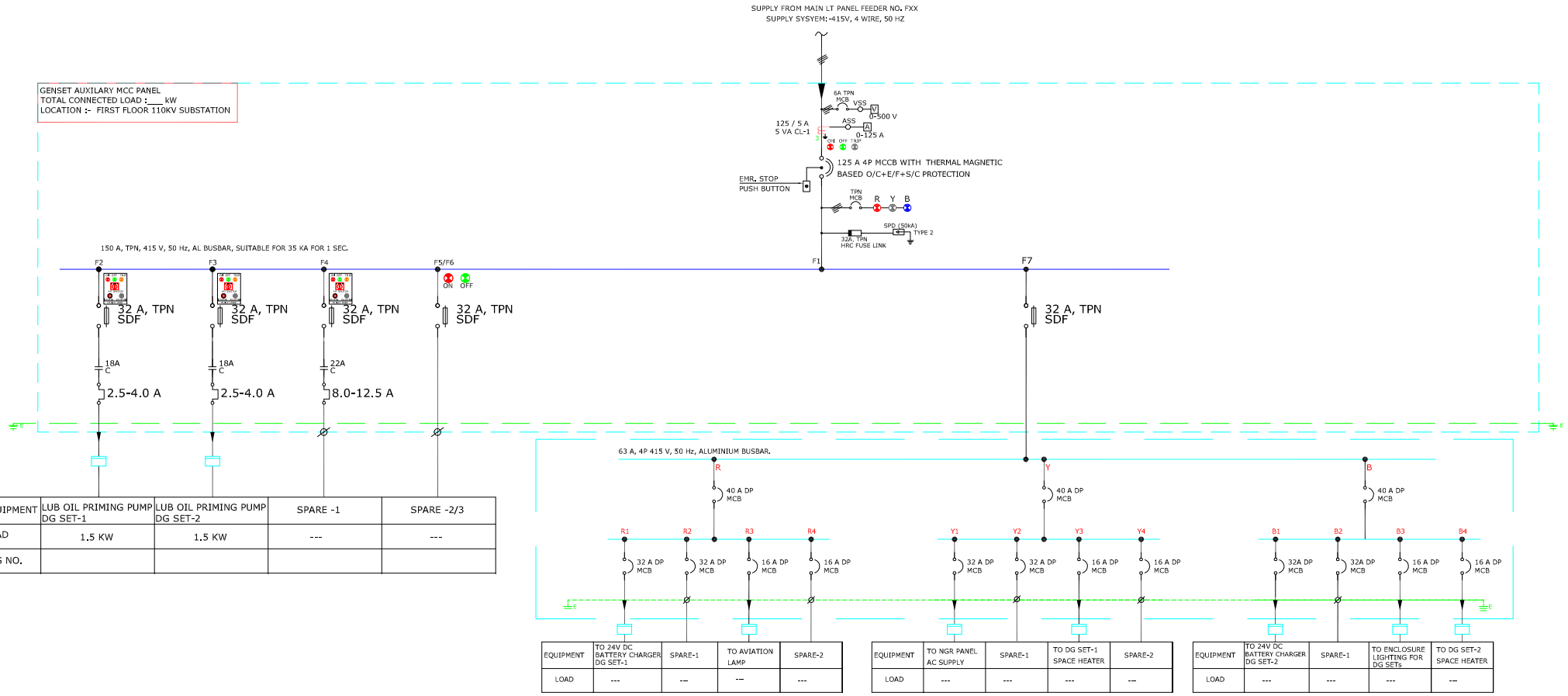

GENSET AUXILIARY MCC PANEL

IMPORTANT NOTE :-
ELECTRICAL DRIVE LIST AND RATING SHALL BE CONFIRMED BY DG SUPPLIER AS PER THEIR ENGINE REQUIREMENT , GIVEN SLD FOR REFERENCE ONLY

NOTES:

