

LEGENDS

S.No.	SYMBOL	DESCRIPTION	S.No.	SYMBOL	DESCRIPTION	S.No.	SYMBOL	DESCRIPTION
1		CHANGE OVER SWITCH	15		AUX. CONTACTOR	29		NO CONTACT
2		SWITCH DISCONNECTOR FUSE UNIT	16		TIMER	30		NC CONTACT
3		CONTROL HRC/FUSE BASE	17		POWER FUSE	31		MOULDED CASE CIRCUIT BREAKER
4		FIXED TYPE AIR CIRCUIT BREAKER	18		HOOTER	32		MOTOR PROTECTION CIRCUIT BREAKER
5		MANUALLY OPERATED DRAW OUT TYPE AIR CIRCUIT BREAKER	19		ELECTRICALLY OPERATED DRAW OUT TYPE AIR CIRCUIT BREAKER			
6		SWITCH FUSE UNIT	20		TRANSFORMER	33		BREAKER RELEASE
7		OVER LOAD RELAY	21		GENERATOR	34		MINIATURE CIRCUIT BREAKER
8		OVER LOAD RELAY NC CONTACT	22		ELECTRONIC KWH METER	35		CAPACITOR BANK
9		CURRENT TRANSFORMER RESIN CAST	23		INDICATING LIGHT	36		BREAKER CONTROL SWITCH
10		POTENTIAL TRANSFORMER	24		PUSH BUTTON	37		ILUMINATED PUSH BUTTON
11		START PUSH BUTTON	25		TERMINALS	38		EARTH LEAKAGE CIRCUIT BREAKER
12		STOP PUSH BUTTON	26		AMMETER/VOLTMETER WITH INBUILT SELECTOR SWITCH	39		AMMETER SELECTOR SWITCH/ VOLTMETER SELECTOR SWITCH
13		NEUTRAL LINK	27		OVER VOLTAGE OR UNDER VOLATEGE RELAY	40		AUTO/MANUAL SELECTOR SWITCH/ PLC/MANUAL SELECTOR SWITCH
14		POWER CONTACTOR	28		EARTHING	41		ENEREGY MANAGEMENT SYSTEM

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PANEL SIZE	HEIGHT -	LENGTH -	DEPTH -
CABLE ENTRY	TOP	BOTTOM	
PAINT SHADE	SIEMENS GRAY 7035	DOORS/COVERS & MAIN FRAME	
PAINT SHADE	G.I.	MOUNTING PLATE	
PAINT SHADE	BLACK RAL 9001	BASE FRAME	



DRAWN BY	MANISH	TITLE	LEGENDS	
CHECKED	F. HUSAIN	CLIENT	TELEPERFORMANCE	SCALE
APPROVED		PROJECT	CANDOR , NOIDA	N.T.S.
DRG. NO.	AAA/LEG./01	CONSULTANT	91 SQUARE FEET	REVISION
DATE	22-01-2025	ARCHITECT	*****	JOB No.
		CONTRACTOR	INFINITY ENGINEERS PVT LTD	AAA/TPF/3345
				SHEET No.
				1 OF 1

DO NOT SCALE

**CPRI APPROVED & AN ISO 9001 : 2015 CERTIFIED**

IF IN DOUBT -- PLEASE ASK

**GENERAL NOTES :-**

**1. POWER SUPPLY CONDITIONS.**

- SYSTEM VOLTAGE - 415V±10% 3Φ, 4W, 50 Hz ±5%
- CONTROL VOLTAGE - 240V AC
- FAULT LEVEL - 65/50/36/25/10KA FOR 1 SEC. (AS PER SLD)

**2. PANEL DESIGN/ CONSTRUCTION DETAILS.**

- DESIGN † NON-DRAWOUT
- MOUNTING † FLOOR MOUNTED / WALL MOUNTED
- CONSTRUCTION - MODULAR
- DEGREE OF PROTECTION - IP-54/IP-42 FOR INDOOR  
IP-55/56 FOR OUTDOOR
- OPERATION - SINGLE FRONT
- INSTALLATION - INDOOR / OUTDOOR
- CABLE ENTRY - TOP / BOTTOM
- MINIMUM OPERATING HEIGHT - 250 mm
- MAXIMUM OPERATING HEIGHT - 1850 mm
- SEALING ARRANGEMENT - PDM/PE FORM RUBBER GASKET TO BE USED TO MAKE THE PANEL DUST AND VERMIN PROOF

