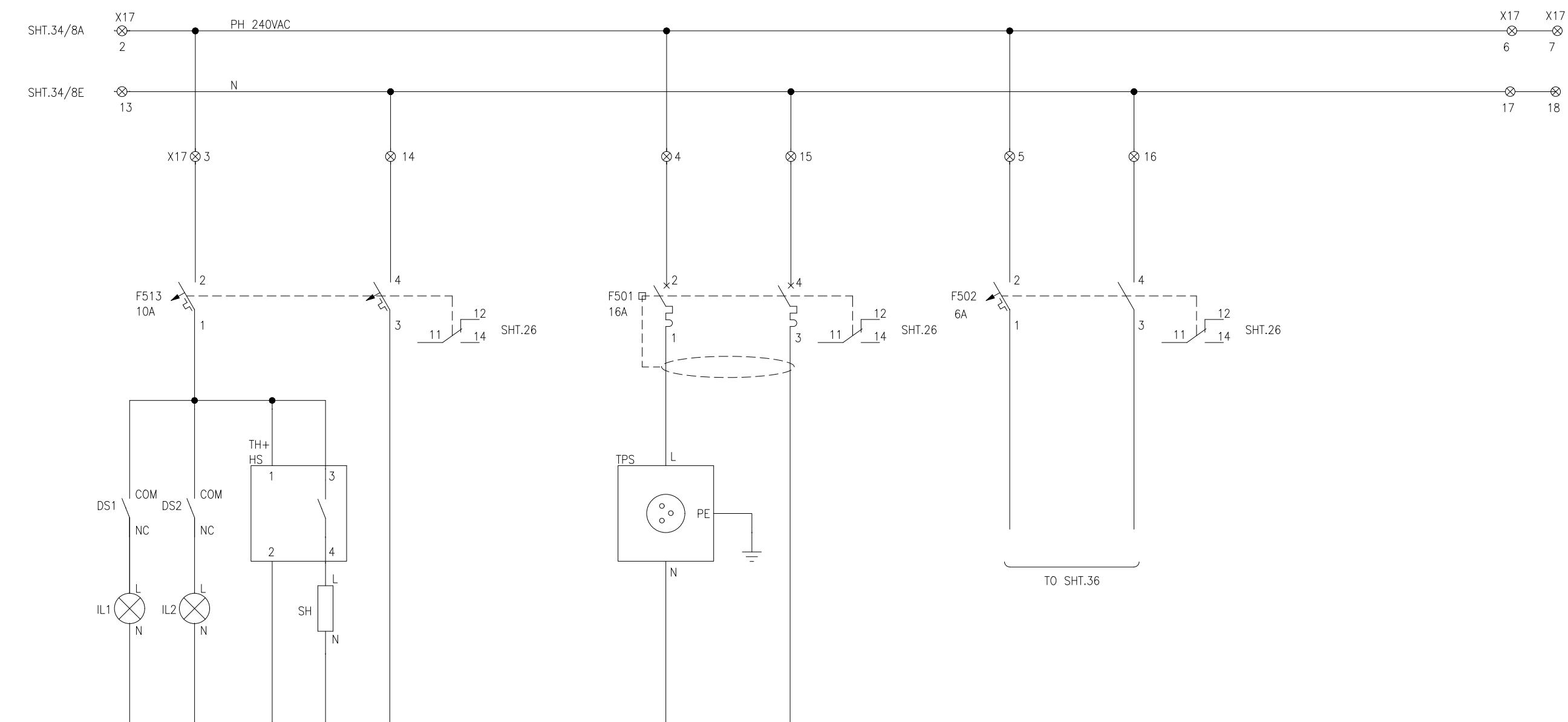
LEGEND

DES:	DESCRIPTION	TYPE	MAKE
F1XX	TWO POLE, AC MCB,s	G60	GE

APPROVED: NAH [Signature]  
CHECKED: MSS [Signature]  
DRAWN: MUR [Signature]

PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&amp;M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV &amp; 500KV RELAY&amp; CONTROL PANELS

TITLE:  
AC DISTRIBUTION CIRCUIT  
220KV LOCAL CONTROL CUBICAL TYPE =D08+S1E P E S O L P v t . L t d.  
71-B Garden Block, New Garden Town, Lahore, PakistanDWG# EPE/ENU-18/D81590 SHT: 34 OF 37  
DATE: 07.03.2019 AS BUILT REV: 0

