



**Generator set**  
**Containerised type**  
**WPS1000S**

# **SPECIFICATIONS**



## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- ISO9001:2015

### Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 50°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.

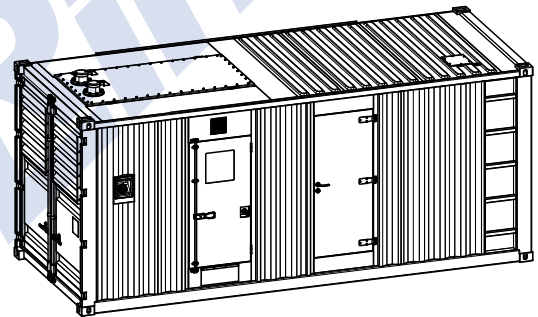
## 2 General Features

- Perkins engine 4008TAG2A
- Close coupled to a Leroy Somer alternator LSA49.3L10
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 1600A
- Rotate speed governor: Electronic governor
- Excitation System: AREP
- AVR Model: D350
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 4\*12V/170AH sealed for life maintenance free battery

- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Oil pump on the engine
- Steel base frame with forklifts
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 10 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

## 3 Equipment Specification

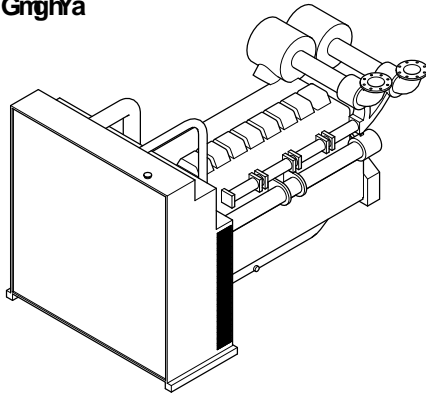
### General technical data



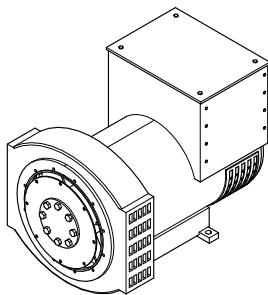
Model.....	WPS1000S
Structure type .....	R
Tank capacity.....	1450L
Dry weight.....	11533kg
Sound pressure level @7m .....	79.7dB(A)
Dimensions L×W×H.....	6058x2438x2591mm
Standby Power .....	1100kVA/880kW
Prime Power .....	1000kVA/800kW

Voltage	380V	400V	415V	440V	
Ampere	1519.4A	1443.4A	1391.2A	1312.2A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	N/A	108	162	224	249

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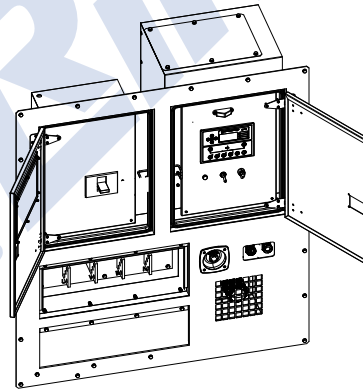


Engine Manufacturer/Brand.....	Perkins
Engine Model.....	4008TAG2A
Dimensions L×W×H.....	2879×1571×1760mm
Dry Weight (approx.) .....	3250kg
Number of Cylinders.....	8
Bore.....	160mm
Stroke.....	190mm
Displacement.....	30.0L
Compression Ratio.....	13.6
Type of injection.....	Direct injection
Intake System.....	Turbocharged, air-to-air charge cooled
Cooling System .....	Water cooled
Fan .....	Pusher
Battery Voltage .....	24V
Type of Fuel.....	BS2869 1998 Class A1, A2
Type of Oil .....	API CD or MIL - L - 2104C
Oil Capacity .....	153L
Type of Coolant .....	Glycol mixture
Coolant Capacity .....	162L
Standby Power .....	980.0kW
Prime Power .....	894.0kW
Fuel Consumption(100%load).....	224.0L/h



Alternator Manufacturer/Brand .....	Leroy Somer
Alternator Model .....	LSA49.3L9
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