**3. PAINTING**

- PRETREATMENT - 9 TANK PRETREATMENT PLANT
- PAINT THICKNESS - 60-80 MICRON DFT
- PAINT TYPE FOR INDOOR PANELS - POWDER COATING PPE
- PAINT TYPE FOR OUTDOOR PANELS - POWDER COATING PPE

**PAINT SHADE**

- ALL CRCA FABRICATED PARTS - RAL-7035
- BASE FRAME - RAL-9005

**4. LOCKING ARRANGEMENT**

- FEEDER FRONT DOORS - METTALIC LOCKS OPENABLE WITH KEY
- BUS BAR CHAMBER/ DOORS - ONE SIDE HINGED OTHER SIDE BOLTED

**5. FABRICATION DETAILS.**

- FABRICATION MATERIAL † CRCA POWDER COATED/ GPSP.
- BASE FRAME MATERIAL † C - CHANNEL FOR PMCC/ 3MM CRCA FOR MCC
- SHEET THICKNESS & DETAILS**
- a) FRAME - 2 mm CRCA POWDER COATED
- b) EQUIPMENT MOUNTING PLATE - 2 mm CRCA POWDER COATED/ GPSP
- c) TOP / BOTTOM COVER SHEET - 1.6 mm CRCA POWDER COATED
- d) PARTITION/NON LOAD BEARING MEMEBR - 1.6 mm POWDER COATED/ GPSP
- e) ANY OTHER LOAD BEARING MEMEBR - 2 mm POWDER COATED/GPSP
- f) SHROUDING - 1.2 mm POWDER COATED/GPSP  
1.6/2 mm POLYCARBONATE SHEET
- g) FRONT DOOR - 1.6 mm POWDER COATED
- h) REAR COVER - 1.6 mm POWDER COATED
- i) REMOVABLE GLAND PLATE - 2 mm GPSP/ MULTI CORE CABLE FOR PDB'S  
3 mm GI FOR MULTI CORE CABLE FOR MAIN PANELS  
3 mm AL. FOR SINGLE CORE CABLE

**ABOUT GPSP SHEET :**

THIS IS HIGHLY CORROSION RESISTIVE WHICH DOES NOT NEED PAINTING, 20% MORE STRENGTH COMPARED TO CRCA, FIRE RESISTANCE , ENVIRONMENTAL FRIENDLY AS CAN BE RECYCLED.

**6. BUS BAR DETAILS**

- MATERIAL † ALUMINIUM / COPPER AS PER SLD
- BUS BAR INSULATION † HEAT SHRINKABLE RED, YELLOW, BLUE AND BLACK COLOUR SLEEVE FOR R-PH, Y-PH, B-PH & NUTRAL RESPECTIVELY
- BUS BAR SUPPORTS - NON-HYGROSCOPIC, NON CARBONISING, CORROSION RESISTANT, SMC/ POLYAMIDE SUPPORTS
- MAX. TEMP. RISE OF BUS BARS - 40°C ABOVE AMBIENT OF 45°C

**AIR CLEARANCES FOR MAIN BUS BARS**

- PHASE TO PHASE - 25 mm (MIN.)
- PHASE TO NEUTRAL - 25 mm (MIN.)
- PHASE TO EARTH - 20 mm (MIN.)
- NEUTRAL TO EARTH - 20 mm (MIN.)

