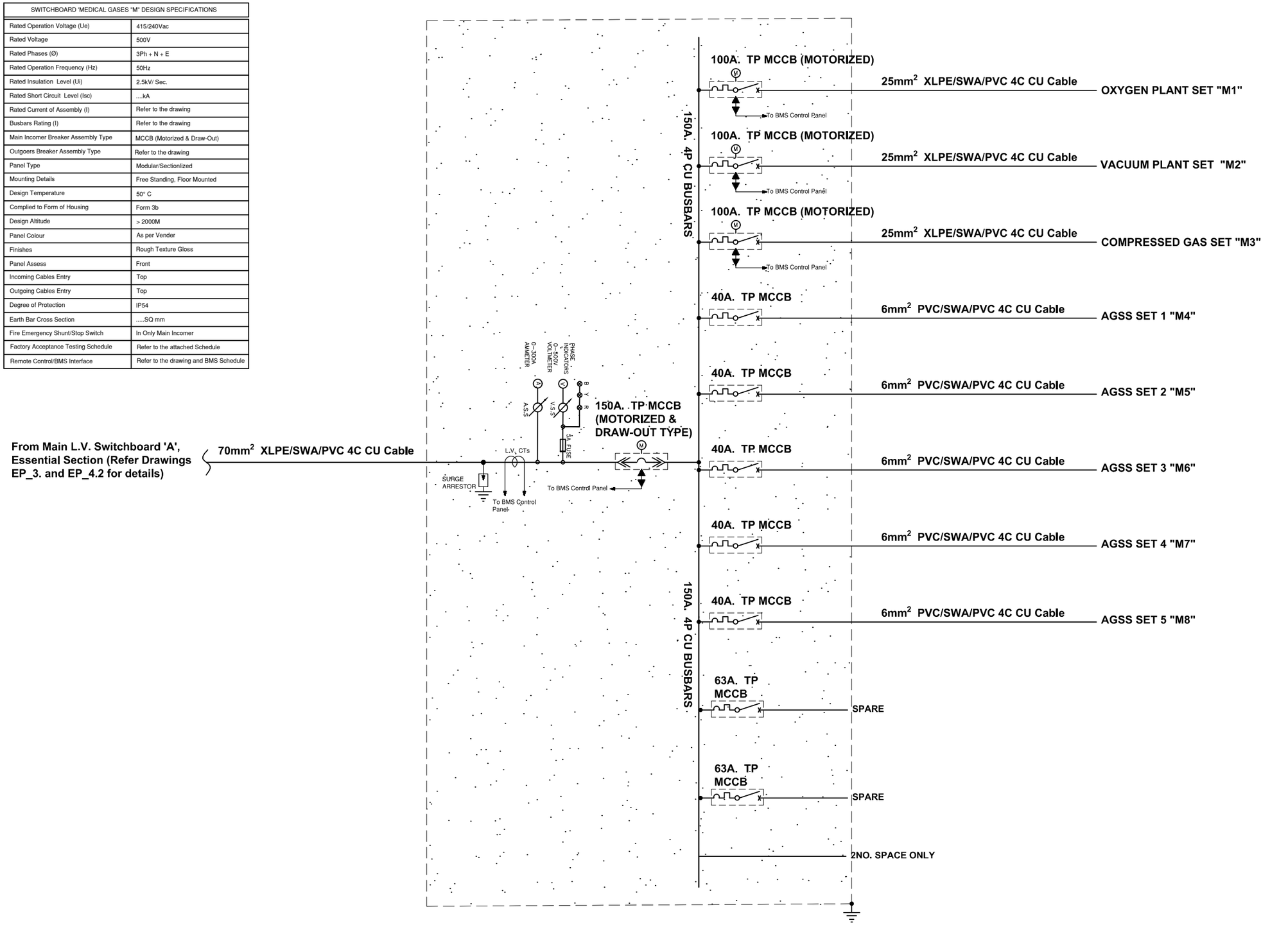
SWITCHBOARD 'MEDICAL GASES "M" DESIGN SPECIFICATIONS	
Rated Operation Voltage (Ue)	415/240Vac
Rated Voltage	500V
Rated Phases (Ø)	3Ph + N + E
Rated Operation Frequency (Hz)	50Hz
Rated Insulation Level (Ui)	2.5kV/ Sec.
Rated Short Circuit Level (Isc)	....kA
Rated Current of Assembly (I)	Refer to the drawing
Busbars Rating (I)	Refer to the drawing
Main Incomer Breaker Assembly Type	MCCB (Motorized & Draw-Out)
Outgoers Breaker Assembly Type	Refer to the drawing
Panel Type	Modular/Sectionlized
Mounting Details	Free Standing, Floor Mounted
Design Temperature	50° C
Complied to Form of Housing	Form 3b
Design Altitude	> 2000M
Panel Colour	As per Vender
Finishes	Rough Texture Gloss
Panel Assess	Front
Incoming Cables Entry	Top
Outgoing Cables Entry	Top
Degree of Protection	IP54
Earth Bar Cross Section	.....SQ mm
Fire Emergency Shunt/Stop Switch	In Only Main Incomer
Factory Acceptance Testing Schedule	Refer to the attached Schedule
Remote Control/BMS Interface	Refer to the drawing and BMS Schedule