1.	LT PANEL SPECIFICATION AS PER SPECIFICATION DOCUMENTS NO:-NPI-120310-ELC-S1-TD-02
2.	INCOMING ELECTRICAL POWER SUPPLY DETAILS ARE AS FOLLOWS:- UTILIZATION VOLTAGE 415 V , 3 PHASE , 4 WIRE , 50 Hz VOLTAGE VARIATION ± 10% FREQUENCY VARIATION ± 3% NEUTRAL ARRANGMENT SOLIDLY GROUNDED
3.	MCC PANEL SHALL BE SINGLE FRONT, FLOOR MOUNTED WITH PROVISION FOR BOTTOM CABLE ENTRY AND MAIN BUSBAR ALLEY SHALL BE AT THE TOP . PANEL SHALL BE EXTENDABLE AT BOTH SIDE.
4.	ALL OUTGOING FEEDERs SHALL BE FIXED TYPE.
5.	INCOMER FEEDER SHALL BE 4 POLE TYPE AND OUTGOING FEEDERs SHALL BE TPN TYPE.
6.	THE CONTROL SCHEME SHALL INCLUDE ALL NECESSARY RELAYS AND SELECTOR /CONTROL SWITCHES.
7.	PANEL SHALL HAVE DOUBLE CONNECTION BODY EARTHING BY ALUMINIUM BUS BAR.
8.	MAIN BUS BARs SHALL BE SUITABLLY-PVC SLEEVED ELECTROLYTIC ALLUMINIUM BUS BAR . VENDOR TO PROVIDE BUSBAR CALCULATIONS.
9.	EQUIPMENT RATING, WHEREVER IS INDICATED,SHALL BE CONSIDERED AS MINIMUM RATING AS REQUIRED OR NEXT HIGHER RATING.
10.	SELECTOR SWITCHs SHALL BE PROVIDED ROTARY KNOB OPERATED TYPE.
11.	INCOMER FEEDER SHALL BE PROVIDED WITH DIGITAL AMMETER AND VOLTMETER WITH IN BUILT SELECTOR SWITCH.
12.	CT & PT RATING AND CHARACTERISTICS SHALL BE CONFIRMED BY THE SWITCHGEAR VENDOR .
13.	LOAD MANAGER (DLM-1) SHALL HAVE FACILITY TO INDICATE PHASE WISE CURRENT, ACTIVE POWER ETC . ALSO ALL LOAD MANAGERS SHALL BE ABLE TO COMMUNICATE WITH CENTRASLIZED LOAD MONITORING SYSTEM. (ENERGY MANAGEMENT SYSTEM THROUGH RS485).
14.	INCOMER MCCB SHALL BE 3VL TYPE SIMILAR TO "SIEMENS" MAKE AND SHALL BE WITH MICRO PROCESSOR BASED PROTECTION SIMILAR TO ETU10 OF "SIEMENS" MAKE WITHOUT COMMUNICATION & DISPLAY
15.	ALSO MCCB SHALL HAVE SHORT TIME RATING OF 35 KA.
16.	MCCB IN OUTGOING FEEDERs SHALL BE 3VL TYPE SIMILAR TO "SIEMENS" MAKE AND SHALL BE WITH THERMAL MAGNETIC (TM) BASED PROTECTION
17.	ALL STAR DELTA STARTER 22 KW AND ABOVE SHALL BE PROVIDED WITH ANALOGUE CURRENT RECORDING
18.	ALL CONVENTIONAL STARTER SHALL BE SUITABLE TO START/ STOP FROM REMOTE AREA.

19.	ALL POWER CONTACTOR SHALL BE AC-3 DUTY.
20.	FOR STARTERS FEEDER, KINDLY CONSIDER THE ELECTRICAL RESET USING AUX. RELAY.
21.	PANEL ANTI-CONDENSATION HEATER SUPPLY SHALL BE 240 VAC.
22.	INCOMER ACB/MCCB SHALL BE SUITABLE FOR EMERGENCY OFF/ SHUT OFF FROM UPSTREAM PANEL.
23.	VENDOR TO CONSIDER NEUTRAL RATING IDENTICAL TO PHASE RATING.
24.	240 VAC CONTROL POWER SUPPLY SHALL BE PROVIDED THROUGH SEPARATE AUXILARY TRANSFORMER AND CONTROL SUPPLY BUS SHALL BE INSTALLED IN BUS BAR ALLEY (HORIZONTAL & VERTICAL)
25.	VENDORS TO INDICATE PURCHASER'S REFERENCE DRAWING NUMBER ON ALL DOCUMENTATION.
26.	THE SWITCHGEAR VENDOR SHALL BE RESPONSIBLE FOR THE COMPLETE DESIGN AS DETAILED IN THE SPECIFICATION, RELEVENT STADARDS AND ENGINEERING BEST PRACTICE.
27.	ALL ISOLATOR AND FUSE COMBINATION (SDF) SHALL BE FIXED TYPE , DOUBLE AIR BREAK TYPE.
28.	MCCB/SDF SHALL BE INTERLOCKED TO PREVENT THE COMPARTMENT DOOR BEING OPENED UNLESS THE MCCB/SDF IN OPEN POSITION.
29.	MCCB/SDF SHALL BE PROVIDED WITH FACILITIES FOR PADLOCKING IN THE "OFF" POSITION. MCCB/SDF WITH ROTARY OPERATING MECHANISM AND DOOR HANDLE
29.	CONTROL SUPPLY FOR EACH FEEDER SHALL BE CONNECTED FROM INCOMER SIDE OF SDF THROUGH DP MCB, DP MCB SHALL HAVE 10KA SHORT CIRCUIT RATING
30.	CT,RELAY, METERING, LAMPS ETC SHOWN ARE INDICATIVE AND MINIMUM. ANY NECESSARY AUX RELAYS, METERS, CT INDICATING LAMPS SHALL BE PROVIDED.
31.	PANEL CONSTRUCTION SHALL BE FORM 3b AND ENCLOUSRE SHALL BE CUSTOMISED ,MANFACTURED BY PANEL SUPPLIER AS PER SPECIFICATION.
32.	VENDOR TO CONSIDER NEUTRAL RATING IDENTICAL TO PHASE RATING.
33.	EACH VERTICAL SECTION SHALL BE CONTAINED AS FOLLOWS. A. SIX FEEDER OF 32/63 A SDF/MCCB IN TIER FORMATION OR B. FOUR FEEDER OF 125/160 A SDF/MCCB IN TIER FORMATION OR C. THREE FEEDER OF 250/400/630 A SDF/MCCB IN TIER FORMATION D. HORIZANTAL CABLE ALLOY SHALL BE 200MM AT TOP SIDE OF THE PANEL. E. VERTICAL BUSBAR ALLOY SHALL BE 300MM AT BOTTOM OF THE PANEL. F. BASE FRAME CHANNEL HEIGHT SHALL BE 75MM. G. PANEL HEIGHT SHALL BE LIMITED TO 2075MM.