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PANEL SIZE				HEIGHT -		LENGTH -		DEPTH -		DRAWN BY		CLIENT		GENERAL NOTES		SCALE		N.T.S.	
CABLE ENTRY				TOP		BOTTOM				MANISH		TELEPERFORMANCE							
PAINT SHADE				SIEMENS GRAY 7035		DOORS/COVERS & MAIN FRAME				F. HUSAIN		PROJECT		CANDOR , NOIDA		REVISION			
PAINT SHADE				G.I.		MOUNTING PLATE						CONSULTANT		91 SQUARE FEET					
PAINT SHADE				BLACK RAL 9001		BASE FRAME				AAA/G.N1/01		ARCHITECT				JOB No.		AAA/TPF/3345	
										DATE		CONTRACTOR		INFINITY ENGINEERS PVT LTD		SHEET No.		1 OF 2	



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**7. DOOR EARTHING**

**8. PANEL WIRING -**

- AC VOLTAGE CIRCUIT
- CURRENT CIRCUIT
- AC CONTROL CIRCUIT
- DC CONTROL CIRCUIT
- POWER CIRCUIT
- FERRULING

FOR BMS

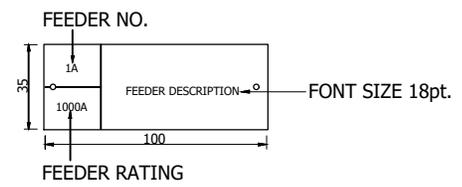
**9. WIRE**

- INSULATION TYPE
- MAKE

**10. LABELLING**

**11. FEEDER DESCRIPTION PLATE DETAILS**

PLATE SHALL BE MOUNTED ON BOTTOM MOST LEFT SIDE OF THE FEEDER DOOR. ALSO AT REAR SIDE OF THE PANEL WHERE REAR ACCES IS REQUIRED FOR OPERATION.



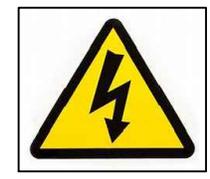
**12. TITLE NAME PLATE DETAIL FOR FLOOR MOUNTED PANEL**



- 2.5 Sq. mm GREEN WIRE
- 1.5 Sq. mm RED, YELLOW, BLUE, & BLACK
- 2.5 Sq. mm RED, YELLOW, BLUE, & GREEN
- 1.5 Sq. mm BLACK
- 1.5 Sq. mm GREY
- MIN. 2.5 Sq. mm BLACK WITH COLOUR CODING
- COMPUTERIZED TUBE FERRULES WITH BLACK LETTERS ON WHITE BACKGROUND.
- 0.75 Sq. mm SHIELDED CABLE
- FRLS
- POLYCAB
- ANODISED ALUMINIUM PLATE, WHITE LETTERS ON BLACK BACKGROUND FOR EACH FEEDER AND PANEL ITSELF

**13. DANGER STICKER DETAIL**

STICKER SHALL BE MOUNTED ON EACH BUSBAR CHAMBER DOOR AND LIVE PART INSIDE THE PANEL.



**14. POWER AND CONTROL TERMINAL SHALL BE SEGREGATED FROM EACH OTHER.**

**15. ITEM LAYOUT SHOWN AT DOORS ARE FOR REFERENCE ONLY. ACTUAL MAY DIFFER.**

- 16. QR CODE SHALL BE PLACED ON FIRST VERTICAL OF PANEL TO ACCES PDF COPY OF FOLLOWING DOCUMENTS:**
- a) FINAL AS BUILT DRAWINGS.
  - b) PANEL TEST CERTIFICATE.
  - c) COMPONENT TEST CERTIFICATE

**17. TESTING**

- FOLLOWING TEST SHALL BE CARRIED OUT ON COMPLETION OF PANEL :
  - (a) INSULATION RESISTANCE TEST
  - (b) HIGH VOLTAGE TEST
  - (c) OPERATIONAL TEST
  - (d) FUNCTIONAL TEST

PANEL SIZE	HEIGHT -	LENGTH -	DEPTH -
CABLE ENTRY	TOP	BOTTOM	
PAINT SHADE	SIEMENS GRAY 7035	DOORS/COVERS & MAIN FRAME	
PAINT SHADE	G.I.	MOUNTING PLATE	
PAINT SHADE	BLACK RAL 9001	BASE FRAME	



		TITLE	GENERAL NOTES		
DRAWN BY	MANISH	CLIENT	TELEPERFORMANCE	SCALE	N.T.S.
CHECKED	F. HUSAIN	PROJECT	CANDOR , NOIDA	REVISION	
APPROVED		CONSULTANT	91 SQUARE FEET		
DRG. NO.	AAA/G.N2/02	ARCHITECT	*****	JOB No.	AAA/TPF/3345
DATE	22-01-2025	CONTRACTOR	INFINITY ENGINEERS PVT LTD	SHEET No.	2 OF 2