LEGEND

DES.	DESCRIPTION	TYPE	MAKE
F1XX	TWO POLE AC MCB	G60	GE
F201	ELCB	DM100	GE
TPS	THREE PIN SOCKET	220V SOCKET	GE
SH	SPACE HEATER	ELH220	GE
TH+HS	THERMOSTAT	ELH220	GE
IL	CUBICLE LIGHT	YST8	YONGSUNG

APPROVED    CHECKED    DRAWN  
NAH [Signature]    MSS [Signature]    MUR [Signature]



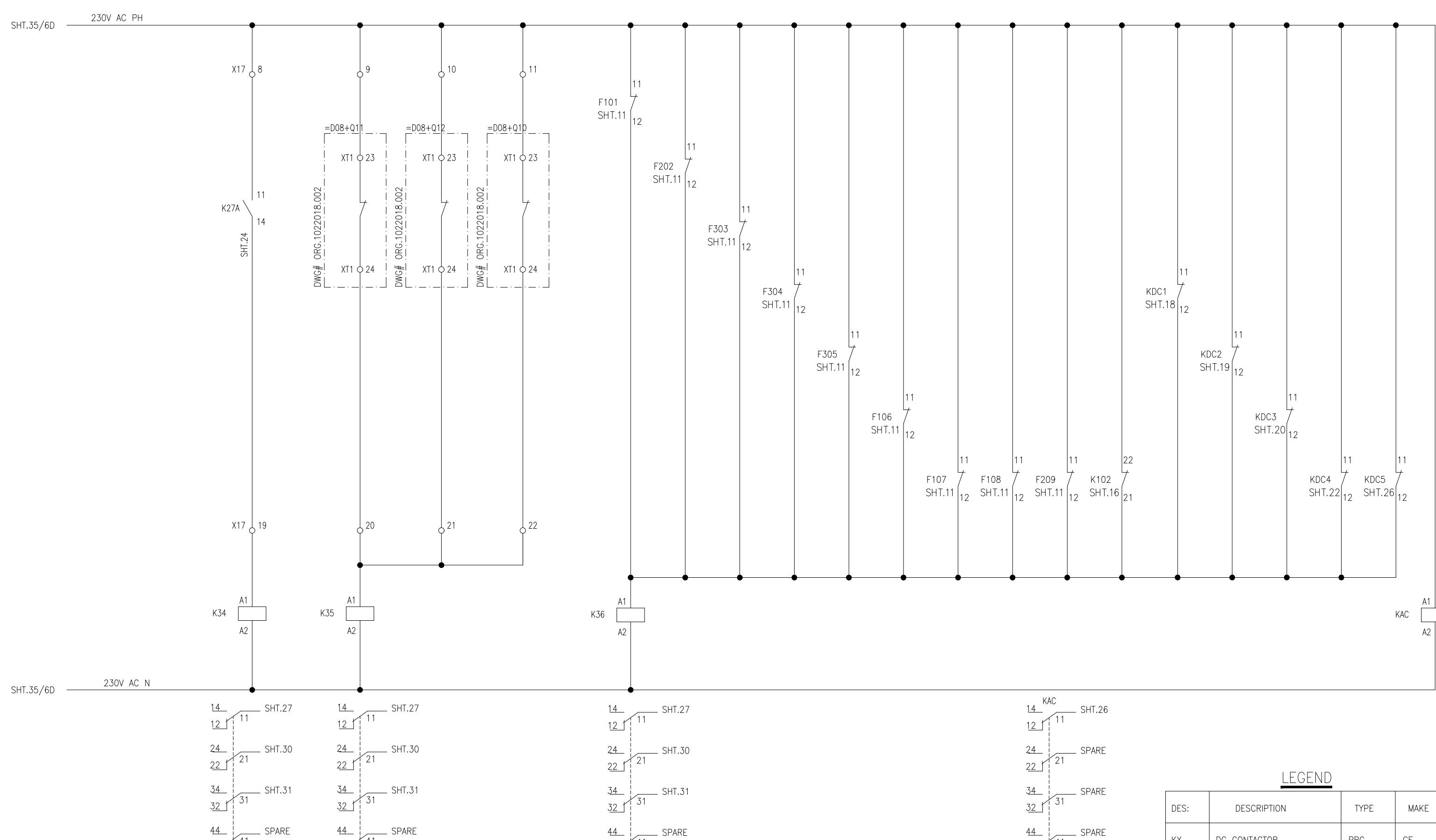
PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS

TITLE:  
AC DISTRIBUTION CIRCUIT  
220KV LOCAL CONTROL CUBICAL TYPE =D08+S1



**EPESOL Pvt. Ltd.**  
71-B Garden Block, New Garden Town, Lahore, Pakistan

DWG# EPE/ENU-18/D81590    SHT: 35 OF 37  
DATE: 07.03.2019    **AS BUILT**    REV: 0

CB MOTOR CIRCUIT  
MCB TRIPDS MOTOR SUPPLY  
MCB TRIPDC MCB  
TRIPLEGEND

DES:	DESCRIPTION	TYPE	MAKE
KX	DC CONTACTOR	PRC	GE

APPROVED	CHECKED	DRAWN
NAH	MSS	MUR



PROJECT: EDUCATIONAL ORDER NTDC PO# CE/MP&M /M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR THE PROCUREMENT OF 220KV & 500KV RELAY& CONTROL PANELS

TITLE:  
AC DISTRIBUTION CIRCUIT  
220KV LOCAL CONTROL CUBICAL TYPE =D08+S1

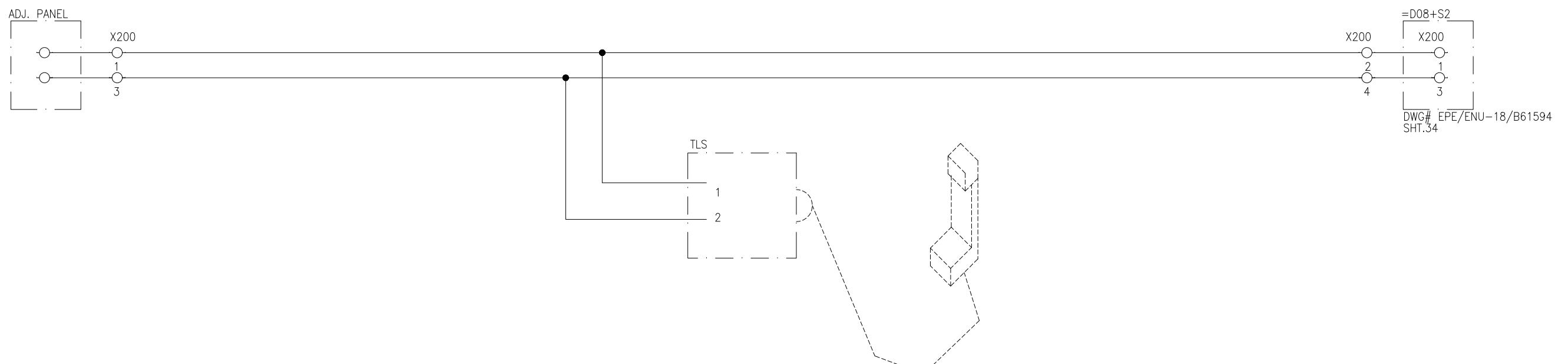


**E P E S O L P v t . L t d .**  
71-B Garden Block, New Garden Town, Lahore, Pakistan

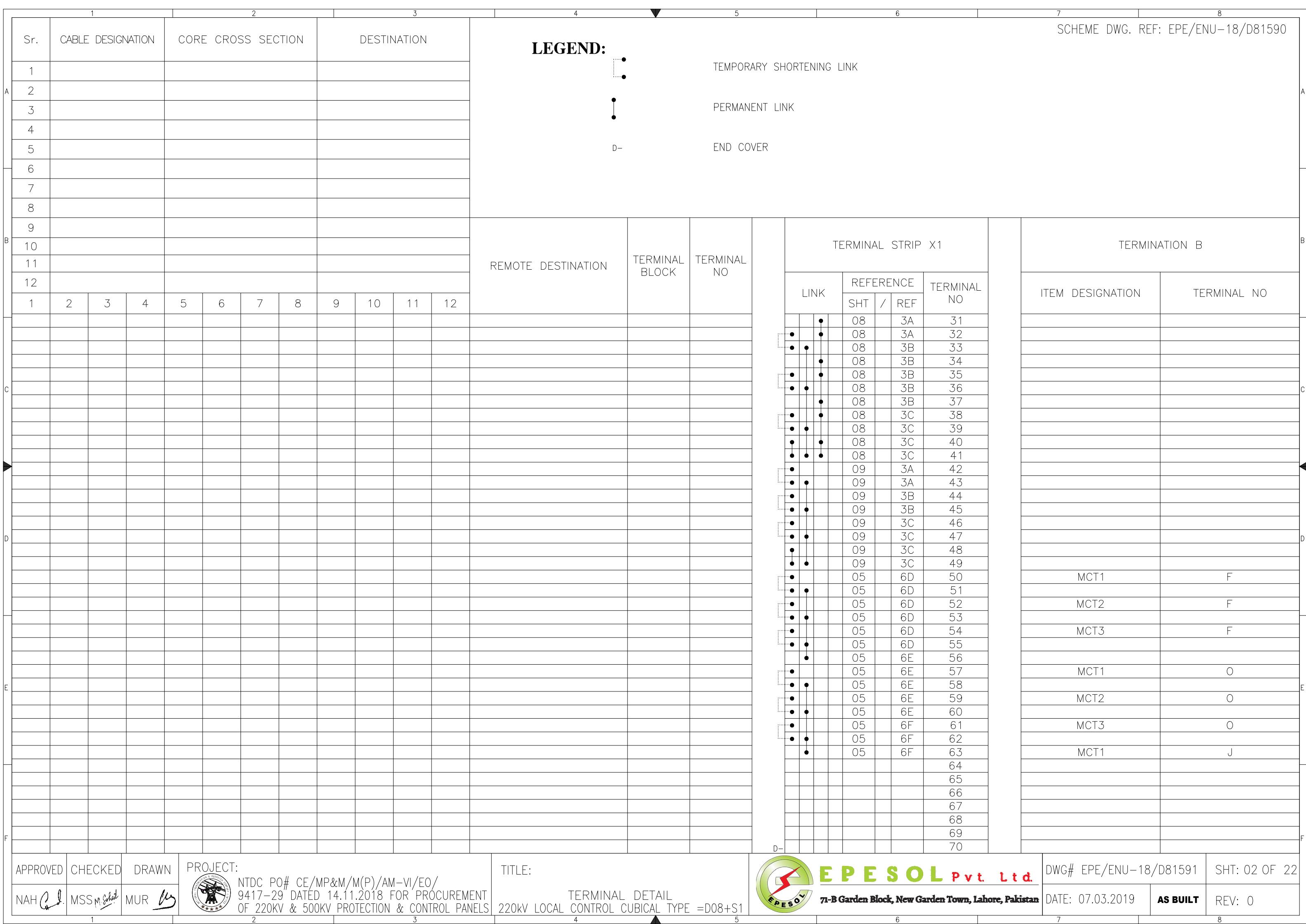
DWG# EPE/ENU-18/D81590 SHT: 36 OF 37  
DATE: 07.03.2019 AS BUILT REV: 0

TELEPHONE  
SOCKETLEGEND

DES.	DESCRIPTION	TYPE	MAKE
TLS	TELEPHONE SOCKET	LOCAL	LOCAL