PROPOSED MEDICAL GASES "M" SINGLE LINE WIRING DIAGRAM

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (MM) UNLESS OTHERWISE SPECIFIED.
2. ALL BUSBARS AND CABLES IN THE SWITCHBOARD SHALL BE COPPER.
3. ALL MAIN BUSBARS MUST BE THE SAME SIZE INCLUDING THE NEUTRAL BUSBAR.
4. ALL BUSBARS MUST BE ADEQUATELY BRACED.
5. INTERCONNECTIONS BETWEEN BUSBAR DROPPERS AND DEVICES SHALL COMPRISE COPPER BARS. CABLES SHALL NOT BE PERMITTED.
6. FLASH TESTS SHALL BE CARRIED OUT AT 2.5kV BEFORE AND AFTER TRIGGERING IN THE PRESENCE OF THE ENGINEER.
7. CURRENT TRANSFORMERS SHALL BE FIRMLY FIXED SQUARE TO BUSBARS FOR ACCURATE READINGS.
8. FIXING OF CABLES TO BUSBARS SHALL BE BY HIGH TENSILE 8.8 GRADE MILD STEEL BOLTS AND NUTS.
9. PANELS SHALL BE FIXED TO THE SWITCHBOARD FRAME BY METRIC HEX-HEAD MACHINE SCREWS OR HIGH TENSILE 8.8 GRADE MILD STEEL BOLTS AND NUTS.
10. BUSBARS SHALL BE FIXED TO AND SUPPORTED ON RECOMMENDED INSULATORS ONLY. SHELLITE SUPPORTS SHALL NOT BE ACCEPTED UNDER ANY CIRCUMSTANCES.
11. ALL TERMINALS AND BUSBARS SHALL BE ADEQUATELY SHROUDED TO AVOID IMMEDIATE ACCESS TO LIVE PARTS.
12. THE SWITCHBOARD SHALL INCORPORATE WARNING LABELS AS APPROPRIATE TO EXPOSURE OF LIVE PARTS.
13. THE SWITCHBOARD SHALL BE SECTIONALIZED TO PROVIDE ELECTRICAL SEPARATION TO AN ACCEPTABLE STANDARD IN ACCORDANCE WITH B.S. 5486 PART 5 1977 AND SHALL BE OF FORM TYPE 3B. THE DEGREE OF PROTECTION AGAINST INGRESS SHALL BE IP54.
14. COMPARTMENT PROTECTION AGAINST DIRECT CONTACT TO LIVE PARTS SHALL BE IP 54 WITH DOORS AND GASKET KIT.
15. THE SWITCHBOARD SHALL BE CAPABLE OF EXTENSION.
16. THE SWITCHBOARD SHALL BE TYPE TESTED ASSEMBLIES (TTA) IN COMPLIANCE WITH STANDARD IEC 61439 -1 AND COMPLY WITH KEBS/K BUREAU OF STANDARDS KS IEC - 61439.
17. THE SWITCHBOARD SHALL BE DESIGNED TO WITHSTAND A SHORT CIRCUIT LEVEL OF - - kA.
18. POWER AND CONTROL CIRCUITS SHALL BE SEPARATE AND COMPLETELY ISOLATED AND AUXILIARY CIRCUITS SHALL BE OF EXTRA-LOW VOLTAGE TYPE.
19. THE SWITCHBOARD AND ALL ITS COMPONENTS SHALL BE SUITABLY TROPICALIZED TO OPERATE SATISFACTORILY IN THE TROPICS AND MORE SPECIFICALLY AT THE ALTITUDE AND WEATHER CONDITIONS PREVAILING AT THE SEA LEVEL COASTAL SALINE ATMOSPHERE.

CLIENT

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DESIGN STAGE 3 Draft Final Design	DISCIPLINE ELECTRICAL
DRAWING NAME MEDICAL GASES "M" SINGLE LINE WIRING DIAGRAM LAYOUT	
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