### BUS BAR DESCRIPTION FOR MCCB LINK

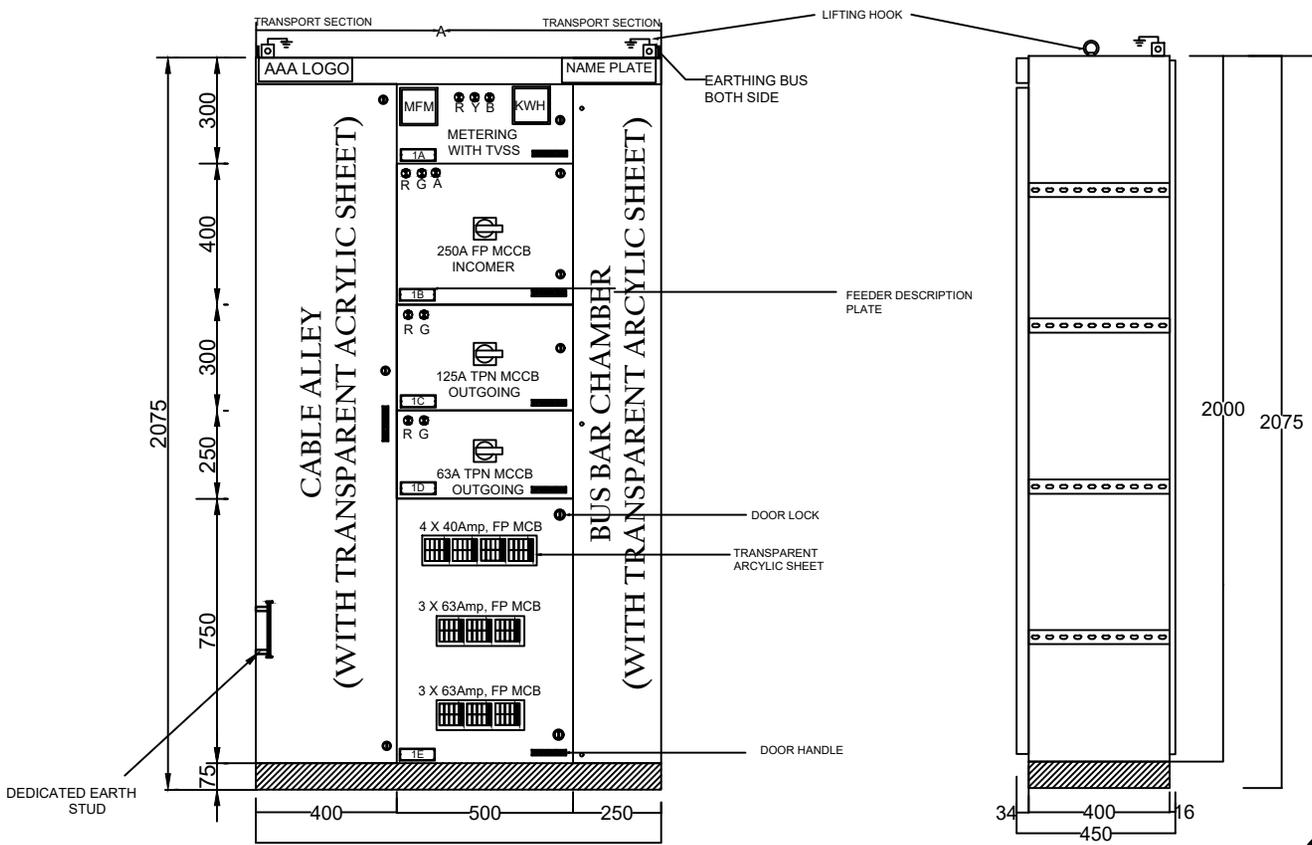
MCCB BUS - BAR SIZE FOR LINK INCOMER & OUTGOING		
S.NO	MCCB AMP RATING	ALUMINIUM BUS BAR SIZE FOR PHASE
1	63AMP MCCB	UNINYVIN / PVC FLEXIBLE WIRE
2	100AMP MCCB	1RUN - 20 x 6 BUS BAR
3	125AMP MCCB	1RUN - 25 x 06 BUS BAR
4	160AMP MCCB	1RUN - 25 x 10 BUS BAR
5	200AMP MCCB	1RUN - 25 x 10 BUS BAR
6	250AMP MCCB	1RUN - 25 x 12 BUS BAR
7	320AMP MCCB	1RUN - 40 x 10 BUS BAR
8	400AMP MCCB	1RUN - 40 x 12 BUS BAR
9	500AMP MCCB	2RUN - 40 x 10 BUS BAR
10	630AMP MCCB	2RUN - 40 x 10 BUS BAR
11	800AMP MCCB	2RUN - 50 x 10 BUS BAR
12	1000AMP MCCB	2RUN - 50 x 12 BUS BAR

