

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- China Compulsory Certification (CCC)
- ISO8528-5:2005
- GB/T2820.5-2009

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 45°C. The coolant heater is needed when the temperature is below 5°C
- Humidity: Less than 80%.
- Altitude: Below one thousand (1000) meters.

Factory Inspection

- Inspection items.
- Protection devices working test.
- Starting ability in normal temperature.
- 50% rated power load moment capability.
- Voltage deviation and speed variation: 0%, 25%, 50%, 75%, 100%, 110% Load.

Painting Process

- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

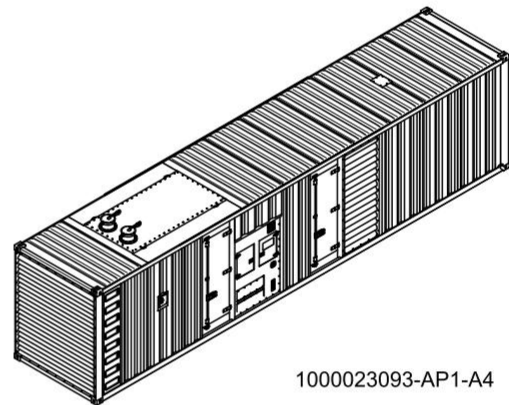
2 General Features

- Perkins engine 4016TAG2A
- Close coupled to a Leroy Somer alternator LSA51.2M60
- Microprocessor control module PLC-8610
- ABB main circuit breaker: 3200A
- Rotate speed governor: Electronic fuel injection governor
- Excitation System: AREP
- A.V.R. Model: R448
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V/150AH sealed for life maintenance free battery
- Lockable battery isolator switch

- Powder coated canopy
- 50°C radiator
- Fire extinguisher
- Oil pump on the engine
- Steel base frame with forklifts
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Fuel tank for 4 hours running
- Drain points for fuel tank
- Fuel inlet pump and it's control box for the fuel tank
- Added fuel-water separator for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data

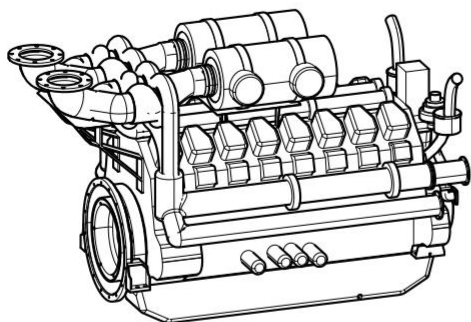


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Model.....P2000D5
 Structure type..... C
 Tank capacity.....2000L
 Dry weight..... 24088kg
 Noise level @7m N/A
 Dimensions L×W×H..... 12192×2438×3150mm
 Standby Power 2100kVA/1680kW
 Prime Power 2000kVA/1600kW

Voltage	380V	400V	415V	440V	
Ampere	3039A	2887A	2782A	2624A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	112	212	326	447	488

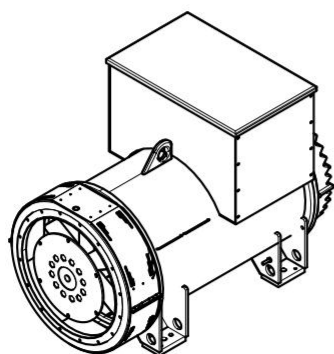
Diesel Engine



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Engine Manufacturer/Brand.....	Perkins
Engine Model.....	4016TAG2A
Dimensions L×W×H.....	3302×1723×2128mm
Dry Weigh (approx.)	5570kg
Number of Cylinders.....	16
Bore.....	160mm
Stroke.....	190mm
Displacement.....	61.12L
Compression Ratio.....	13.6
Type of Injection	Direct injection
Intake System.....	Turbocharged
Intake Resistance.....	≤3.7kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	24V
Type of Fuel.....	BS2869 1998 Class A1, A2
Type of Oil	API CG4 15W/40
Oil Capacity	214L
Type of Coolant	Glycol mixture
Coolant capacity.....	316L
Back Pressure	≤6.6kPa
Standby Power	1937kW
Prime Power	1766kW
Fuel Consumption(100%load).....	209g/kW.h

