LEGENDS

SYMBOLS	DESCRIPTION
	11 KV VCB (VACCUM CIRCUIT BREAKER)
	ACB (AIR CIRCUIT BREAKER)
	HRC FUSES
	(MCCB) MOULDED CASE CIRCUIT BREAKER
	POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER
	SURGE PROTECTION DEVICES
A	AMMETER
V	VOLTMETER
ASS	AMMETER SELECTOR SWITCH
VSS	VOLTMETER SELECTOR SWITCH
	INDICATING LAMP
EA	ENERGY ANALYZER WITH MDI
PF	POWER FACTOR METER
Hz	FREQUENCY METER
	CAPACITOR
VR	VOLTAGE RELAY
	M.C.B. (MINIATURE CIRCUIT BREAKER)
DM	DUAL REGISTER ENERGY METER
	ISOLATOR
	PUSH BUTTON
S/S L R	SELECTOR SWITCH
TNC	TRIP/NORMAL/CLOSE SWITCH WITH LOST MOTION DEVICE
1 2 3 4 5 6 7 8 9 10 11 12	ANUNCIATION WINDOW WITH
86	MASTER TRIP RELAY
59	OVER VOLTAGE RELAY
95	TRIP CIRCUIT SUPERVISION RELAY
64	RESTRICTED EARTH FAULT RELAY
50	INST. O/C RELAY
51	IDMT RELAY
50 51	IDMT & 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	IDMT EARTH FAULT RELAY
51G	SENSITIVE EARTH FAULT RELAY

rev. no.	date	revision
R0.	18.02.2017	GFC ISSUED.

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.

Interlocking Scheme For PLC load manager.

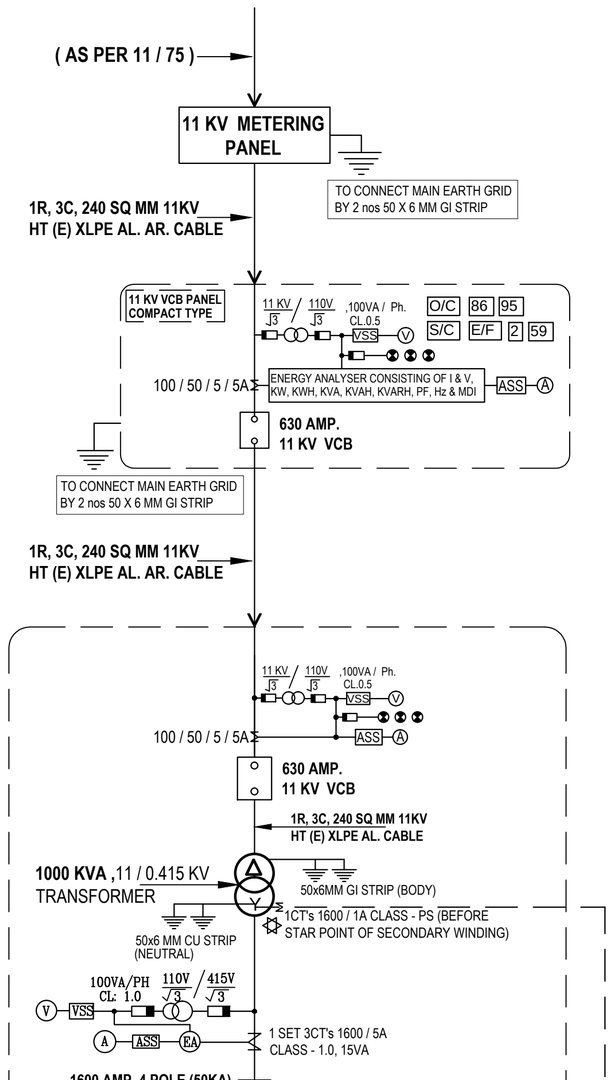
Conditions		Breaker Position			
		EQUIP.	DG - 01 320 KVA	CSS (1000 KVA)	B/C	DG - 02 320 KVA
		ACB No.	1	2	4	3
Mains "ON"	Under Normal Condition. Total Load is at Transformers.		OFF	ON	ON	OFF
Mains Failure	When max. demand Load is upto 218 KW then load transferred to DG-01.		ON	OFF	ON	OFF
	When max. demand Load is upto 218 KW & DG - 01 fails to start, then Load transferred to DG - 02.		OFF	OFF	ON	ON
	When max. demand Load is more than 218 KW, The load is at both the DG's.		ON	OFF	OFF	ON