MCCB BUS - BAR SIZE FOR LINK INCOMER & OUTGOING		
S.NO	MCCB AMP RATING	COPPER BUS BAR SIZE FOR PHASE
1	63AMP MCCB	UNINYVIN / PVC FLEXIBLE WIRE
2	100AMP MCCB	1RUN - 20 x 05 BUS BAR
3	125AMP MCCB	1RUN - 20 x 05 BUS BAR
4	160AMP MCCB	1RUN - 20 x 05 BUS BAR
5	200AMP MCCB	1RUN - 25 x 05 BUS BAR
6	250AMP MCCB	1RUN - 25 x 06 BUS BAR
7	320AMP MCCB	1RUN - 32 x 08 BUS BAR
8	400AMP MCCB	1RUN - 32 x 08 BUS BAR
9	500AMP MCCB	1RUN - 40 x 10 BUS BAR
10	630AMP MCCB	1RUN - 40 x 10 BUS BAR
11	800AMP MCCB	1RUN - 50 x 10 BUS BAR
12	1000AMP MCCB	1RUN - 50 x 12 BUS BAR

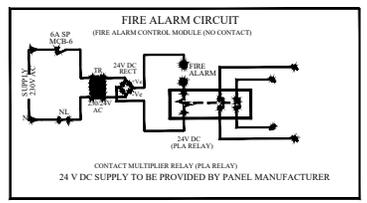
PANEL SIZE		
CABLE ENTRY		
PAINT SHADE	SIEMENS GRAY 7035	DOORS/COVERS & MAIN FRAME
PAINT SHADE	G.I.	MOUNTING PLATE
PAINT SHADE	BLACK RAL 9001	BASE FRAME



DRAWN BY	MANISH	CLIENT	TELEPERFORMANCE	SCALE	N.T.S.
CHECKED	F. HUSAIN	PROJECT	CANDOR , NOIDA	REVISION	
APPROVED		CONSULTANT	91 SQUARE FEET		
DRG. NO.	G.N2/02	ARCHITECT		JOB No.	AAA/TPF/3345
DATE	22-01-2025	CONTRACTOR	INFINITY ENGINEERS PVT LTD	SHEET No.	1 OF 1



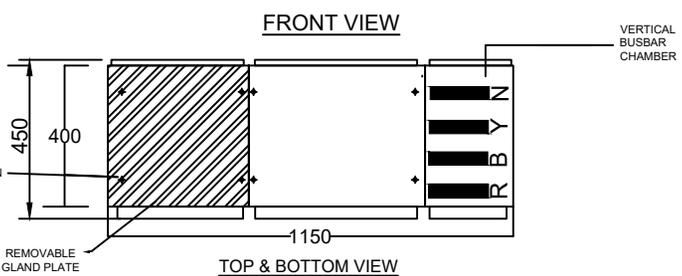
- LEGENDS**
- - RED PHASE INDICATING LIGHT
  - - YELLOW PHASE INDICATING LIGHT
  - - BLUE PHASE INDICATING LIGHT
  - - ON INDICATING LIGHT
  - - OFF INDICATING LIGHT
  - - TRIP INDICATING LIGHT
  - MFM - MULTI FUNCTION METER
  - KWH - ENERGY METER