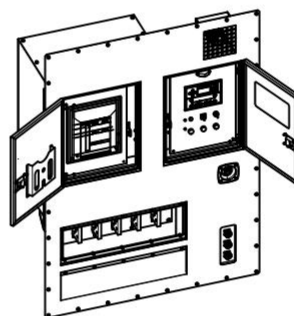
Alternator



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Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA51.2M60
Exciter.....	Brushless
Cooling Fan	Cast alloy aluminum
Windings.....	100% copper
Insulation Class	H
Winding Pitch.....	2/3
Terminals	6
Drip Proof	IP23
Altitude.....	≤1000m
Overspeed	2250rpm
Air Flow.....	2.5m³/s
Excitation System.....	AREP or PMI
A.V.R. Model.....	R449
Voltage Regulation	±0.5%
Sustained Short-circuit Current	300% (3 IN) : 10s
Total harmonic TGH / THC	< 2.5%
Telephone Interference.....	THF<2%;TIF<50

PLC-8610 Control System



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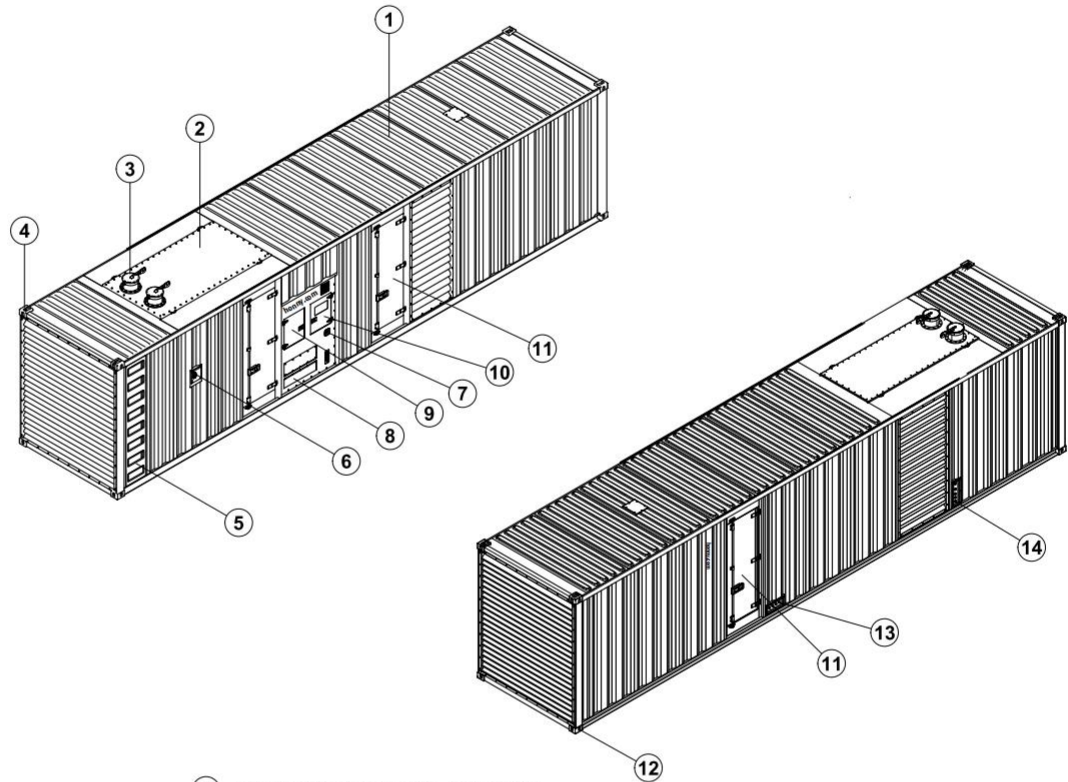
PLC-8610 is a microprocessor based control unit containing all necessary functions for protection of the genset and the breaker control. Furthermore, it contains all necessary three-phase measuring circuits and presents all values and alarms on the LCD display. The module has the function of load sharing which enables the module to share the active load (kW) equally when operating in parallel with other gensets. The load sharing is performed so each genset takes a portion of the load that is calculated in percent according to the nominal power.

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the 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
- RS232 & RS485 can be used at the same time
- Real time clock for time and date display, overall runtime display, 250 log entries

