

LV GENERATION, TRANSMISSION AND DISTRIBUTION SYSTEM (AMF PANEL GENERATOR AND SYNCHRONIZING GENERATOR SET C/W RLC)



Model Number : DDC-AMFS-250M + Load Bank

Description

The Standard Lab has been designed for experiments and testing in Electrical Machines in education. This is a typical electrical power generating station complete with synchronizing board but specially adapted for instructional purposes, as the supply requirement for the system operation requires 240/415V, 50Hz. 2 x 50kVA Engine Diesel Generator Set (Canopy Type), 1 x Generator Synchronizing Board, 1 x AMF Board, 1 x Load Bank System .



TECHNICAL SPECIFICATION :		
<p>METERING & CONTROL PANEL SYSTEM</p> <ul style="list-style-type: none"> ❖ 2 x 250A Motorized circuit breaker, TP&N, 50Hz, 50kA c/w under voltage trips coil. ❖ 2 x Set of AMF Control Panel consists of generator set signal pilot lamps, HR meter, battery charger, DC Ammeter and DC Voltmeter. ❖ 2 x Overcurrent relay. ❖ 2 x Earth fault relay. ❖ 2x Set of Current transformer for protective relay. ❖ 2x Set of Current transformer for measuring meters and synchronizing modules. ❖ 2 x Voltmeter c/w selector switch. ❖ 2 x Ammeter c/w selector switch. ❖ 2 x Kilowatt meter. ❖ 2 x Digital power meter. ❖ 2 x Kilowatt hour meter. ❖ 2 x Power factor meter. ❖ 2 x Frequency meter. ❖ 2 x Reverse power relay. ❖ 6 x Phase indicating light. ❖ 2 x Set of control fuses. ❖ 2 x Synchronizing key switch. <p>Auto/Manual Synchronizing Panel Set :</p> <ul style="list-style-type: none"> ❖ 1 x Double voltmeter. ❖ 1 x Double frequency meter. ❖ 1 x Synchro scope. ❖ 2 x Synchronizing lamp. ❖ 1 x Voltage trimmer. ❖ 1 x Speed control trimmer. ❖ 1 x Auto synch module. ❖ 1 x Load sharing module. 	<p>AUTOMATIC MAIN FAILURE BOARD</p> <p>Incoming Section</p> <ul style="list-style-type: none"> ❖ 1 x 630A TPN, 415V, 50Hz, Motor Operated Air Circuit Breaker (draw-out type) c/w Under Voltage Trip Coil ❖ 1 x 630A, 4 poles Automatic/Manual Changeover Contactor ❖ 1 x 630A TPN, 415VAC, 50Hz MCCB <p>Outgoing Section:-</p> <ul style="list-style-type: none"> ❖ 2 x 63A TPN MCCB c/w shunt trip coil & ELR ❖ 2 x 100A TPN MCCB c/w shunt trip coil & ELR. ❖ 1 x 150A TPN MCCB c/w shunt trip coil & ELR ❖ 1 x 200A TPN MCCB c/w shunt trip coil & ELR. ❖ 1 OOA Isolator ❖ 1 x Lightning Arrestor ❖ 1 x Essential By-Pass panel for UPS consisting of: ❖ 2 x 150A 4P Isolator with castle key ❖ 2 x 1 OOA 4P Isolator with castle key 	<p>ENGINE DIESEL GENERATOR SET</p> <p>Engine Diesel , CUMMINS ,4BTA3.9</p> <ul style="list-style-type: none"> ❖ Engine power: 50kW ❖ Number of cylinders: 4 ❖ Cylinder arrangement: vertical in-line ❖ Cycle: 4 stroke ❖ Induction system: turbocharged, after water-cooled ❖ Combustion system: direct injection ❖ Cooling system: water-cooled <p>Alternator , STAMFORD, UCI224D</p> <ul style="list-style-type: none"> ❖ 3 -Phase 415VAC 50Hz, Prime 50kVA, Standby 55kVA ❖ Power Factor: 0.8 ❖ 4-poles, 1500 min-1 ❖ Class H insulation system, impregnated with high grade resin ❖ Maximum ambient temperature: 40°C ❖ Designed in compliance with IEC 60034-1, BS 4999-5000 ❖ Three-phase synchronous generator, selfexciting, by means of a brushless type excitation system