# GA NO.-1

CABLE ENTRY:-TOP & BOTTOM ONLY

MATERIAL 300A TPN AL BUSBAR	
PHASE	1B x 40 x 10MM
NEUTRAL	1B x 40 x 06MM
EARTHING	1B x 25 x 06MM

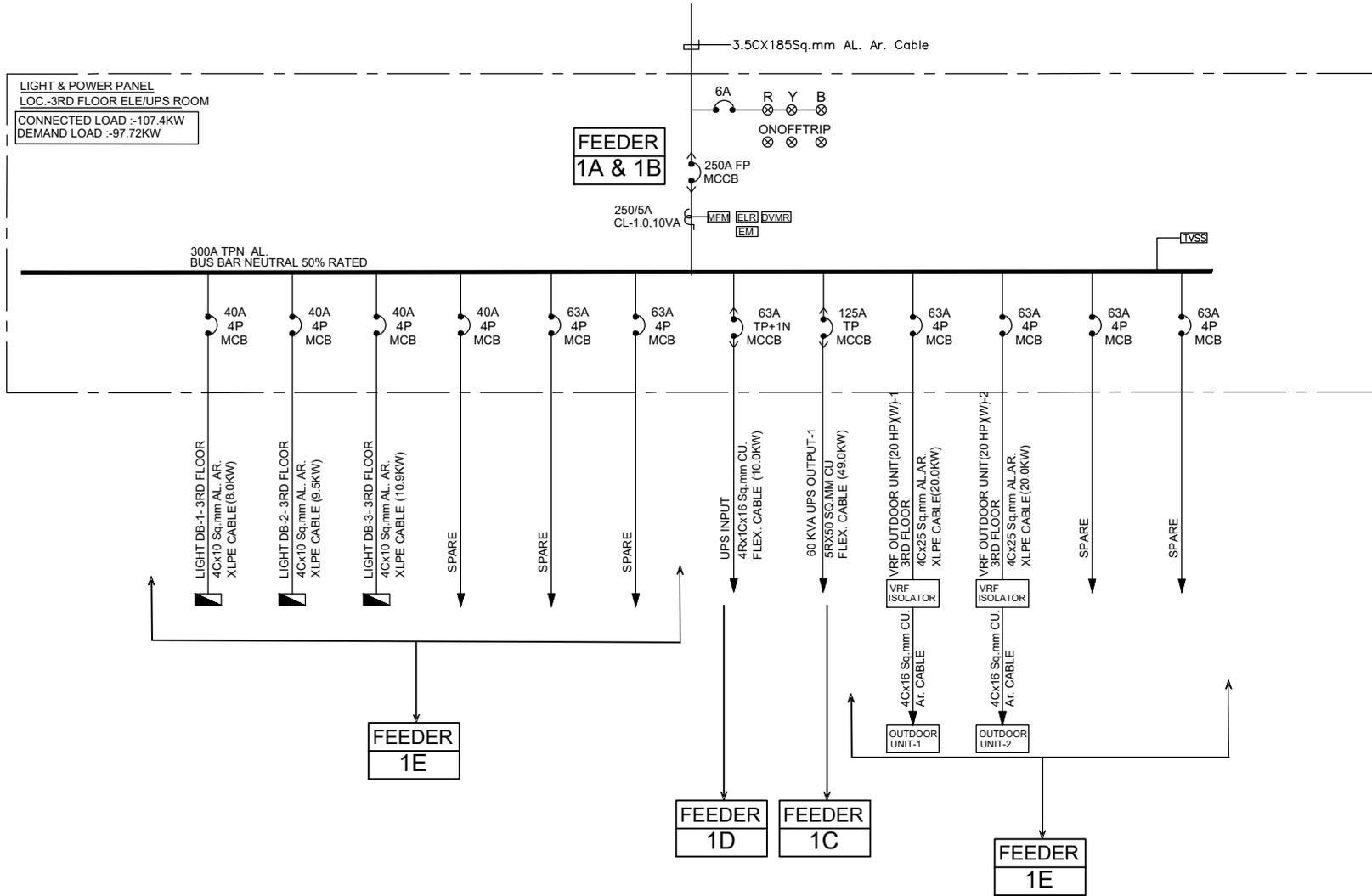


PANEL SIZE	HEIGHT - 2000 + 75	LENGTH - 1150	DEPTH - 450
CABLE ENTRY	TOP YES	BOTTOM YES	
PAINT SHADE	SIEMENS GRAY 7035	DOORS/COVERS & MAIN FRAME	
PAINT SHADE	G.I.	MOUNTING PLATE	
PAINT SHADE	BLACK RAL 9001	BASE FRAME	



