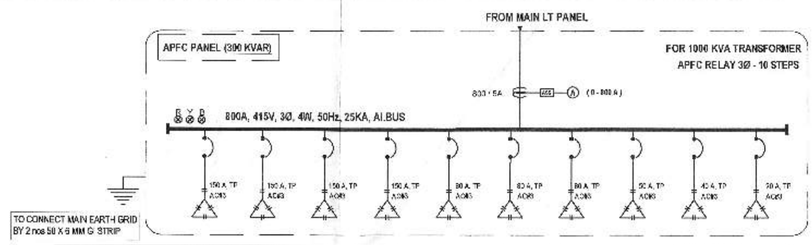
LEGENDS

SYMBOLS	DESCRIPTION
	11 KV VCB (VACUUM CIRCUIT BREAKER)
	ACB (AIR CIRCUIT BREAKER)
	MCB (MINIATURE CIRCUIT BREAKER)
	MCCB (MOULDED CASE CIRCUIT BREAKER)
	POTENTIAL TRANSFORMER
Σ	CURRENT TRANSFORMER
	SURGE PROTECTION DEVICES
A	AMMETER
V	VOLTMETER
ASS	AMMETER SELECTOR SWITCH
VSS	VOLTMETER SELECTOR SWITCH
	INDICATING LAMP
EA	ENERGY ANALYZER WITH KWH
PF	POWER FACTOR METER
Hz	FREQUENCY METER
	CAPACITOR
VR	VOLTAGE RELAY
	MCB (MINIATURE CIRCUIT BREAKER)
DM	DIGITAL ENERGY METER
	ISOLATOR
	PUSH BUTTON
S/S L R	SELECTOR SWITCH
TNC	TEMPERATURE CONTROLLER WITH TRIP ON INTERLOCK DEVICE
	ANNUNCIATOR WINDOW WITH
86	MASTER TRIP RELAY
59	OVER VOLTAGE RELAY
95	TRIP CIRCUIT SUPERVISION RELAY
64	RESTRICTED EARTH FAULT RELAY
50	INSTANTANEOUS RELAY
51	TIME RELAY
50/51	TIME & INSTANTANEOUS RELAY
59	OVER VOLTAGE RELAY WITH TIMER
27	UNDER VOLTAGE RELAY WITH TIMER
2	TIMER
32	REVERSE POWER RELAY
87	DIFFERENTIAL RELAY
BC	BATTERY CHARGER
TS	TEMPERATURE SCANNER
51V	VOLTAGE RESTRAINED OVER CURRENT RELAY
51N	EARTH FAULT RELAY
51G	SENSITIVE EARTH FAULT RELAY

rev. no.	date	revision
R0	08.05.2018	GFC ISSUED.

NOTES:-

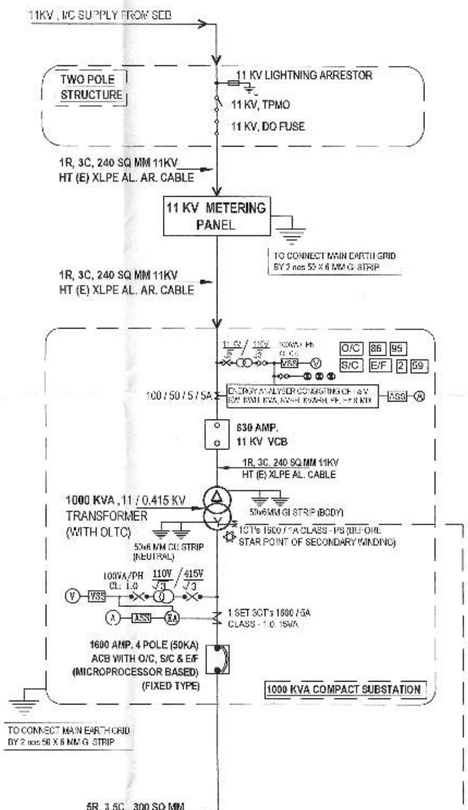
- ALL THE INDICATIONS & METERING SHALL BE DONE THROUGH 110 VOLTS FROM SECONDARY OF PT's. NO INDICATIONS LAMPS & METERING SHOULD NOT BE OPERATED AT 415 VOLTS.
- 1 No. CT's TO BE PROVIDED IN LOOSE CONDITION BY THE PANEL MANUFACTURER TO THE CLIENT FOR REF PROTECTION.