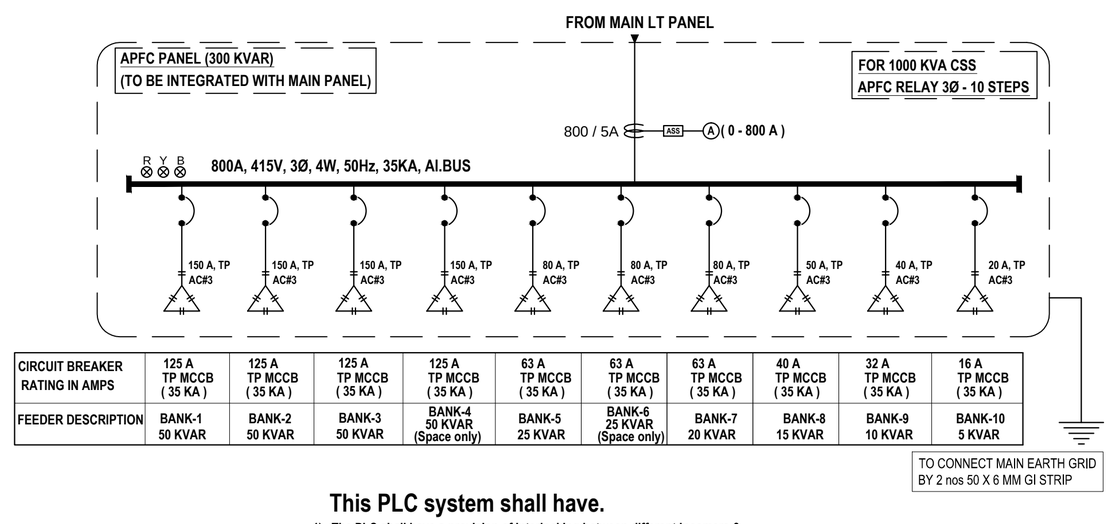
NOTES:-

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.

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.





CIRCUIT BREAKER RATING IN AMPS	125 A TP MCCB (35 KA)	125 A TP MCCB (35 KA)	125 A TP MCCB (35 KA)	125 A TP MCCB (35 KA)	63 A TP MCCB (35 KA)	63 A TP MCCB (35 KA)	63 A TP MCCB (35 KA)	40 A TP MCCB (35 KA)	32 A TP MCCB (35 KA)	16 A TP MCCB (35 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

