



LV Main Switchboard Electronic IDMT Main Switchboard Demonstrator

Category: Electrical Engineering · Model reference: MZM-4016



SPECIFICATIONS

TECHNICAL SPECIFICATION :

1. Input Rating : 3 Phase, 400V AC, 50 Hz
- 1 no. Air Circuit Breaker 1000 Amp, 45kA, TPN, draw out type, manual spring charge, c/w Mechanical and Electrical Interlock.
2. Output :
 - 2 x 32 A TPN Switch Fuse
 - 2 x 32 A TPN MCCB
 - 2 x 63 A Fuse Switch
 - 1 x Distribution board c/w
 - 4 x 6 A MCB
 - 2 x 20 A MCB
 - 2 x 32 A MCB
 - 1 x 40 A Main Switch SPN
 - 1 x 40 A RCCB DP (100 mA)
- Spare Compartment
3. Instrument :
 - Digital power meter (2 unit)
 - Detection method : True RMS
 - Display : LCD
 - Detect frequency (Hz) : 45 – 65
 - Input Current Range : 5mA – 10A
 - Input Voltage Range : 0 – 300V AC
 - Mounting : Panel / DIN Rail
 - Communication : Modbus RTU/Modbus TCP/IP/Built-in Webserver
 - Analog (2 unit)
 - 1 x Ammeter c/w selector switch 0 – 500 A
 - 1 x Voltmeter c/w selector switch 0 – 500 V
 - 1 x Power Factor Meter
 - 1 set x Indicating Lights
 - 1 x kWh meter 3 phase (digital type)
 - 1 x 20 A MCCB – for 1 x 5 kVAR Capacitor Bank
4. Protective Device
 - 1 x Earth Fault Relay
 - 1 set x Protective Device IDMT O/C (Electronic Type)
5. Capacitor Bank
 - 1 x Power Factor Regulator minimum 5 step c/w built in Current Transformer)
 - 1 x 200 A MCCB – for Capacitor Bank busbar
 - 2 x 30 A MCCB – for 2 x 10 kVAR Capacitor Bank
 - 2 x 45 A MCCB – for 2 x 15 kVAR Capacitor Bank

1.6 Safety Equipment

- a. 1 No. of Rubber Mate 1000V (Standard size - for MSB)
- b. 1 No. of Safety Helmet.
- c. 1 Pair of Leather Glove 1000V
- d. Caution notice (1 No. of "AWAS", 3 No. of "DANGER", 3 No. of "BAHAYA", 3 No. "WORK IN PROGRESS") refer to Electrical Regulation 1994 (Regulation 38)
- e. Labelling - All Part Instrument Panel I equipment such as Breaker, Metering, Protection Devices, outgoing, Capacitor Bank and others.
- f. Both feeder must be connected to four hour artificial loading unit to show the increasing I decreasing the current only.
- g. CPR chart refer to Electrical Regulation 1994 (Regulation 39) and CO2 fire extinguisher refer to Regulation 40
- h. Protection equipment will be calibrate at the site (SAT)
- i. 2 no. of Three-pole Earthing and Short Circuiting Devices:
 - Clamping range 55mm
 - Cable cross-section 25/25 mm²
 - Max. short-circuit current I_k 0.5s 7.0kA
 - Max. short-circuit current I_k 1s 4.9kA
 - Standard EN/IEC 61230 (DIN VDE 0683 Part 100)
 - Temperature range –25°C + 55°C
 - Material (clamp body) MCl/gal Zn
 - Material (pressure plates) copper alloy
 - Material (short circuiting cables) highly flexible copper

1.7 General Specification

a. Construction

The LV MSB is modular, contained, suitable for both front back access. The Switchboard Construction is Fabricated

b. Paint Work

The Heavy Sheet Steel is treated with the trust in habiting primer, following by coatings of top quality epoxy powder paint and oven bake to 200C to obtain good adhesive.

c. Technical Data The LV MSB is suitable for 400V, 3 phase, 4 wire and 50 Hz system. It is designed to with stand a fault level of 31 MVA.

d. Busbars are of hard drawn high conductivity copper with current density of 400A per sq. In color coating identification for the bus bar are as below:

i. Red - for red phase

ii. Yellow - for yellow phase iii. Blue - for blue phase

iv. Black - for neutral

e. Supply with 2 termination box c/w 5 x 400 Amp copper terminal (R, Y, B, N, & E) and 4 x 35mms amour cable.

CONSTRUCTION

- Marking: Engraved or silk-screened legends
- Storage: 1 compartments for storing miscellaneous item like hand tools, etc.
- Console: Heavy Sheet Steel
- Finish: Baked epoxy powder in matching grey duty castors
- Mounting : 6 Unit Heavy Duty Castors Wheel

