

1. Generator Load Bank LS Series

Sephco LS series load banks are completely self-contained, incorporating resistive elements, load contactors for each load group, individual load group circuit breakers, load bank protection devices, main load bus, auxiliary terminals, fan cooling systems, malfunction detection system, unit controller, and (IP54) type segregated control enclosure. The load bank is manufactured under ISO9001:2015 quality assurance, completely weather-proofed for outdoor installation.

Sephco LS series load banks are generally used for permanent on-site installation for standby or primary power generators. The load bank is for supplementing the plant load during a low-load condition and maintaining the generator at a constant load, eliminating wet-stacking and cylinder glazing. The load bank can also be used for periodic exercise and testing of the generator.

Note : For base loads or 24 hour/7 day a week operation, please consult with the factory.

KW Size & Model No.

AS specified

2. Load Bank Design

The load bank is completely self-contained, free standing unit, incorporating all resistive elements, load contactors for each load group, individual load group circuit breakers, load bank protection devices, main load busbars, auxiliary terminals, fan cooling systems, malfunction detection system, unit controller, remote control facility and IP54 type segregated control enclosure with IP65 rated resistor cooling chamber.

3. General Construction

Resistors

Load resistors are fully sealed stainless steel finned, stainless steel sheath type, immersion proof and vibration proof, impervious to heavy rain conditions. Resistors are calibrated to within 5% of their rated value, tested to 2kV and individually grounded. Resistor connections are light gauge nickel-plated copper bus links, connected in groups of 50kw maximum and arranged to minimize strain on resistor terminals. All connections of the resistor groups to the corresponding switchgear is made using 125°C rated IEC 60228/AS/NZS1125 multi-stranded flexible cable.

4. Construction

Load bank's body panels and control compartment is constructed from 2mm (Zincanneal) zinc-impregnated steel (Patented), incorporating removable panels for access to resistors. The Load Bank shell is mounted onto a fully hot dipped galvanized chassis frame with forklift pockets. Air inlet and outlet are fully protected by grills having 12mm X 25mm maximum opening. Air cooling is vertical flow discharge, so adjacent equipment and

personnel are not affected. The control and electrical cabinet is incorporated as an integral part of the load bank but segregated from the resistor section.

Load bank switchgear enclosure is constructed with full gutter surround, fitted with lift off type hinges, security type locks and wire reinforced neoprene door gaskets

5. PAINT FINISH

All panels and final assembly are cleaned, pre-treated and finished in Dulux Polyester Powder Coat White Gloss. Load bank base frame assembly is fully hot-dip galvanised and finished in Dulux Polyester Powder Coat Black Gloss.

For marine environments, optional stainless steel construction is available. External screws and bolts are #316 stainless steel material.

6. Cooling Fans

The load bank's cooling design ensures that the control enclosure does not rise above 40°C above ambient at full load. Fan motors are rated at 940 RPM IP55, each protected by thermal overloads and circuit breakers.

7. Safety Interlocks

Load bank incorporates a triple interlock protection system for each fan motor fitted, protection against fan failure, airflow restriction, high temperature and fan reversal.

8. Fan Run On- Cool Down

An automatic fan run-on for a period of five minutes automatically activates on load dump, fan shut down signal or on tripping of the fan interlock protection system.

9. Switchgear and Auxiliaries

All load groups are evenly balanced and switched by suitably rated mechanical contactors. Each load group is protected by a dedicated re-settable circuit breaker.

10. LSM800MB Load Bank Controller

The load bank is fitted with the Smartload LSM800MB control processor, which monitors the load bank fan interlock systems, such as thermostats, airflow switches and fan motor thermal overload devices. The controller is field settable where, it can be set from 0-100% loading of the generator. Other settings include start time delay, load step ramp time and CT value. Settings stay in memory even when not operating or power disconnected.

Initiating the controller and load bank operation is with a remote voltage free signal. The LSM800MB incorporates an LCD screen, which indicates the kW activated and load bank fault status or condition.

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Automatic Loadbanks To Maintain Generators Under Load – Type LS Series

11. The LS800MP remote controller is available as an option, used as a manual override control panel for exercising and testing of the generator. The LS800MP can also be used as a remote display during the automatic operation of the load bank.

LS800MP Remote Manual Override Control Panel

- LS800MP Remote “Mimic” Control Panel – Manual Override Operation
- Multi-Function OLED Blue on Black 2 Line display
- LED - Load Bank “COOLING FAULT” indication
- LED - Load Bank “COOL-DOWN” indication
- LED - →→ Load Bank “FAN ON” indication
- Touch key button operation
- “AUTO/MANUAL” selection button
- “MENU” button
- “UP” & “Down” buttons
- “ENTER” (Master) button
- Full access to LSM800MB Controller settings for remote adjustment
- Automatic load dump contacts to transfer switch.
- Automatic Exercising Function