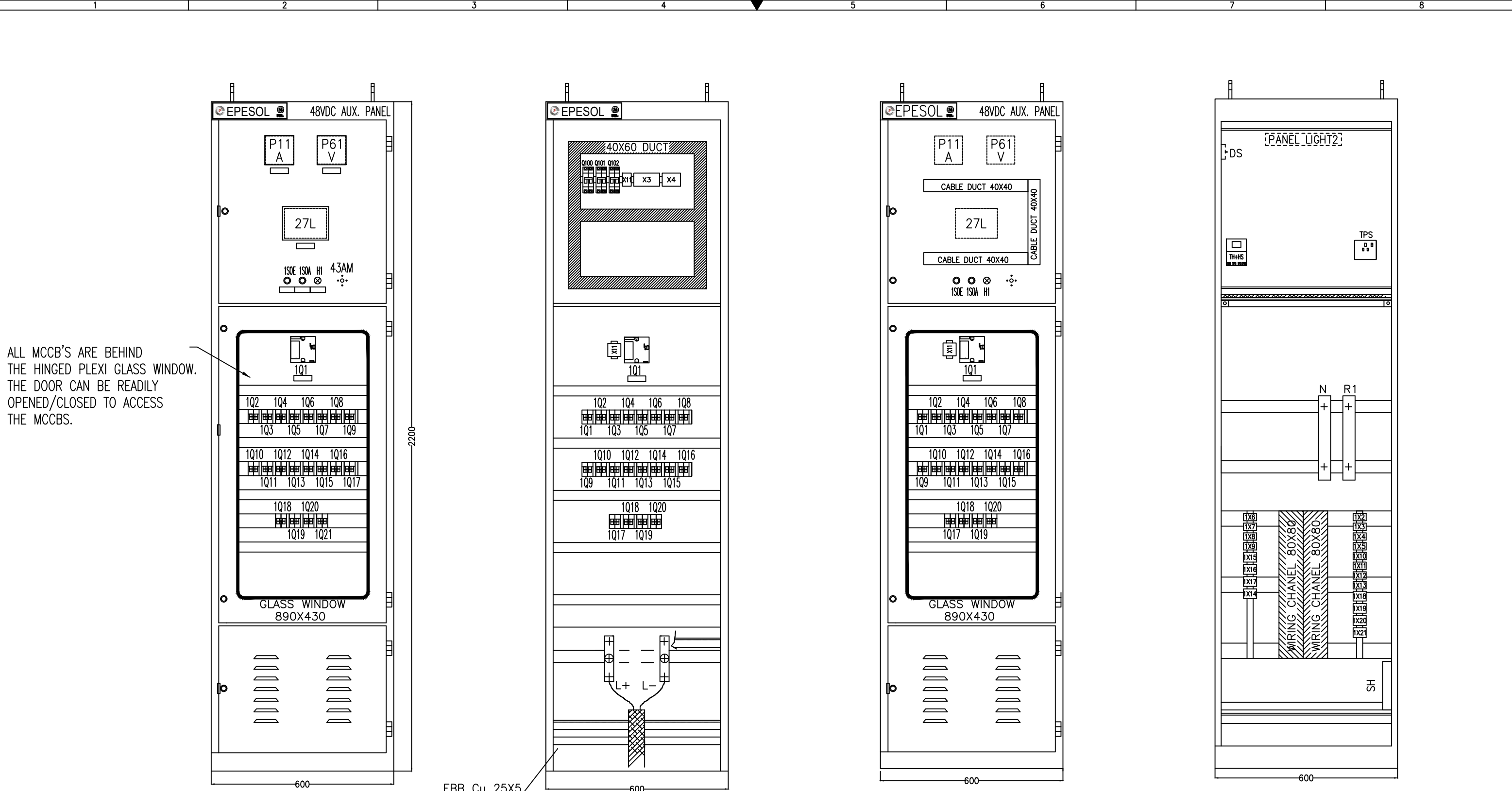


LAYOUT DRAWING OF
48V DC AUXILIARY SUPPLY
DISTRIBUTION BOARD

APPROVED	CHECKED	DRAWN	PROJECT: PO. NO. 6019415518 DATED 16.04.2018 220/132kV CONTROL, PROTECTION & ACDC PANEL GHAZI ROAD PROJECT	TITLE: COVER SHEET 48VDC DISTRIBUTION BOARD	 EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/P1467		SHT: 01 OF 03
NAH	ABW	ASJ				DATE:21.12.2018	AS BUILT	REV: 0



ALL MCCB'S ARE BEHIND THE HINGED PLEXI GLASS WINDOW. THE DOOR CAN BE READILY OPENED/CLOSED TO ACCESS THE MCCBS.