Sr.	CABLE DESIGNATION		CORE CROSS SECTION		DESTINATION		LEGEND:				TERMINAL STRIP X2		TERMINATION B				
A	1						D-	TEMPORARY SHORTENING LINK									
B	2						D-	PERMANENT LINK									
C	3						D-	END COVER									
D	4						REMOTE DESTINATION	TERMINAL BLOCK	TERMINAL NO	TERMINAL STRIP X2			TERMINATION B				
E	5									LINK	REFERENCE		TERMINAL NO	ITEM DESIGNATION		TERMINAL NO	
F	6										SHT	/	REF				
G	7									D-	10	/	5D	1			
H	8										10	/	5D	2			
I	9										10	/	5E	3			
J	10										10	/	5E	4			
K	11										10	/	5E	5			
L	12										10	/	5E	6			
M	1	2	3	4	5	6	7	8	9	10	11	12					
N																	
O																	
P																	
Q																	
R																	
S																	
T																	
U																	
V																	
W																	
X																	
Y																	
Z																	

APPROVED: *[Signature]* CHECKED: *[Signature]* DRAWN: *[Signature]* PROJECT: NTDC PO# CE/MP&M/M(P)/AM-VI/E0/9417-29 DATED 14.11.2018 FOR PROCUREMENT OF 220KV & 500KV PROTECTION & CONTROL PANELS



TITLE:

TERMINAL DETAIL  
220KV LOCAL CONTROL CUBICAL TYPE =D08+S1



**EPESOL Pvt. Ltd.**  
71-B Garden Block, New Garden Town, Lahore, Pakistan

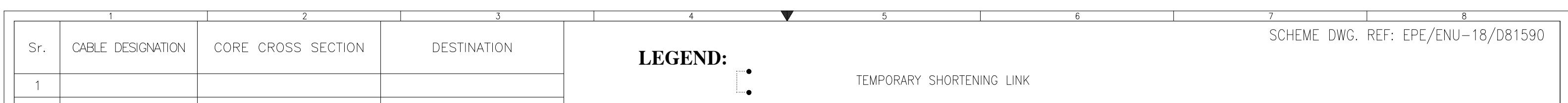
DWG# EPE/ENU-18/D81591

SHT: 03 OF 22

DATE: 07.03.2019

AS BUILT

REV: 0



### LEGEND:



TEMPORARY SHORTENING LINK



PERMANENT LINK

D-

END COVER

REMOTE DESTINATION

TERMINAL BLOCK

TERMINAL NO

### TERMINAL STRIP X101

LINK	REFERENCE		TERMINAL NO
	SHT	/	

•	11	/	1B	1
•	11	/	2C	2
•	11	/	6C	3
•	11	/	7C	4
•	11	/	1B	5
•	11	/	2C	6
•	11	/	7C	7
•	11	/	7C	8
•	11	/	1B	9
•	11	/	3C	10
•	11	/	6C	11
•	11	/	8C	12
•	11	/	1B	13
•	11	/	3C	14
•	11	/	6C	15
•	11	/	8C	16
•	11	/	1B	17
•	11	/	3C	18
•	11	/	4C	19
•	11	/	5C	20
•	11	/	1B	21
•	11	/	3C	22
•	11	/	4C	23
•	11	/	5C	24
				25
				26
				27
				28
				29
D-				30

SCHEME DWG. REF: EPE/ENU-18/D81590

### TERMINATION B

ITEM DESIGNATION	TERMINAL NO
F101	1
F107	1
F108	1
F101	3
F107	3
F108	3
F202	1
F206	1
F209	1
F202	3
F206	3
F209	3
F303	1
F304	1
F305	1
F303	3
F304	3
F305	3







Sr.	CABLE DESIGNATION	CORE CROSS SECTION	DESTINATION	
A	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
B	9			
	10			
	11			
	12			
	1	2	3	4
				5
				6
				7
				8
				9
				10
				11
				12
C				
D				
E				
F				

**LEGEND:**

	TEMPORARY SHORTENING LINK
	PERMANENT LINK
	END COVER

REMOTE DESTINATION	TERMINAL BLOCK	TERMINAL NO	TERMINAL STRIP X6			TERMINATION B	
			LINK	REFERENCE			TERMINAL NO
				SHT	/		
	14	/	3A	1			
	14	/	3B	2			
	14	/	2C	3			
	14	/	3C	4			
	14	/	3D	5			
	14	/	7B	6			
	14	/	3B	7			
	14	/	4C	8			
	14	/	4C	9			
	14	/	7B	10			
	14	/	3B	11			
	14	/	5D	12			
	14	/	5D	13			
	14	/	7C	14			
	14	/	7C	15			
	14	/	3D	16			
	14	/	8C	17			
	14	/	4D	18			
	14	/	8C	19			
	14	/	6D	20			
	14	/	7C	21			
				22			
				23			
				24			
				25			

ITEM DESIGNATION	TERMINAL NO
EM01	2
EM01	4
EM01	6

APPROVED	CHECKED	DRAWN	PRO
NAH <i>f</i>	MSS <i>N School</i>	MUR <i>ky</i>	



PROJECT: NTDC PO# CE/MP&M/M(P)/AM-VI/E0/  
9417-29 DATED 14.11.2018 FOR PROCUREMENT  
OF 220KV & 500KV PROTECTION & CONTROL PANEL

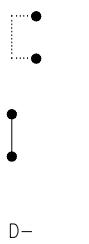
	TITLE:	TERMINAL DETAIL	
NT	CLS	2001V LOCAL CONTROL SURGICAL TYPE	D02 + C1



