

Features:

- Excitation system: self-excited (AREP and PMG are optional)
- ATS (automatic transfer switch) receptacle
- Lockable battery isolator switch
- Stainless galvanized zinc plates with strong corrosion resistance
- Vibration isolators between the engine/alternator and base frame
- Integrated wiring design
- Base fuel tank for at least 8 hours running
- Equipped with an industrial muffler
- Engine oil pump
- 50 C radiator
- Top lifting and steel base frame with forklift holes
- Drainage for fuel tank
- Complete protection functions and safety labels
- IP54 (soundproof sets), IP56 (control system)
- Water jacket preheater, oil heater and double air cleaner, etc. are available.



Output Ratings

Generating Set Model	Prime	Standby
EP800	800kVA/640kW	880kVA/704kW

Ratings at 0.8 power factor.

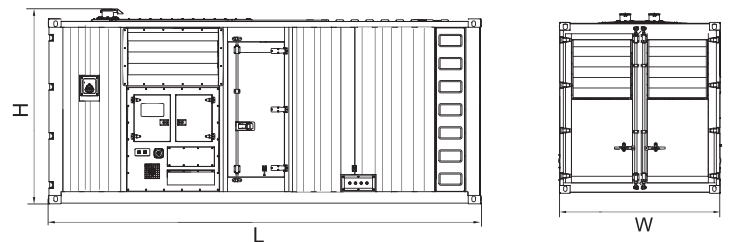
Ratings and Performance Data

Engine Make & Model:	4006-23TAG3A	
Alternator Model:	LSA49.1M75	
Alternator Brand:	Leroy Somer	
Control System:	PLC-7420	
Noise Level@7m:	/	
Circuit Breaker Type:	/	
Frequency & Phase:	50Hz & 3PH	
Engine Speed: RPM	1500	
Structure Type:	EP800	C
Fuel Tank Capacity: L	EP800	1150
Fuel Consumption: l/hr (100% Load)	Prime	/
	Standby	/

Dimensions and Weights

Generating Set Model	Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	Dry kg (lb)	Wet kg (lb)
EP800	6058	2438	2725	11248	/

Dry = With Lube Oil Wet = With Lube Oil and Coolant



Also available in the following voltages: 415/240V-380/220V-220/127V-200/115V;

ESP: Standby Power Standby duty, operation under variable load, without over load;

PRP: Prime Power-Continuous duty operation, under variable load 24/24h-10% over load permissible 1 hour/12 hours;

The data is only for your reference but not for use of sales.

M: Mechanical speed governor, E/ECCU: Electronic speed governor;

NA: Naturally aspirated, TC: Turbocharged, TCA: Turbocharged and air-air aftercooled. TCW: Water-cooled Turbocharged;

The weights are approximate and without fuel.

Engine model: 4006-23TAG3A

Cooling system

Recommended coolant: 50% inhibited ethylene glycol or 50% inhibited propylene glycol and 50% clean fresh water. For combined heat and power systems and where there is no likelihood of ambient temperature below 10°C, then clean 'soft' water may be used, treated with 1% by volume of Perkins inhibitor in the cooling system. The inhibitor is available in 1 litre bottles from Perkins.

Nominal jacket water pressure in crankcase. 170 kPa
 Maximum top temperature (standby) 98°C
 Maximum static pressure head on pump 7 m
 Draw down capacity 22 litres
 Maximum permissible restriction to coolant pump flow. 20 kPa
 Thermostat operating range..... 71 - 85°C
 Ambient cooling clearance (open ElectropaK prime power) based on air temp at fan 3°C above ambient.

Temperate

Maximum additional restriction (duct allowance) to cooling airflow. (TAG2A and TAG3A standby power) and resultant minimum airflow					
Ambient clearance: 50% Glycol		Duct allowance mm H ₂ O		Min airflow m ³ /sec	
rev/min		rev/min		rev/min	
1500	1800	1500	1800	1500	1800
36°C	39°C	25	25	13	16

Tropical

Maximum additional restriction (duct allowance) to cooling airflow. (TAG2A and TAG3A standby power) and resultant minimum airflow					
Ambient clearance: inhibited coolant		Duct allowance mm H ₂ O		Min airflow m ³ /sec	
rev/min		rev/min		rev/min	
1500	1800	1500	1800	1500	1800
50°C	50°C	13	20	20	22

The above information at 1500 rev/min applies for ½ TA Luft and Best SFC ratings.