TITLE	SDB-1 TOWER 8 GENERAL ARRANGEMENT	QTY. - 1 No.
DRAWN BY	MANISH	SCALE
CHECKED	F.HUSSAIN	REVISION
APPROVED		
DRG. NO.	AAA/GA/3345/01	JOB No.
DATE	21-01-2025	SHEET No.
CLIENT	TELEPERFORMANCE	
PROJECT	CANDOR, NOIDA	
CONSULTANT	91 SQUARE FEET	
ARCHITECTS		
CONTRACTOR	INFINITY ENGINEERS PVT LTD	

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PANEL SIZE				
CABLE ENTRY	TOP	YES	BOTTOM	YES
PAINT SHADE	SIEMENS GRAY 7035	DOORS/COVERS & MAIN FRAME		
PAINT SHADE	G.I.	MOUNTING PLATE		
PAINT SHADE	BLACK RAL 9005	BASE FRAME		



DRAWN BY	MANISH	CLIENT	SDB-1 TOWER8	QTY-1NO
CHECKED	F.HUSSAIN	PROJECT	TELEPERFORMANCE	N.T.S.
APPROVED		CONSULTANT	CANDOR , NOIDA	REVISION
DRG. NO.	AAA/SLD/3345/1	ARCHITECT	91 SQUARE FEET	JOB No. AAA/TPP/3345
DATE	22-01-2025	CONTRACTOR	INFINITY ENGINEERS PVT LTD	SHEET No. 1 OF 4

CPRI APPROVED &amp; AN ISO 9001 : 2015 CERTIFIED

## BILL OF MATERIALS

1	Feeder : I/C 250A FP MCCB LP 4TH Qty : 1	Qty	Family	Make
1.1	250A, 4P, 36kA, MCCB, Ekip LS/I Release, Type: XT4 250	1	MCCB	ABB
1.2	Auxiliary Contact AUX 1Q 250VAC/DC XT1...XT4	2	MCCB Accessories	ABB
1.3	Extended Spreaded Terminals-ES, KIT ES XT4 8pcs	1	MCCB Accessories	ABB
1.4	Transmitted RHE XT2-XT4, W Standard Returned	1	MCCB Accessories	ABB
1.5	Shunt Opening Release - SOR XT1...XT4, 220...240V AC-220...250V DC	1	MCCB Accessories	ABB
1.6	250/5A CL-1,VA-10 CURRENT TRANSFORMER	4	Current Transformer	Procom
1.7	EasyLogicEM6436H, VAF+ PF + Power & Energy Meter, Class accuracy 1.0, 01 RS485 port	1	Digital Meters	Schneider
1.8	Energy meter EM1200, CI 1.0, with RS485 port	1	Digital Meters	Schneider
1.9	TVSS - 40kA	1	SurgeProtectionDevice	PHONIEX
1.10	3 Phase, 3 Wire & 3 Phase, 4 Wire, Under & Over Voltage Relay (Auto / Manual Reset, Trip Time & Power ON Delay 1-10 Sec) OV/UV - adjustable, Neutral fail indication 1CO+1CO DIN Rail Mounted	1	Protective Relay	Minilec
1.11	30mA-30A, Static Earth Leakage Relay With Tape Wound CBCT, 150mm	1	Protective Relay	Prok Dv
1.12	Yellow, LED Indicating lamp Gen next Pro 22.5mm, suitable for operating at, 240V AC	1	Indicating Lamps	ESBEE
1.13	Amber, LED Indicating lamp Gen next Pro 22.5mm, suitable for operating at, 240V AC	1	Indicating Lamps	ESBEE
1.14	Blue, LED Indicating lamp Gen next Pro 22.5mm, suitable for operating at, 240V AC	1	Indicating Lamps	ESBEE
1.15	Green, LED Indicating lamp Gen next Pro 22.5mm, suitable for operating at, 240V AC	1	Indicating Lamps	ESBEE
1.16	Red, LED Indicating lamp Gen next Pro 22.5mm, suitable for operating at, 240V AC	2	Indicating Lamps	ESBEE
1.17	63A, 4P, 10kA, C Curve, MCB SB200 M, Type: SB204 M-C	1	MCB	ABB
1.18	6A, 1P, 10kA, C Curve, MCB SB200 M, Type: SB201 M-C	4	MCB	ABB
1.19	24V DC, 2P, with LED at 240V AC/24V DC, Plug in Enclosed Version Type: MSP Relay	1	Protective Relay	Salzer
1.20	BRIDGE RECTIFIER	1	Protective Relay	RECTIFIER
1.21	CONTROL TRANSFORMER	1	Protective Relay	GuRU

