



DESIGN PARAMETERS:
APPLICATION : INDOOR
SYSTEM VOLTAGE : 415V+10%,-10%
HIGHEST SYSTEM VOLTAGE : 1.1kV
SYSTEM FREQUENCY : 50HZ +3%,-3%
FAULT LEVEL : 50KA
AMBIENT TEMPERATURE : 50° C
CONTROL VOLTAGE : 240V 1Ph AC
AUXILIARY VOLTAGE : 240V 1Ph AC
PROTECTION LEVEL : IP42FOR LT PANEL
CONSTRUCTION : FORM-4B
LT SWITCHGEAR SHALL BE INDOOR TYPE, METAL CLAD, TOTALLY ENCLOSED, RIGID, FREE STANDING,FLOOR MOUNTING, AIR INSULATED, FULLY DRAIN AND VENTIL. PROF. DESIGN INTERNAL WIRING SHALL BE CARRIED OUT 1.1kV PVC INSULATED, SINGLE CORE STANDARD COPPER CONDUCTOR OF 2.5 sq.mm FOR CURRENT CONTROL CIRCUIT AND 1.5 sq.mm FOR POTENTIAL CIRCUIT.
PAINTING OF PANEL SURFACE FINISH SHALL BE POWDER COATING AND SHADE SHALL BE 631 AS PER PANEL THICKNESS SHALL BE MINIMUM 100 MICRON (0.015-0.15 INCH).
BUS BARS SHALL BE AIR INSULATED AND MADE OF HIGH CONDUCTIVITY COPPER BUS BAR.
EARTH BUS COPPER PLAT SUITABLE TO FAULT CURRENT SHALL BE PROVIDED THROUGHOUT THE LENGTH OF PANEL PROJECTED OUTSIDE FOR EXTERNAL CONNECTION.
ALL MAIN BUS BARS AND VERTICAL RISERS ARE COLOR CODED FOR IDENTIFICATION.
PANEL SHALL BE TENSIBLE ON BOTH SIDES.
MULTIFUNCTION METER SHALL BE MICROPROCESSOR BASED GIVING DETAILS OF AMP, VOLTS, KWH, KVA, POWER FACTOR, ETC. WITH RS485 PORT FOR PLC COMMUNICATION.
AMMETER, VOLTMETER SHALL BE DIGITAL,SQUARE PATTERN TYPE 96X96mm AND CLASS WILL BE 1.0.
ALL INDICATING LAMP ARE OF CLUSTER LED TYPE LAMP.
1. IN EVENT OF FAILURE OF 415V POWER SUPPLY TO THE SUBSTATION LT PANEL LOAD WILL BE FED BY DG SET LOCATED IN DG ROOM.
2. PROVIDE INTERLOCK BETWEEN DG SET AND C APACITOR BANK IF DG SET WILL BE ON CONDITION THAN CAPACITOR BANK SHOULD BE OFF CONDITION.
3. AUXILIARY TRANSFORMER DG RATING ARE INDICATIVE ONLY. EPC C CONTRACTOR SHALL FINALIZE THE RATING DURING ELECTRICAL ENGINEERING.
IF MAXIMUM DEMAND OF EACH PROCESS PLANT EXCEEDS 100kW/125KVA THEN DEDICATED 11kV RMU/DRO TYPE TRANSFORMER/LT SWITCHBOARD ARRANGEMENT SHALL BE CONSIDERED. IF THE MAXIMUM DEMAND IS LESS THAN 100kW THEN DEDICATED LV SWITCHBOARD SHALL BE CONSIDERED FOR EACH PROCESS PLANT WHICH SHALL BE FED FROM TWO DIFFERENT POWER POINTS.11kV INCOMING POWER SUPPLY SHALL BE TAPPED FROM NEAREST 11kV RMU AT TWO DIFFERENT POINTS.
5. ALL INCOMERS AND OUTGOINGS FEEDER SHALL BE SCADA/PLC COMPATIBLE.

FOR TENDER

CLIENT

**MAHARASHTRA INDUSTRIAL
TOWNSHIP LTD (MITL)**

PROJECT

DESIGN, CONSTRUCTION, TESTING, COMMISSIONING
AND OPERATION & MAINTENANCE OF INFRASTRUCTURE
WORKS AT DIGHI PORT INDUSTRIAL AREA (DPIA)- PHASE
1 UNDER DELHI MUMBAI INDUSTRIAL CORRIDOR (DMIC)
ON EPC BASIS

TITLE

**TYPICAL SINGLE LINE DIAGRAM FOR
LT AUXILIARY SWITCHBOARD FOR
STP/CETP/WTP/SWM PLANTS**

PROJECT CODE: DI1628	STATUS: ISSUED FOR TENDER	DATE: 18.12.202
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