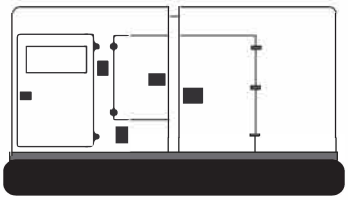
POWERLINK
Power Systems



Generator set

Sound-proof type

WPS100S

SPECIFICATIONS

EP series
WPS100S
50 Hz @ 1500rpm,3-phase/4-wiring

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformite Europeenne (CE)
- ISO9001:2015

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25℃ to 50℃. The coolant heater is needed when the temperature is below 5℃
- 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

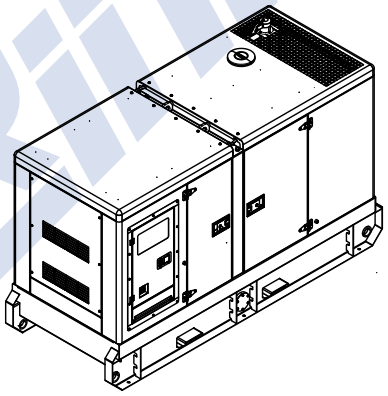
- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

2 General Features

- Perkins engine 1104D-E44TAG2
- Close coupled to a Leroy Somer alternator LSA44.3S5
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 160A
- Rotate speed governor: Electronic governor
- Excitation System: SHUNT
- A.V.R.Model: R250
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 12V/95AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50℃ radiator
- Oil pump on the engine
- Steel base frame with forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 9 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data

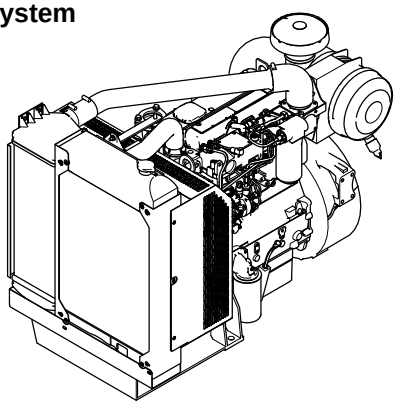


Model..... WPS100S
Structure type ..... R
Tank capacity.....240L
Dry weight..... 1852kg
Sound pressure level @7m .....70.2dB(A)
Dimensions L×W×H..... 2888x1165x1681mm
Standby Power 110kVA/88kW
Prime Power 100kVA/80kW

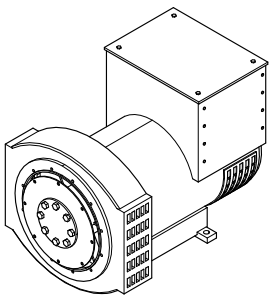
Voltage	380V	400V	415V	440V
Ampere	151.9A	144.3A	139.1A	131.2A

Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	N/A	13.2	19.8	24.5	26.5

Power System

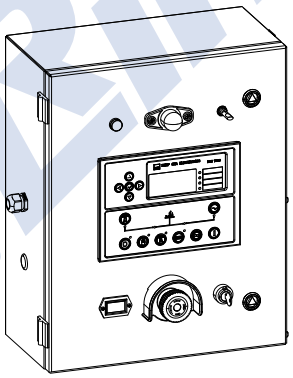


Engine Manufacturer/Brand.....Perkins
Engine Model.....1104D-E44TAG2
Dimensions L×W×H.....1358×749×108mm
Dry Weight (approx.) 465kg
Number of Cylinders.....4
Bore 105mm
Stroke 127mm
Displacement.....4.4L
Compression Ratio 16.2
Type of injection..... Direct injection
Intake System..... Turbocharged,air-to-air charge cooled
Cooling System .....Water cooled
Fan ..... Pusher
Battery Voltage 12V
Type of Fuel..... EPA2D 89.330-96
Type of Oil ..... API-CC/SE or CCMC-D1
Oil Capacity 8.0L
Type of Coolant .....Glycol mixture
Coolant Capacity 17L
Standby Power 105kW
Prime Power.....95.5kW
Fuel Consumption(100%load).....24.5L/h



Alternator Manufacturer/Brand ..... Leroy Somer
Alternator Model ..... LSA44 .3S5
Exciter.....Brushless
Cooling Fan ..... Cast alloy aluminum
Windings.....100% copper
Insulation Class ..... H
Winding Pitch.....2/3
Drip Proof IP23
Altitude.....≤1000m
Overspeed 2250rpm
Air Flow..... 0.8m³/s(50HZ),0.99m³/s(60HZ)
Voltage Regulation .....±1.0%
Total harmonic TGH / THCat no load < 1.5 % - on load < 5%
Telephone Interference..... THF<2%;TIF<50