2	Feeder : O/G 63A FP MCB LP 3RD Qty : 1	Qty	Family	Make
2.1	40A, 4P, 10kA, C Curve, MCB SB200 M, Type: SB204 M-C	4	MCB	ABB
2.2	63A, 4P, 10kA, C Curve, MCB SB200 M, Type: SB204 M-C	6	MCB	ABB
3	Feeder : O/G 1 125A MAIN FLOOR PNL 4F Qty : 1	Qty	Family	Make
3.1	125A, 3P, 25kA, MCCB, with SACE Formula DSP, TMD / TMA Release, Type: P1C160	1	MCCB	ABB
3.2	Auxiliary Contact AUX Q+SY P1-P4 250V AC	1	MCCB Accessories	ABB
3.3	Rotary Handle, RHE P1-P2	1	MCCB Accessories	ABB
3.4	3P, Front extended spread terminal- 45mm, ES KIT ES P1 6pcs	1	MCCB Accessories	ABB
3.5	Green, LED Indicating lamp Gen next Pro 22.5mm, suitable for operating at, 240V AC	1	Indicating Lamps	ESBEE
3.6	Red, LED Indicating lamp Gen next Pro 22.5mm, suitable for operating at, 240V AC	1	Indicating Lamps	ESBEE
3.7	6A, 1P, 10kA, C Curve, MCB SB200 M, Type: SB201 M-C	1	MCB	ABB
4	Feeder : O/G 63A TP MCCB LP 3RD Qty : 1	Qty	Family	Make
4.1	63A, 3P, 25kA, MCCB, with SACE Formula DSP, TMD / TMA Release, Type: P1C160	1	MCCB	ABB
4.2	Auxiliary Contact AUX Q+SY P1-P4 250V AC	1	MCCB Accessories	ABB
4.3	Rotary Handle, RHE P1-P2	1	MCCB Accessories	ABB
4.4	Green, LED Indicating lamp Gen next Pro 22.5mm, suitable for operating at, 240V AC	1	Indicating Lamps	ESBEE
4.5	Red, LED Indicating lamp Gen next Pro 22.5mm, suitable for operating at, 240V AC	1	Indicating Lamps	ESBEE
4.6	6A, 1P, 10kA, C Curve, MCB SB200 M, Type: SB201 M-C	1	MCB	ABB

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PANEL SIZE				
CABLE ENTRY	TOP	YES	BOTTOM	YES
PAINT SHADE	SIEMENS GRAY 7035	DOORS/COVERS & MAIN FRAME		
PAINT SHADE	G.I.	MOUNTING PLATE		
PAINT SHADE	BLACK RAL 9005	BASE FRAME		



DRAWN BY		MANISH		CLIENT		SDB-1 TOWER8 BILL OF MATERIALS		QTY-1NO	
CHECKED	F.HUSSAIN	PROJECT	CANDOR , NOIDA	SCALE			N.T.S.		
APPROVED		CONSULTANT	91 SQUARE FEET	REVISION					
DRG. NO.	AAA/BOM/3345	ARCHITECTS	*****	JOB No.	AAA/TPF/3345				
DATE	22-01-2025	CONTRACTOR	INFINITY ENGINEERS PVT LTD	SHEET No.	1 OF 4				