Radiator

Face area 2,56 m²
 Rows and materials..... 3 rows of brass tubes

Gills per inch and material

-jacket water..... Copper fin at 14 gills/in
 -charge air section..... Copper fin at 10 gills/in

Width and height of matrix

-height 1600 mm
 -width..... 1606 mm
 Weight (dry) radiator 570 kg
 Total coolant capacity 105 litres

Charge cooler, integral with radiator

Face area 2.56 m²

Coolant pump

Speed and method of drive 1.4 x e rev/min Gear

Fan

Type Engine mounted
 Speed:
 -1500 1170 rev/min
 -1800 1404 rev/min

Diameter 1,2 m
 Number of blades:
 -Temperate 6
 -Tropical 8
 Material..... Steel
 Drive ratio 0.78:1

Lubrication system

Recommended lubricating oil to conform with the specification of API CG4 15W/40

Lubricating oil capacity

-sump maximum 113,4 litres
 -sump minimum 90,7 litres

Lubrication oil pressure at rated speed

Minimum 240 kPa
 Oil relief values open 300 kPa
 Oil filter spacing 40 microns
 Sump drain plug tapping size G1
 Oil pump speed and method of drive 1.4 x e rev/min, gear

Oil pump flow

-1500 rev/min 3,7 litres/sec
 -1800 rev/min 4,4 litres/sec
 Oil consumption as a percentage of full load fuel consumption less than 0.25%

Normal operating angles

Front and rear 5°
 Side tilt 10°

Electrical system

Type Insulated return
 Alternator 40 amps at 28 volts, stabilised output at 20°C ambient
 Starter motor 7,5 kW
 Number of teeth on flywheel..... 190
 Number of teeth on starter motor 12
 Minimum cranking speed 120 rev/min
 Pull in current of starter motor solenoid..... 30 amps at 24 volts
 Hold in current of starter motor solenoid 9 amps at 24 volts
 Engine stop solenoid 24 volts
 Pull in current of stop solenoid 60 amps at 24 volts

Fuel system

Recommended fuel To conform to BS2869 1998 Class A1, A2
 Type of injection system Direct injection
 Fuel injector Combined unit injector
 Fuel injector pressure 220 ATS (NOP) 1400 bar maximum operating pressure

Induction system

Maximum air intake restriction of engine

-clean filter 127 mm H₂O
 -dirty filter 380 mm H₂O
 -air filter type dry - paper

Exhaust system

Exhaust outlet size (internal) 2 x 152,4 mm

Exhaust back pressure for total system

-TAG2A 610 mm H₂O
 -TAG3A 610 mm H₂O
 For recommended pipe sizes see the Installation Manual.

Alternator model: LSA49.1M75

SPECIALLY ADAPTED FOR APPLICATIONS

The LSA 49.1 alternator is designed to be suitable for typical generator applications, such as: backup, standard production, cogeneration, marine applications, rental, telecommunications, etc.

COMPLIANT WITH INTERNATIONAL STANDARDS

The LSA 49.1 alternator conforms to the main international standards and regulations:

IEC 60034, NEMA MG 1.22, ISO 8528, CSA, CSA/UL, marine regulations, etc.

It can be integrated into a CE marked generator.

The LSA 49.1 is designed, manufactured and marketed in an ISO 9001 environment.