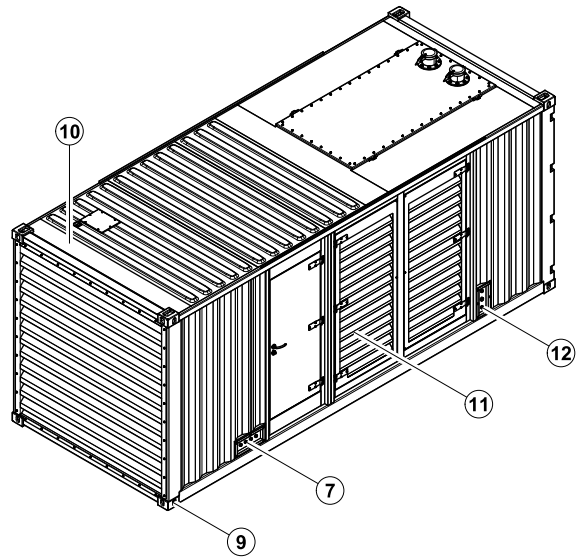
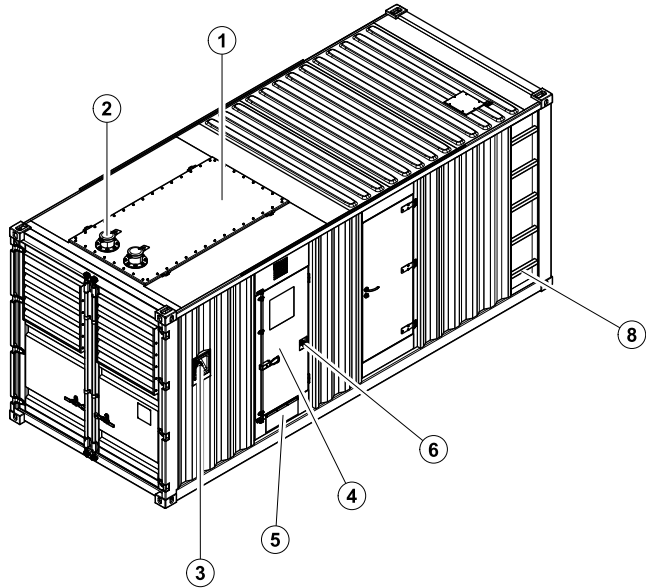
## PLC-7420 Control System



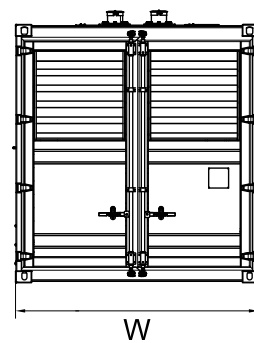
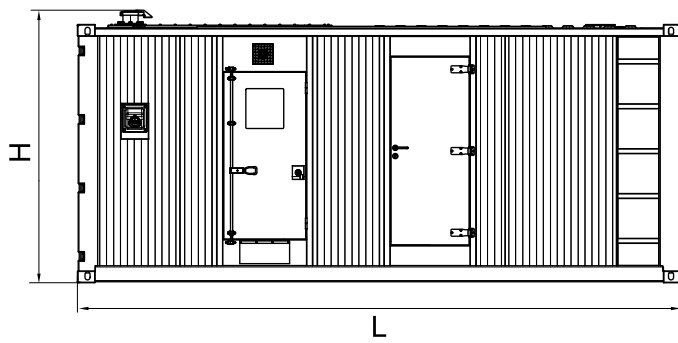
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

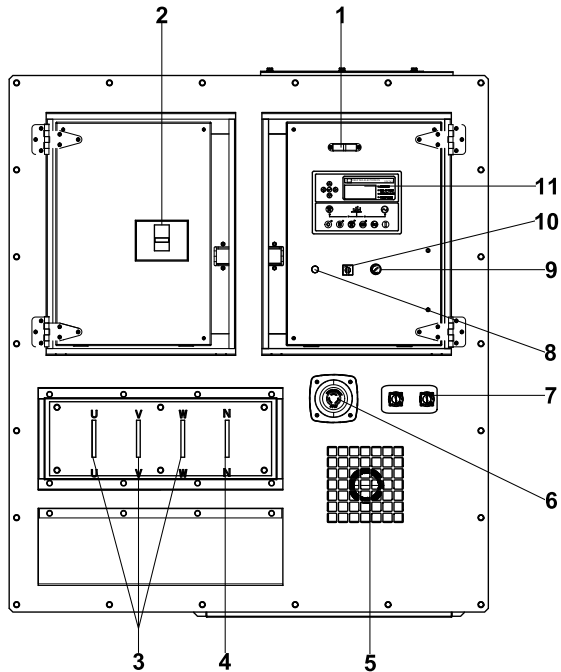
## 4 Overall Dimensions



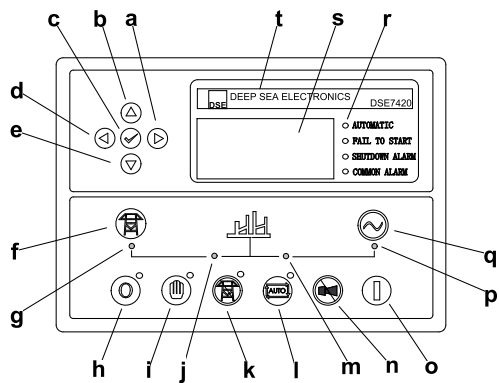
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|-------------------------|---|
| ⑥ Emergency stop switch | ⑫ External fuel inlet/return hose fitting |
| ⑤ Cable trench          | ⑪ Access door                             |
| ④ Control cabinet       | ⑩ Canopy                                  |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



## 5 Control System



**Control Cabinet**



**Control Module**

Ref.	Description
1	Control panel lamp
2	Main circuit breaker
3	Live wire terminals
4	Neutral wire terminal
5	Alarm indicator
6	Emergency stop button
7	ATS communication interface
8	Charge indicator
9	Key switch
10	Control panel lamp switch
11	Control module

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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