

## **AMF Technical Specification**

### **1. Scope of work:**

- i. Design, Supply, installation, testing and commissioning of PLC based AMF panel for 82.5KVA DG Model/make-KOEL/kirloskar, type -4R1040TA.
- ii. Vendor shall submit GA drawing, electrical circuit drawing for approval to Niman power.
- iii. Vendor shall arrange installation engineer on the intimation of 2-3 days in advance.
- iv. Warrantee: not less than 12 months from the date of commissioning or 18 months from the date of supply.
- v. Scope includes Supervision & assistance for commissioning including wiring, termination, special tools, if any and testing at site.
- vi. Delivery Location- Noida UP

### **2. Technical specification of AMF control panel:**

- i. The AMF (automatic mains failure) panel should be made out of well painted 14/16SWG sheet Steel enclosure with necessary components like mains contactor, control relays, timers, bus bars, Protective relays, metering, battery charger, indication annunciation system etc.
- ii. The AMF panel has necessary protection like short circuit, over current, under voltage etc.
- iii. The AMF panel shall be floor mounting, cubical type, indoor, dust and worm in proof, totally enclosed, made out of 14/16SWG sheet steel, having hinged door with removable type bottom gland plates, powder coated after 7 tank pretreatment process.
- iv. 250A capacity PVC sleeved (with colour code) Aluminium bus-bar for all the 3 phases and 150A capacity for Neutral.
- v. The bus-bar should be well supported by 1.1kV grade resin compound mould / porcelain material.
- vi. The AMF should have facility of alarm/reset, test, Start/stop / auto start/stop and emergency stop with necessary control relays.
- vii. the panel should have necessary DC/AC aux. relays, control fuses, MCBs, indication facility like low oil pressure, high temperature, under /over speed, low oil level, genset running etc.
- viii. Feature of AMF: auto start when main fails and auto stop when main restores.
- ix. Auto battery charger shall be provided, suggestible by main incoming.
- x. Terminal block 04 nos. of suitable size or bus link shall be provided for taking load.

- xi. The display menu shall be provided like engine temperature, battery voltage, fuel status, oil temperature, engine running hours, genset voltage, current, frequency, KW/KVA etc.
- xii. AMF panel have engine monitoring facility like engine over/under speed, lubrication oil pressure, engine temperature, battery charging fuel level, oil temperature, recording of running hours etc.

### **3. General**

- i. All bus bar should be sleeved with color code matching with phase.
- ii. Control wire is not less than 1.5 sqmm copper flexible with white/gray color.
- iii. Legend should be provided for all on/off/trip etc.
- iv. Control logic should be designed such that it may be started in test mode although main is not fail.
- v. Generator should start after 2 or 3 minutes when main power fails.
- vi. Vendor should provide an operation manual.

### **4. Components Make**

- i. MCB: - ISI where applicable
- ii. MCCB: - ISI where applicable
- iii. Contractor: - ISI where applicable
- iv. Meters analog: - ISI where applicable
- v. CT: - ISI where applicable