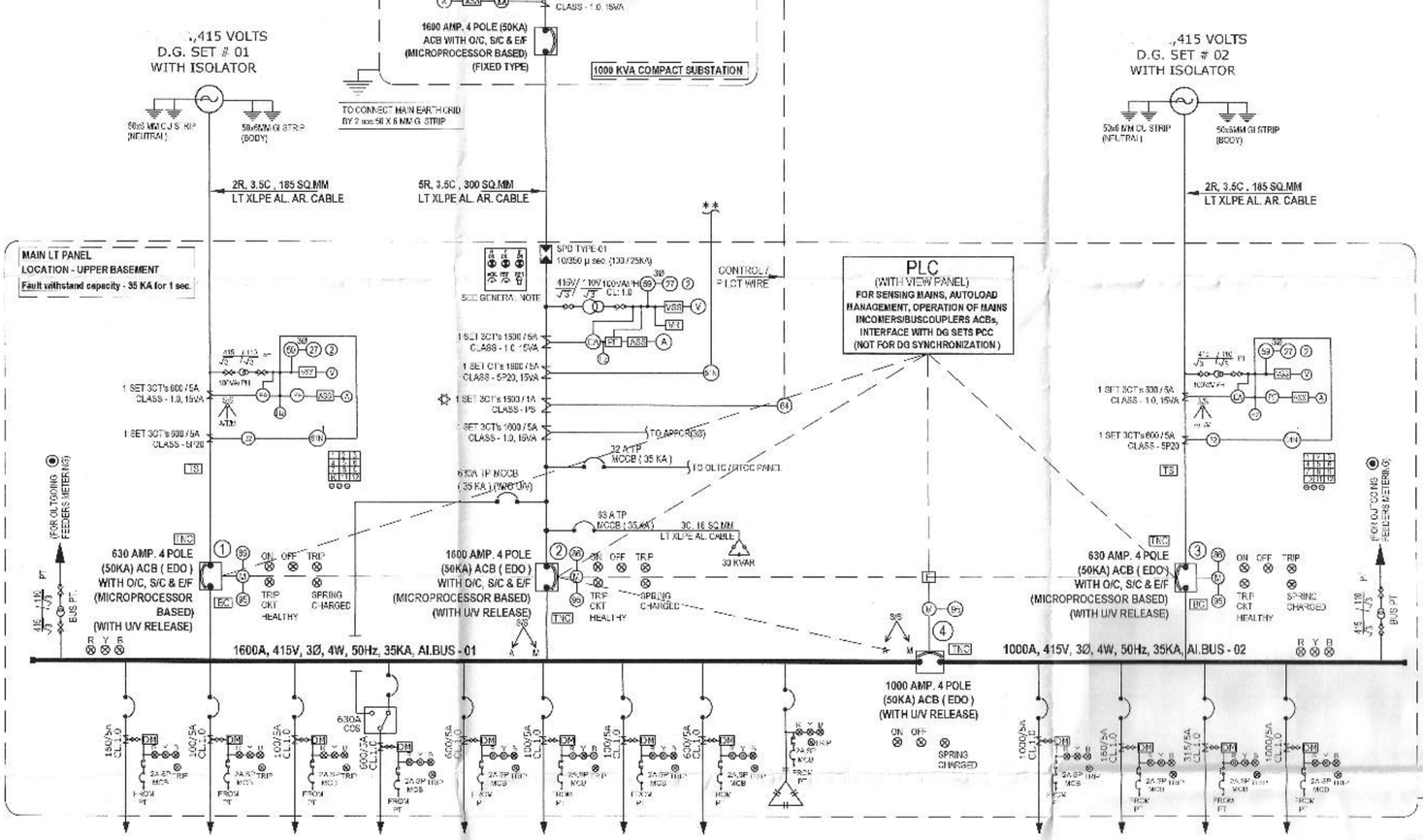


CIRCUIT BREAKER RATING IN AMPS	125 A TP MCCB (25 KA)	125 A TP MCCB (25 KA)	125 A TP MCCB (25 KA)	125 A TP MCCB (25 KA)	63 A TP MCCB (25 KA)	63 A TP MCCB (25 KA)	63 A TP MCCB (25 KA)	40 A TP MCCB (25 KA)	32 A TP MCCB (25 KA)	16 A TP MCCB (25 KA)
FEEDER DESCRIPTION	BANK-1 50 KVAR	BANK-2 50 KVAR	BANK-3 50 KVAR	BANK-4 50 KVAR (Space only)	BANK-5 25 KVAR	BANK-6 25 KVAR (Space only)	BANK-7 20 KVAR	BANK-8 15 KVAR	BANK-9 10 KVAR	BANK-10 5 KVAR

Interlocking Scheme For PLC load manager.

Conditions		Breaker Position			
	EQUIP.	DG - 01	T/F (1000 KVA)	B/C	DG - 02
	ACB No.	1	2	4	3
Mains "ON"	Under Normal Condition. Total Load is at Transformers.	OFF	ON	ON	OFF
Mains Failure	When max. demand Load is upto 218 KW then load transferred to DG-02	OFF	OFF	ON	ON
	When max. demand Load is upto 218 KW & DG - 02 fails to start, then load transferred to DG - 01	ON	OFF	ON	OFF
	When max. demand Load exceeds from 218 KW and not fulfill any condition shown above, then both the DG's shall run independently at separate bus bar. i.e. DG-01 at bus section-01 & DG-02 at bus section-02.	ON	OFF	OFF	ON





This PLC system shall have.