FRONT VIEW WITH DOOR

FRONT VIEW WITHOUT DOOR

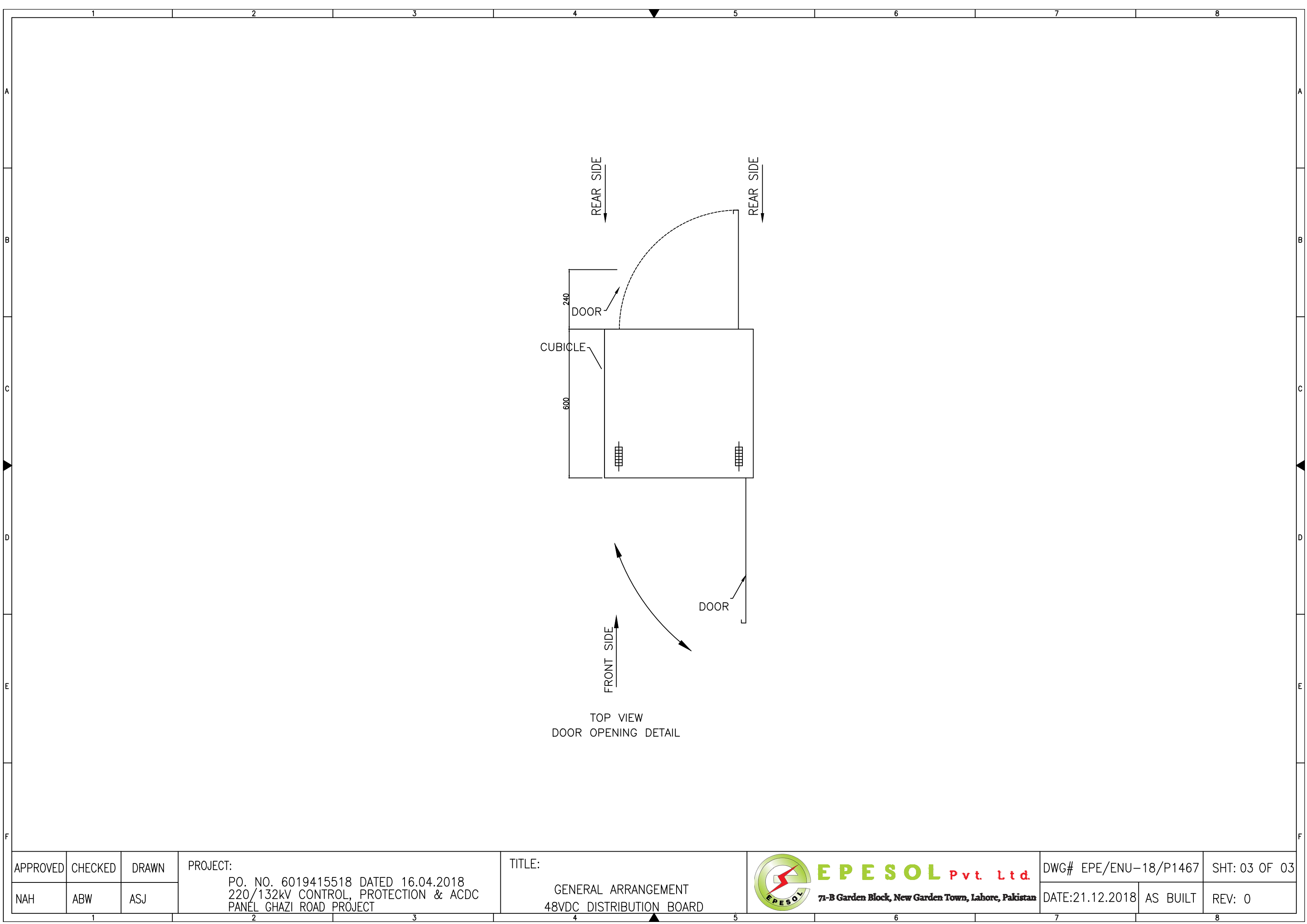
FRONT VIEW WITH DOOR


REAR VIEW WITHOUT DOOR

NOTES

1. COLOR: RAL7032
2. CLASS OF PROTECTION: IP51
3. CONTROL PANEL: 600x600x2200 mm (WIDTHxDEPTHxHEIGHT)
4. EARTHING BUSBAR 25x5 mm²
5. FLEXIBLE EARTHING STRIP 16mm²

APPROVED	CHECKED	DRAWN	PROJECT:	TITLE:	 EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/P1467	SHT: 02 OF 03
NAH	ABW	ASJ	PO. NO. 6019415518 DATED 16.04.2018 220/132kV CONTROL, PROTECTION & ACDC PANEL GHAZI ROAD PROJECT	GENERAL ARRANGEMENT 48VDC DISTRIBUTION BOARD		DATE:21.12.2018	AS BUILT



APPROVED	CHECKED	DRAWN	PROJECT: PO. NO. 6019415518 DATED 16.04.2018 220/132kV CONTROL, PROTECTION & ACDC PANEL GHAZI ROAD PROJECT	TITLE: GENERAL ARRANGEMENT 48VDC DISTRIBUTION BOARD	 EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/P1467		SHT: 03 OF 03
NAH	ABW	ASJ				DATE:21.12.2018	AS BUILT	REV: 0

LIST OF APPARATUS

48V DC AUXILIARY SUPPLY







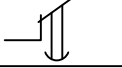
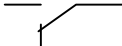