TOP OF THE RANGE ELECTRICAL PERFORMANCE

- Class H insulation.
- Standard 6-wire re-connectable winding, 2/3 pitch, type no. 6.
- Voltage range 50 Hz : 380V - 400V - 415V and 220V - 230V - 240V ,
- Voltage range 60 Hz : 380V - 416V - 440V - 480V and 220 V - 240 V.
- High efficiency and motor starting capacity.
- Other voltages are possible with optional adapted windings :
 - 50 Hz : 440 V (no. 7), 500 V (no. 9), 600 V (no. 22 or 23), 690 V (no. 10 or 52)
 - 60 Hz : 380 V and 416 V (no. 8), 600 V (no. 9).
- THD Total harmonic distortion < 4% (full load).
- R 791 interference suppression conforming to standard EN 55011 group 1 class B standard for European zone (CE marking).

EXCITATION AND REGULATION SYSTEM SUITED TO THE APPLICATION

Voltage regulator	Excitation system		Regulation options				
	AREP	PMG	Current transformer for paralleling	R 726 Mains paralleling	R 731 3-phase sensing	R 734 3-phase sensing mains paralleling unbalanced	Remote voltage potentiometer
R 450	Std	Option	√	√	√	√	√
D 510	Optional	Optional	√	Included	Included	contact factory	√

Voltage regulator accuracy +/- 0.5%.

√ : possible mounting

PROTECTION SYSTEM SUITED TO THE ENVIRONMENT

- The LSA 49.1 is IP 23.
- Standard winding protection for clean environments with relative humidity ≤ 95 %, including indoor marine environments.
- Options : - Filters on air inlet : derating 5%.
 - Filters on air inlet and air outlet (IP 44) derating 10%.
 - Winding protections for harsh environments and relative humidity greater than 95%.
 - Space heaters.
 - Thermal protection for winding.

REINFORCED MECHANICAL STRUCTURE USING FINITE ELEMENT MODELLING

- Standard direction of rotation : clockwise when looking at the drive end view (engine side).
- Compact and rigid assembly to better withstand generator vibrations.
- Steel frame.
- Cast iron flanges and shields.
- Twin-bearing and single-bearing versions designed to be suitable for engines on the market.
- Half-key balancing.
- Regreasable bearings.
- Standard direction of rotation : clockwise when looking at the drive end view (for anti-clockwise, derate the machine by 5%).

ACCESSIBLE TERMINAL BOX PROPORTIONED FOR OPTIONAL EQUIPMENT

- Easy access to the voltage regulator and to the connections.
- Possible clusion of accessories for paralleling, protection and measurement.
- Connection bar for reconnecting voltage .

Control System

PLC-7420

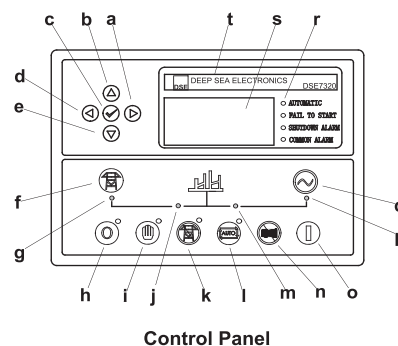
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, breaker control and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and display all values and alarms information on the LCD. In addition, the control module can automatically shut down the engine and indicate the engine failure.

FEATURES

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the mains supply and genset
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections; multiple parameters display, like pressure, temp. etc.
- Manual, automatic and remote work mode selectable
- Real time clock for time and date display, overall runtime display, 250 log entries
- Overall power output display
- Integral speed/frequency detecting, telling status of start, rated operation, overspeed etc.
- Communication with PC via RS485 OR RS232 interface, using MODBUS protocol



- a Button (next page)
- b Button (increase value / previous item)
- c Button (accept)
- d Button (previous page)
- e Button (decrease value / next item)
- f Button (transfer the load to the mains supply, when in Manual mode only)
- g Mains supply available LED
- h Stop / Reset button
- i Manual button (Manual control mode)
- j Mains supply on load LED
- k Test button (Test mode)
- l Auto button (Auto mode)
- m Genset on load LED
- n Mute/Lamp test button
- o Start button (Manual)
- p Genset available LED
- q Button (transfer the load to the genset, when in Manual mode only)
- r Alarm LED (4 alarm items)
- s LCD display
- t Control module name



Control Panel