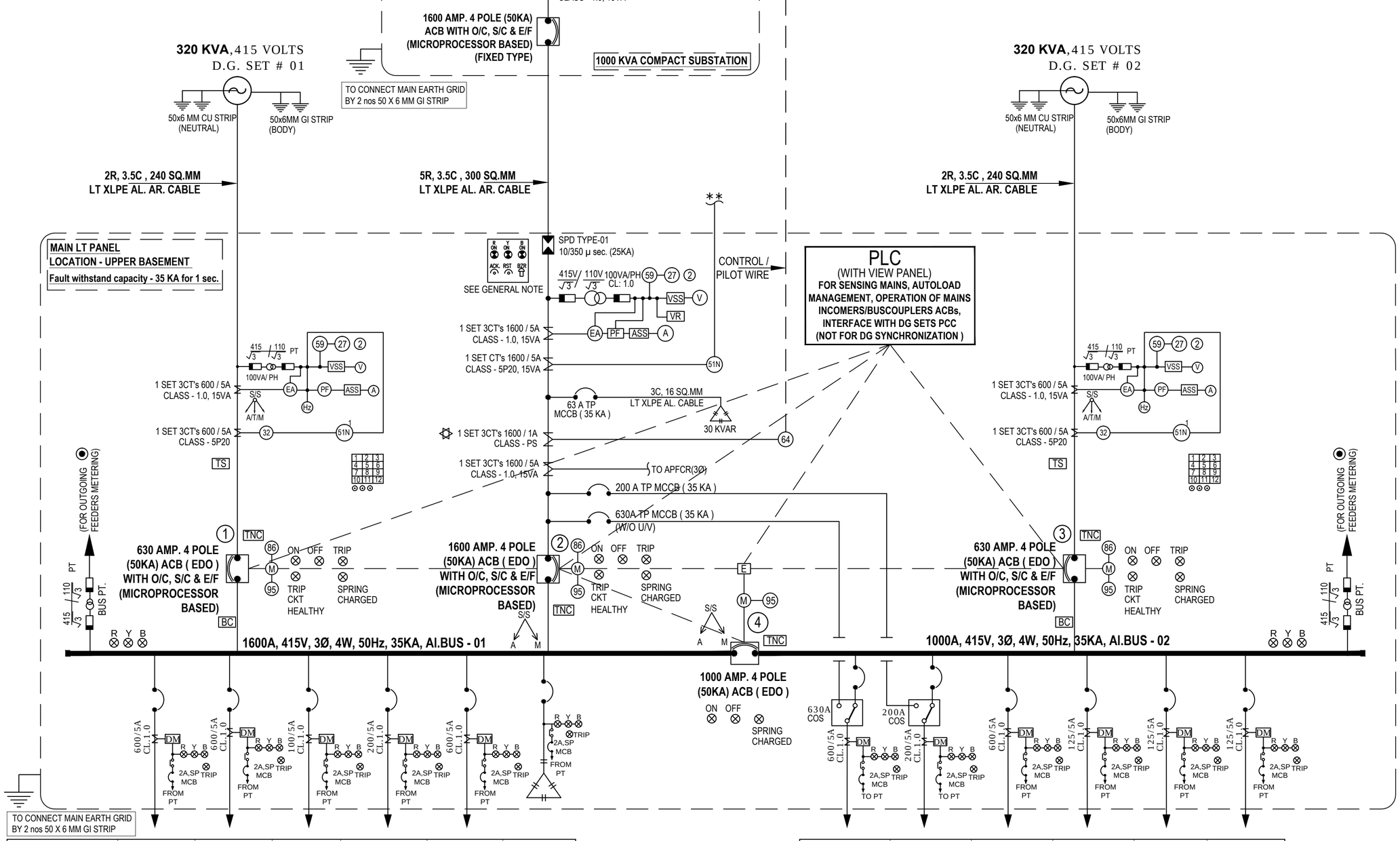
This PLC system shall have.

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 commond 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.

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



FEEDER NUMBER	F - 1	F - 2	F - 3	F - 4	F - 5	F - 6
CIRCUIT BREAKER RATING IN AMPS	630 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)	100 A TP MCCB (35 KA)	200 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)	800 A TP MCCB (35 KA)
CABLE SIZE IN SQ. MM. 'AL'	2R, 3.5C, 185	2R, 3.5C, 185	1R, 3.5C, 35	1R, 3.5C, 95	---	2R, 3.5C, 240
FEEDER DESCRIPTION	RISING MAINS TOWER - A	RISING MAINS TOWER - C	COMMERCIAL	BASEMENT VENTILATION	SPARE	CAP. PANEL 300 KVAR

F - 7	F - 8	F - 9	F - 10	F - 11	F - 12
630 A (W/O U/V Protection) TP MCCB (35 KA)	200 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)	125 A TP MCCB (35 KA)	125 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)
2R, 3.5C, 240	1R, 3.5C, 95	2R, 3.5C, 185	1R, 3.5C, 70	1R, 3.5C, 70	---
FIRE PANEL	MAIN COMMON SER. PANEL	RISING MAINS TOWER - B	W.T.P.	S.T.P.	SPARE

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