# **E P E S O L Pvt. Ltd.**

DWG# EPE/ENU-18/D81591	SHT: 08 OF 22
DATE: 07.03.2019	<b>AS BUILT</b>
	REV: 0



**LEGEND:**

TEMPORARY SHORTENING LINK  
PERMANENT LINK  
END COVER

REMOTE DESTINATION

TERMINAL BLOCK

TERMINAL NO

TERMINAL STRIP X32

**LINK**

SHT	/	REFERENCE	TERMINAL NO
-----	---	-----------	-------------

16	/	2B	1
16	/	4B	2
16	/	6B	3
16	/	2E	4
16	/	4E	5
16	/	6E	6
			7
			8

TERMINATION B

**ITEM DESIGNATION**     **TERMINAL NO**

K100	13
K100	43
K100	53
K101	14
K101	44
K101	54



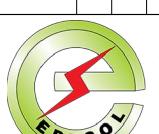










Sr.	CABLE DESIGNATION		CORE CROSS SECTION		DESTINATION														SCHEME DWG. REF: EPE/ENU-18/D81590	
A	1																			
A	2																			
A	3																			
A	4																			
A	5																			
A	6																			
B	7																			
B	8																			
B	9																			
B	10																			
B	11																			
B	12																			
c	1	2	3	4	5	6	7	8	9	10	11	12								
D																				
E																				
F																				
PROJECT:				NTDC PO# CE/MP&M/M(P)/AM-VI/E0/ 9417-29 DATED 14.11.2018 FOR PROCUREMENT OF 220KV & 500KV PROTECTION & CONTROL PANELS				TITLE: TERMINAL DETAIL 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1				 EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan				DWG# EPE/ENU-18/D81591		SHT: 17 OF 22		
APPROVED		CHECKED	DRAWN													DATE: 07.03.2019		AS BUILT	REV: 0	
NAH Q.		MSS M. Sohail	MUR Iy																	

Sr.	CABLE DESIGNATION			CORE CROSS SECTION			DESTINATION															SCHEME DWG. REF: EPE/ENU-18/D81590			
A	1	2	3	4	5	6	7	8	9	10	11	12													A
B	9	10	11	12	1	2	3	4	5	6	7	8													B
C	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	C		
D	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	32	32	32	D		
E	1D	2D	3D	4D	5D	6D	7D	8D	9D	10D	11D	12D	13D	14D	15D	16D	17D	18D	19D	20D	21D	22D	E		
F	1	2	3	4	5	6	7	8	9	10	11	12													F
PROJECT:				NTDC PO# CE/MP&M/M(P)/AM-VI/E0/ 9417-29 DATED 14.11.2018 FOR PROCUREMENT OF 220KV & 500KV PROTECTION & CONTROL PANELS			TITLE: TERMINAL DETAIL 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1															DWG# EPE/ENU-18/D81591	SHT: 18 OF 22		
APPROVED	CHECKED	DRAWN	MUR	 EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan			TITLE: TERMINAL DETAIL 220KV LOCAL CONTROL CUBICAL TYPE =D08+S1															DATE: 07.03.2019	AS BUILT	REV: 0	
NAH	MSS	MUR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		





**PROJECT:** NTDC PO# CE/MP&M/M(P)/AM-VI/EO/  
9417-29 DATED 14.11.2018 FOR PROCUREMENT  
OF 220KV & 500KV PROTECTION & CONTROL PANEL

TITLE: TERMINAL DETAIL  
IT 220KV LOCAL CONTROL CUBICAL TYPE -D08 LS1



# **E P E S O L Pvt. Ltd.**

DWG# EPE/ENU-18/D81591 SHT: 20 OF 22  
 DATE: 07.03.2019 AS BUILT REV: 0

Sr.	CABLE DESIGNATION				CORE CROSS SECTION			DESTINATION				
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
1	2	3	4	5	6	7	8	9	10	11	12	

**LEGEND:**

TEMPORARY SHORTENING LINK



PERMANENT LINK



END COVER

REMOTE DESTINATION				TERMINAL BLOCK	TERMINAL NO	TERMINAL STRIP X17		
LINK	REFERENCE		TERMINAL NO			TERMINATION B		
	SHT	/						
•	34	/	1A	1				
•	35	/	2A	2				
•	35	/	2B	3				
•	35	/	4B	4				
•	35	/	6B	5				
•	35	/	8A	6				
•	35	/	8A	7				
•	36	/	2A	8				
•	36	/	2A	9				
•	36	/	3A	10				
•	36	/	3A	11				
•	34	/	1E	12				
•	35	/	2B	13				
•	35	/	3B	14				
•	35	/	5B	15				
•	35	/	6B	16				
•	35	/	8B	17				
•	35	/	8B	18				
•	36	/	2D	19				
•	36	/	3D	20				
•	36	/	3D	21				
•	36	/	3D	22				
				23				
				24				
				25				
				26				
				27				
				28				
				29				
				30				