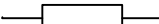

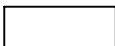




DISTRIBUTION BOARD



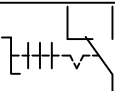

APPROVED	CHECKED	DRAWN	PROJECT: PO. NO. 6019415518 DATED 16.04.2018 220/132kV CONTROL, PROTECTION & ACDC PANEL GHAZI ROAD PROJECT	TITLE: COVER SHEET 48VDC DISTRIBUTION BOARD	 EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/P1468		SHT: 01 OF 02
NAH	ABW	ASJ				DATE:21.12.2018	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	1	1Q1	TRIPLE POLE MCCB RATED CURRENT 80–100 Amp, Icu = 50 KAmP WITH 1NO+1NC AUXILIARY CONTACTS, ONE NORMALLY CLOSED TRIP CONTACT AND ELECTRICAL OPERATOR UNIT				1	FD160	GE	HUNGARY	FDC35TE100GD(1)+FABAT10(1)+FAS10R(1)+FAS01L(1)+FDEMFF(1)			A	
	2	1Q2~1Q21	DC MCB DOUBLE POLE RATED 10Amp, 10KA WITH ONE C/O CONTACT				20	EP–100	GE	HUNGARY	EP102UCC10+CAH(1)				
B	3	Q101, Q102	DC MCB's SINGLE POLE 10Amp., 10KA				2	G60	GE	HUNGARY	G61C06+CAH(1)			B	
	4	Q100	AC MCB's DOUBLE POLE RATED 10Amp, WITH ONE CHANGE OVER CONTACT, 10KA				1	G60	GE	HUNGARY	G62C10+CAH(1)				
C	5	P11	DC AMPERE METER 0–120Amp 96X96 FOR 60 mV SHUNT ACCURACY CLASS 1.5				1	1F96MA	FRER	ITALY				C	
	6	P61	DC VOLT METER SCALE 0–100 VOLT DC ACCURACY CLASS 1.5				1	1F96MV	FRER	ITALY					
D	7	27L	DC UNDER VOLTAGE RELAY 48 VOLTAGE				1	ELUV–XX	ELABS	PAKISTAN				D	
	8	1SOE, 1SOA	PUSH BUTTON FOR INCOMER BREAKER ON–OFF WITH TWO CONTACTS EACH				2	YSAP1	YOUNGSUNG	SOUTH KOREA	YS–AP1–2–40–B–DW				
E	9	K21	CONTACTOR RATED 230 VOLT AC WITH 2NO+2NC CONTACTS				1	MCR	GE	HUNGARY	MCRA022ATN			E	
	10	H1	INDICATING LAMPS COLOR RED FOR CB ON POSITION INDICATION RATING 2WATTS AT 48 VOLT DC				1	–	GGT/EQU.	ITALY					
F	11	R1	SHUNT, 60mV, 100Amp				1		FRER	ITALY				F	
	12	1X2 TO 1X21	TERMINAL BLOCKS SUITABLE FOR 16mm ² CABLE (2Nos. FOR EACH TYPE)				40	CBD–16	CABUR	ITALY					