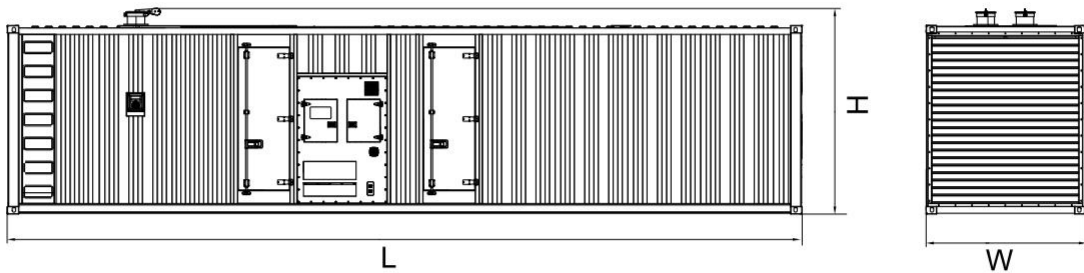
4 Overall Dimensions

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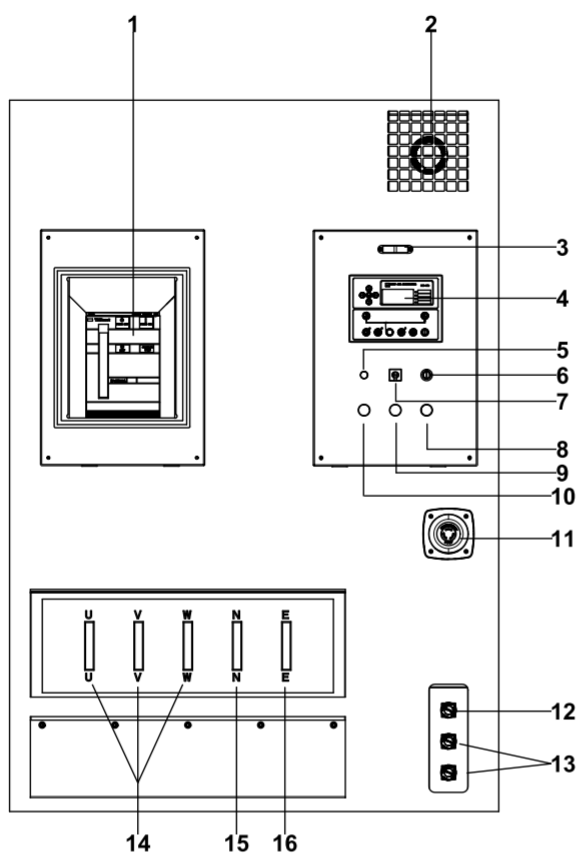
Dry weight	24088kg
Fuel tank capacity	2000L
Dimensions L x W x H	12192x2438x3150mm



- | | |
|-------------------------|---|
| ⑦ Emergency stop switch | ⑭ External fuel inlet/return hose fitting |
| ⑥ Fuel inlet | ⑬ External fuel inlet/return hose fitting
Coolant/Oil drain hose fitting |
| ⑤ Ladder | ⑫ Fixing lug |
| ④ Lifting lug | ⑪ Access door |
| ③ Exhaust gas outlet | ⑩ Switch cabinet |
| ② Muffler | ⑨ Control cabinet |
| ① Canopy | ⑧ Cable trench |

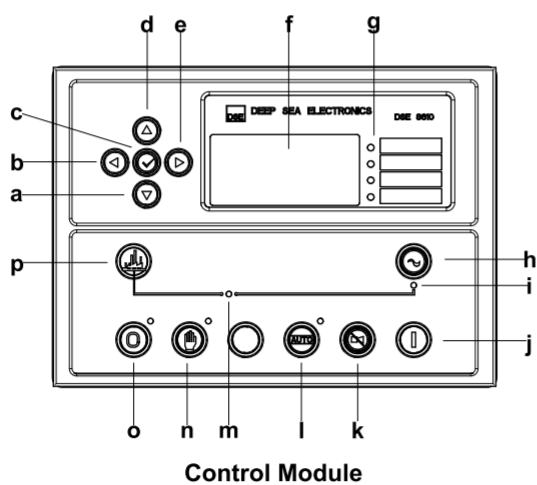


5 Control System



Ref.	Description
1	Main circuit breaker
2	Alarm indicator
3	Control panel lamp
4	PLC-8610 control module
5	Charge indicator
6	Key switch
7	Control panel lamp switch
8	Alarm reset button
9	Genset close indicator
10	Genset open indicator
11	Emergency stop button
12	Mains input/ remote communication connector
13	2xparalleling communication connectors
14	Live wire terminals
15	Neutral wire terminal
16	Ground wire terminals

Control & Field Wiring Cabinet



a	Decrease value / next item
b	Previous page
c	Accept
d	Increase value / previous item
e	Next page
f	LCD display
g	Four alarm LEDs
h	Close genset
i	Genset available LED
j	Manual start
k	Mute alarm / lamp test
l	Auto mode (with LED)
m	Genset breaker on LED
n	Manual mode (with LED)
o	Stop / reset (with LED)
p	Open genset

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