TECHNICAL SPECIFICATION :		
<p>LOADING UNIT RESISTIVE 40kW System is rated for 40kW, 3 phase, 415V AC, 50Hz and consists of the following</p> <ul style="list-style-type: none"> ❖ 1 x Moulded Case Circuit Breaker 1 00A, TP&N 50Hz, and 50kA c/w shunt trip and Earth Leakage Relay. ❖ 1 x Ammeter 0-1 00A c/w selector switch. ❖ 1 x Voltmeter 0-500V c/w selector switch. ❖ 3 x Phase Indicating light (R, Y, B). ❖ 1 x set of Control fuses. ❖ 1 x set of Current Transformer for measuring meter. ❖ 1 x Set of 1 00A bus bar. ❖ 1 x Sheet metal console. ❖ 6 x Push buttons (green) ❖ 6 x Push buttons (red) <p>Load Bank Console</p> <ul style="list-style-type: none"> ❖ 6 x Resistive load banks of combination of 1kW, 2x 2kW, 5kW, 10kW and 20 kW ❖ 6 x Miniature Circuit Breaker TP, 1 0kA assorted amp rating according to the resistive load bank. ❖ 6 x Contactor. ❖ 9 x Cooling fan c/w thermostat & Miniature Circuit Breaker SP ❖ 1 x Thermal switch 75°C to prevent from over heating ❖ 1 x Sheet metal Console. 	<p>LOADING UNIT INDUCTIVE 40 KVAR System is rated for 40kVar, 3 phase, 415VAC, 50Hz and consists of the following:</p> <ul style="list-style-type: none"> ❖ 1 x Moulded Case Circuit Breaker 1 00A, TP&N 50Hz and 50kA c/w shunt trip and Earth Leakage Relay. ❖ 1 x Ammeter 0-1 00A c/w selector switch. ❖ 1 x Voltmeter 0-500V c/w selector switch. ❖ 3 x Phase Indicating light (R, Y, B). ❖ 1 x set of Control fuses ❖ 1 x set of Current Transformer for measuring meter. ❖ 1 x Set of 1 00A bus bar. ❖ 1 x Sheet metal console. ❖ 6 x Push buttons (green). ❖ 6 x Push buttons (red). ❖ 6 x Indicating lights. <p>Load Bank Console</p> <ul style="list-style-type: none"> ❖ 6 x Inductive load banks of combination of 1KVAR, 2x 2KVAR, SKVAR, 10KVAR and 20KVAR. ❖ 6 x Miniature Circuit Breaker TP, 1 0kA assorted amp rating according to the inductive load bank. ❖ 6 x Contactor. ❖ 1 x Cooling fan c/w thermostat & Miniature Circuit Breaker SP ❖ 1 x Sheet metal Console. 	<p>LOADING UNIT CAPACITIVE 40kVAR System is rated for 40kVar, 3 phase, 415VAC, 50Hz and consists of the following:</p> <ul style="list-style-type: none"> ❖ 1 x Moulded Case Circuit Breaker 100A, TP&N 50Hz, 50kA c/w shunt trip and Earth Leakage Relay. ❖ 1 x Ammeter 0-100A c/w s/switch. ❖ 1 x V-meter 0-500V c/w s/switch. ❖ 3 x Phase Indicating light (R, Y, B). ❖ 1 x set of Control fuses. ❖ 1 x set of Current Transformer for measuring meter. ❖ 1 x Set of 1 00A bus bar. ❖ 1 x Sheet metal console. ❖ 6 x Push buttons (green). ❖ 6 x Push buttons (red). ❖ 6 x Indicating lights. <p>Load Bank Console</p> <ul style="list-style-type: none"> ❖ 6 x Capacitive load banks of combination of 1KVAR, 2x 2KVAR, 5KVAR, 10KVAR and 20KVAR. ❖ 6 x Miniature Circuit Breaker TP, 10kA assorted amp rating according to the capacitive load bank. ❖ 6 x Contactor. ❖ 1 x Cooling fan c/w thermostat & Miniature Circuit Breaker SP ❖ 1 x Sheet metal Console.

Manuals :

- (1) All manuals are written in English
- (2) Programming Manual (CD Format)
- (3) Teaching Manuals (CD Format)
- (4) Training manual

General Terms :

- (1) Accessories will be provided where applicable
- (2) Manuals & Training will be provided where applicable
- (3) Designs & Specifications are subject to change without notice
- (4) We reserve the right to discontinue the manufacturing of any product.

Warranty :

2 Years

* Proposed design only, subject to changes without any notice.