G	13	1X1	TERMINATION PADS (40X5mm Cu) FOR INCOMING CABLES				4							G	
	14	X3	TERMINAL BLOCKS FOR AC CIRCUIT				4	CBD–4	CABUR	ITALY					
H	15	X11	TERMINAL BLOCKS FOR CONTROL CIRCUIT				8	CBD–4	CABUR	ITALY				H	
	16	DS	DOOR SWITCH				1	YSP–YSMS	YOUNGSUNG	SOUTH KOREA	YSP3315GW–B+YSMS–C				
I	17	IL	CUBICLE LIGHTING, 5W, 230 VOLT AC				1	YST8	YOUNGSUNG	SOUTH KOREA	YST8–30–5W			I	
	18	TPS	THREE PIN SOCKET 240 VAC, 16Amp				1		LEAR	CHINA					
J	19	TH+HS	THERMOSTAT AND HUMIDSTAT				1	ELH–220	E–LABS	PAKISTAN				J	
	20	SH	SPACE HEATER (60W)				1	ELH–220	E–LABS	PAKISTAN					
K	21	43AM	THREE POSITIN AUTO–OFF–MANUAL SELECTOR SWITCH WITH 3C/O CONTACTS				1	GGT	GGT	ITLAY				K	
APPROVED	CHECKED	DRAWN	PROJECT:				TITLE:				DWG# EPE/ENU–18/P1468		SHT: 02 OF 02		
NAH	ABW	ASJ	PO. NO. 6019415518 DATED 16.04.2018 220/132kV CONTROL, PROTECTION & ACDC PANEL GHAZI ROAD PROJECT				LIST OF APPARATUS 48VDC DISTRIBUTION BOARD				DATE:21.12.2018		AS BUILT	REV: 0	
1		2		3		4		5		6		7		8	

SCHEMATIC DIAGRAMS
48V DC AUXILIARY SUPPLY
DISTRIBUTION BOARD

APPROVED	CHECKED	DRAWN	PROJECT: PO. NO. 6019415518 DATED 16.04.2018 220/132kV CONTROL, PROTECTION & ACDC PANEL GHAZI ROAD PROJECT	TITLE: COVER SHEET 48VDC DISTRIBUTION BOARD	 EPESOL Pvt. Ltd. 71-B Garden Block, New Garden Town, Lahore, Pakistan	DWG# EPE/ENU-18/P1469		SHT: 01 OF 11
NAH	ABW	ASJ				DATE:21.12.2018	AS BUILT	REV: 0

LIST OF SYMBOLS	
	RELAY PANEL TERMINAL BLOCK
	CONTROL PANEL TERMINAL BLOCK
	EARTH CONNECTION
	NORMALLY CLOSED CONTACT
	NORMALLY OPEN CONTACT
	CONTACT FOR TRIPPING
	TIME DELAY PICKUP
	CHANGE OVER CONTACT
	MCB/MCCB
	INDICATION BULB/LED
	THREE PIN SOCKET
	SPACE HEATER
	COIL
	EQUIPMENT WITHIN PANEL
	INDEPENDENT PANEL
	INDEPENDENT PANEL
	RESISTOR
	FUSE

LIST OF SYMBOLS	
	TIME DELAYED CONTACTOR/TIMER
	PUSH BUTTON
	TWO POSITION SWITCH
	AC BELL