1) The PLC shall have a provision of Interlocking between different Incomers & Bus couplers to avoid Paralleling of two different supplies from Transformer & DG sets.
2) Logic to AUTO START & AUTO STOP for each DG sets.
3) Taking data from Energy Analysers and issuing and selecting starting command for DG set as per above logic. Further it shall also be possible to START/STOP DG sets in Manual/Test Mode.
4) Paralleling of DG sets have not been envisaged.
5) In case of any discrepancy in interlocking scheme inform consultant before execution.

GA DRAWINGS SHALL BE GOT APPROVED BEFORE FABRICATION. THE PANEL HAS TO BE SPECIFICALLY FABRICATED AS PER THE SPACE AVAILABLE AT PANEL ROOM IN BASEMENT. THE EXISTING COLUMN POSITIONS WILL ALSO BE CONSIDERED.

GENERAL NOTE:- In normal case all three lamps shall be "ON" to indicate that incoming power supply is available. In case of power resumption after failure buzzer shall ring to indicate that power supply is resume, there shall be one push button to acknowledge the same.

NOTE :-
FOR MAIN LT PANELS
1) All ACB should have Ics = Icu = Icw = 50 KA for 1 sec, fully rated at 50 deg C ambient temperature
2) All ACB's shall have an inbuilt facility of O/C, S/C, Instantaneous S/C & Earth fault protection
3) All ACB's shall have Auxiliary switches with 4NO + 4NC contacts.
4) All incoming ACB's shall facility with LCD / LED display for event history & measurement of current parameters.
5) All MCCB shall be microprocessor based with inbuilt O/L & S/C release with E/F protection
6) All MCCB's shall be Ics = 100% Icu,
7) All MCCB's shall have adjustable O/L & S/C trip setting as per load requirement
8) All Incomer / Bus coupler ACB shall have inbuilt U/V Release.

FEEDER NUMBER	F - 1	F - 2	F - 3	F - 4	F - 5	F - 6	F - 7	F - 8	F - 9
CIRCUIT BREAKER RATING IN AMPS	160 A TP MCCB (35 KA)	100 A TP MCCB (35 KA)	100 A TP MCCB (35 KA)	630 A (W/O U/V Protection) TP MCCB (35 KA)	630 A TP MCCB (35 KA)	100 A TP MCCB (35 KA)	100 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)	800 A TP MCCB (35 KA)
CABLE SIZE IN SQ. MM. AL	1R, 3.5C, 70	1R, 3.5C, 35	1R, 3.5C, 35	2R, 3.5C, 240	2R, 3.5C, 185	1R, 3.5C, 50	1R, 3.5C, 50	—	2R, 3.5C, 240
FEEDER DESCRIPTION	ELEVATOR PANEL	COMMON LIGHTING PANEL	COMMERCIAL	FIRE PANEL	RISING MAINS-02 OASIS TOWER	W.T.P.	S.T.P.	SPARE	CAP. PANEL 300 KVAR

F - 10	F - 11	F - 12	F - 13
1000 A TP MCCB (35 KA)	160 A TP MCCB (35 KA)	315 A TP MCCB (35 KA)	1000 A TP MCCB (35 KA)
3R, 3.5C, 185	1R, 3.5C, 70	..	—
RISING MAINS-01 OASIS TOWER	CLUB / COMMUNITY	BASEMENT VENTILATION	SPARE

TO CONNECT MAIN EARTH GRID BY 2 nos 50 X 6 MM G. STRIP

Consummate Engineering Services Pvt. Ltd. Sec / Noida 30, Gomti Nagar Lko. Consulting Engineers

Goods for Construction
Issued On 09/05/2018

project	title	drawing released for	drg. no.	drawn by	Architects :	services consultant
SG -OASIS AT 2B/3 VASUNDHARA GHAZIABAD U.P.	ELECTRICAL DRAWING subtitle MAINS SCHEMATIC DIAGRAM	☐ APPROVAL ☐ ADVANCE COPY ☐ TENDER COPY ■ CONSTRUCTION	SG-OASIS / ELEC / EXT / 02/01 scale N.T.S. @ A1 date March, 2018	Najmul designed by Ateeq Ur Rahman checked by Anand Havelia	Space Designers International Pvt. Ltd. B-34, Sector-57, Noida-201301 (U.P.) PH : 0120-4644445, 4446, 4447, 4448, 4449 e-mail : spacedi@gmail.com, www.spacedi.com	Consummate Engineering Services (P) Ltd. Noida Office : B - 57, Sector - 57, Noida - 201 301 Tel : (0120) 6843500 (24 Lines) Lko. Office : R 205, Rohtas Plumeria, Gomti Nagar, Lucknow e mail : mail@cesplin, website : www.cesplin