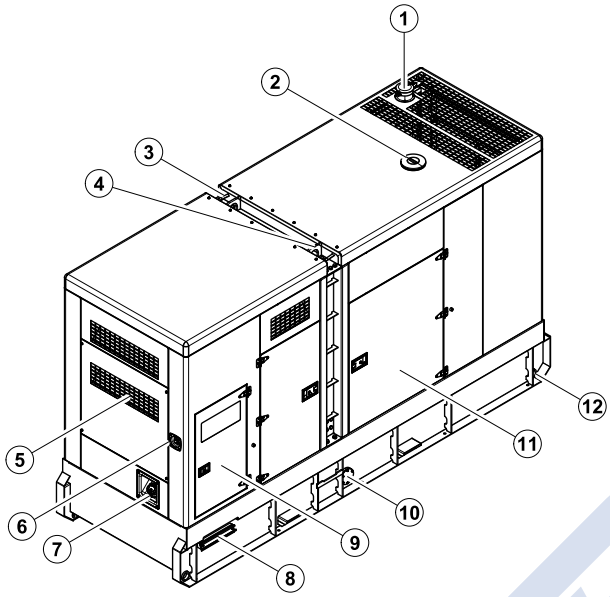
PLC-7420 Control System

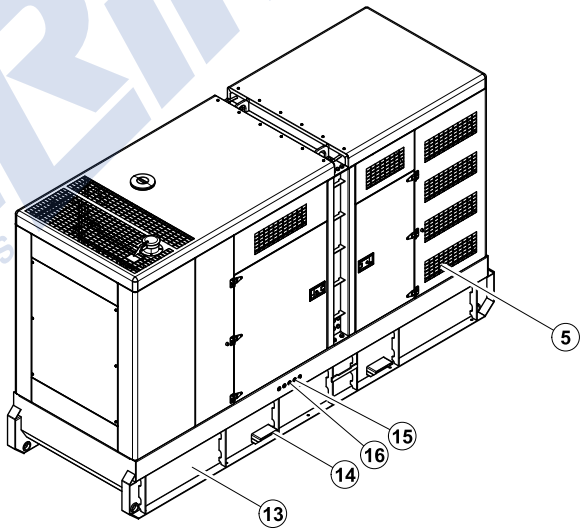


PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and 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.

- 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

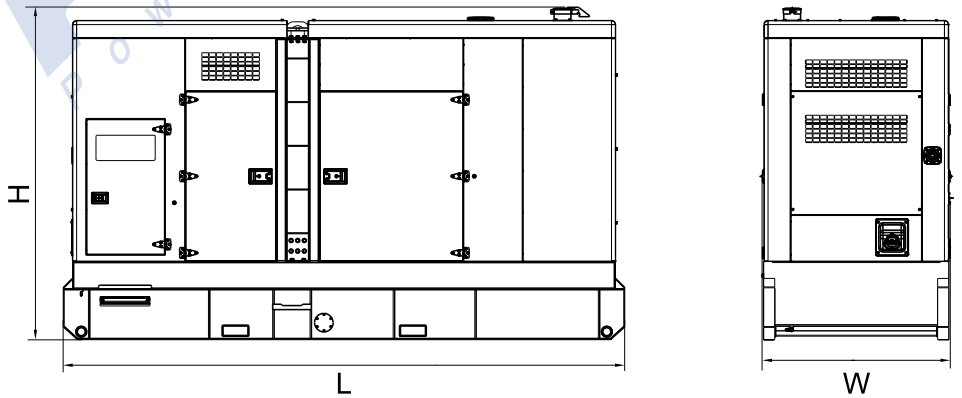
4 Overall Dimensions



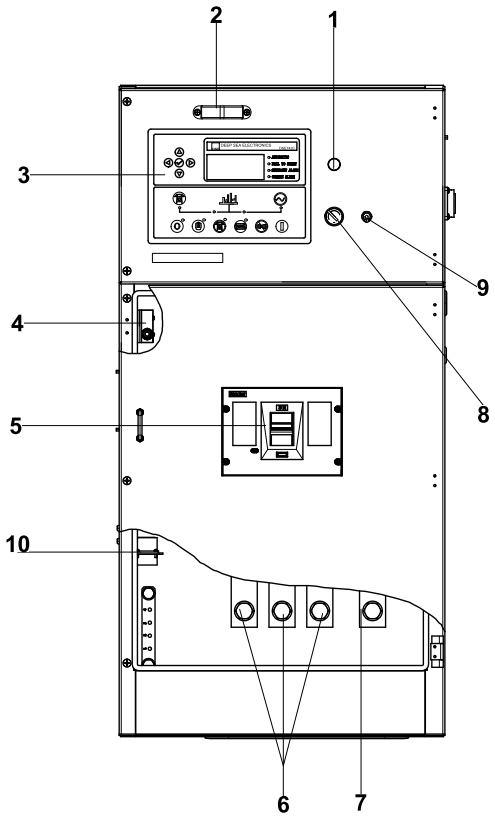


8 Cable trench
7 Fuel inlet
6 Emergency stop switch
5 Air inlet
4 Lifting lug
3 Roping lug
2 Coolant inlet
1 Exhaust gas outlet

16 Coolant/Oil drain hose fitting
15 External fuel inlet/return hose fitting
14 Fork lift channel
13 Base frame
12 Tie down
11 Access door
10 Fuel drain
9 Control cabinet

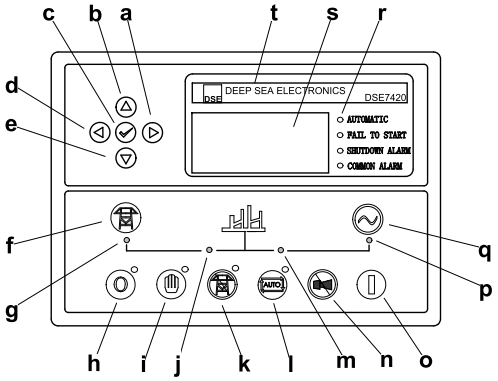


5 Control System



Control & field wiring cabinet

Ref.	Description
1	Charge indicator
2	Control cabinet lamp
3	Control module
4	Limit switch
5	Main circuit breaker
6	Live wire terminals
7	Neutral wire terminal
8	Key switch
9	Control cabinet lamp switch
10	Mains input/remote/AMF communication connector



Control Panel

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

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