INSTRUMENTATION

A	AMMETER
ASS	AMMETER SELECTOR SWITCH
V	VOLTMETER
VSS	VOLTMETER SELECTOR SWITCH
LM	LOAD MANAGER
EDO	ELECTRICAL DRAW OUT
MDO	MANUAL DRAW OUT
SPD	SURGE PROTECTION DEVICE
EPB	EMR. PUSH BUTTON
S	SUPPLY BLOWER MOTOR
R	RETURN BLOWER MOTOR
H	HEATER BANK

LEGEND:-

SYMBOL	DESCRIPTION
R Y B	RYB INDICATION LAMP (LED TYPE)
ON OFF TRIP	ON, OFF, TRIP INDICATION LAMPS
	DIRECT SUPPLY TO PANEL.
S	SUPPLY CONNECT TO SWITCH SOCKET
ACB	AIR CIRCUIT BREAKER DRAW OUT TYPE
A	AMMETER
V	VOLTMETER
	SWITCH DISCONNECTOR FUSE UNIT
	VOLTAGE TRANSFORMER
	CURRENT TRANSFORMER (FIGURE INDICATES NO. OF CTs)
	MINITURE CIRCUIT BREAKER
	SOFT STARTER
	MOTOR PROTECTION CIRCUIT BREAKER
ON OFF TRIP RESET	STARTER FEEDER INDICATION & PUSH BUTTON
PM	POWER METER
DLM-1	DIGITAL LOAD MANAGER ONLY TO INDICATE AMPER & KW RATING
	MOULDED CASE CIRCUIT BREAKER
	AUTO-MANUAL SELECTOR SWITCH
	CABLE GLAND

⌀	SPARE FEEDER
	FUSE
	SDF WITH SUPERFAST SEMI CONDUCTOR FUSE
EPB	EMERGENCY PUSH BUTTON
	GAS FILLED TYPE CAPACITOR WITH 7% OF DETUNED HARMONIC FILTER & DISCHARGE RESISTER RATING 480 VAC
	CAPACITOR FEEDER INDICATION & PUSH BUTTON (FOR SUB PANELS)
	DISTRIBUTION TRANSFORMER
	TRIP/NEUTRAL/CLOSE SWITCH
TCH	TRIP CIRCUIT HEALTHY INDICATION
CC	CLOSING COIL
TC	TRIPPING COIL
SCM	SPRING CHARGING MOTOR (BLUE COLOUR)
ON	BREAKER ON INDICATION (RED COLOUR)
OFF	BREAKER OFF INDICATION (GREEN COLOUR)
TRIP	AUTO TRIP INDICATION (AMBER COLOUR)
DCF	DC SUPPLY FAIL INDICATION
	BUS DUCT
	THYRISTOR MODULE SIMILAR TO TSM SERIES OF EPCOS MAKE WITH 2200 TIE CARD
	CAPACITOR FEEDER INDICATION & PUSH BUTTON (APFC PANEL)

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Project No.: 120310
Location CHENGALPATTU

Description: **GENSET AUXILIARY MCC PANEL**

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