

DGPL110P-3 50 Hz @ 1500rpm, 3-phase/ 5-wiring

**110kVA
PERKINS
DGPL110P-3**

A. STANDARDS & CONDITIONS

Design Standards

The designs and the productions are in conformity with:

- Conformance Europeenne (CE)
- ISO8528-5:2005
- AS 3000-2018
- AS 3010-2017

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 90%
- Altitude: Below one thousand (1000) meters above sea level

Factory Inspection

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

Painting Process

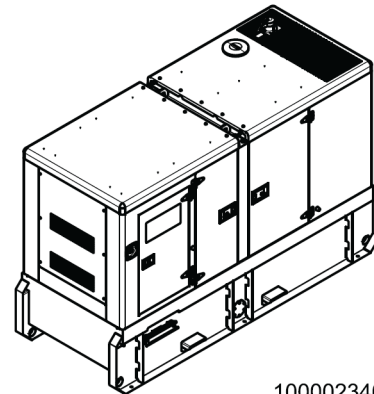
- Painting process specifications and colors are based on the manufacturer's standard
- The customer could also choose the color which the manufacturer offers

B. GENERAL FEATURES

- Perkins engine 1104C-44TAG2
- Close coupled to a Leroy Somer alternator LSA44.2VS45
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 160A
- Rotate speed governor: Electronic fuel injection governor
- Excitation System: Self Excited SHUNT
- A.V.R. Model: R250
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- Remote run connector
- 1x12V/120AH 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 forkslots

- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 24 hours running
- Drain points for fuel tank
- Breather valve for fuel tank
- Operation Manual / Specifications

C. GENERAL TECHNICAL DATA

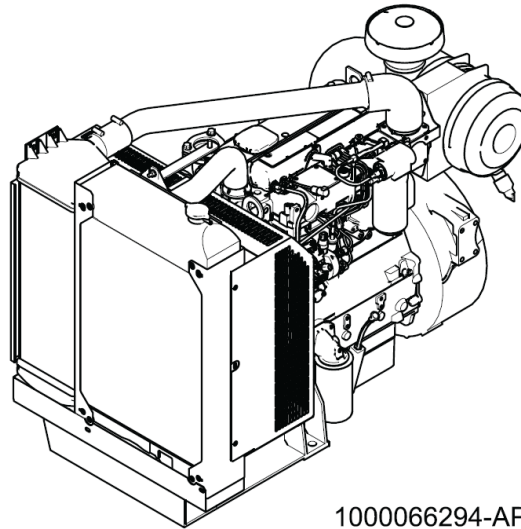


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MODEL	WPS100S-AU
STRUCTURE TYPE	R
TANK CAPACITY	530 L
DRY WEIGHT	1979 kg
NOISE LEVEL @ 7M	70.1 dBA
DIMENSIONS	2888 × 1171 × 1900 mm
STANDBY POWER	110 kVA / 88 kW
PRIME POWER	100 kVA / 80 kW
VOLTAGE / AMPERE	415 V / 111 A

Voltage	415V	440V	460V	480V	
Ampere	139A	131A	126A	120A	
GENSET FUEL CONSUMPTION					
Freq./Load	25%	50%	75%	100%	110%
50Hz (L/h)	N/A	11.2	17.1	22.6	24.9

POWER SYSTEM



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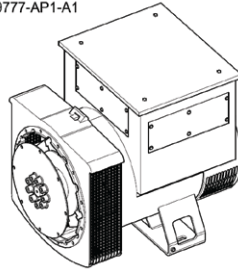
ENGINE SPECIFICATIONS

1	ENGINE MANUFACTURER/BRAND	Perkins
2	ENGINE MODEL	1104C-44TAG2
3	DIMENSIONS	1259 × 721 × 966 mm
4	DRY WEIGHT (APPROX.)	401 kg
5	NUMBER OF CYLINDERS	4
6	BORE	105 mm
7	STROKE	127 mm
8	DISPLACEMENT (LITER)	4.4 L
9	COMPRESSION RATIO	18.23
10	TYPE OF INJECTION	Direct Injection
11	INTAKE SYSTEM	Turbocharged, air-to-air charge cooled
12	INTAKE RESISTANCE	8 kPa
13	COOLING SYSTEM	Water Cooled
14	FAN	Pusher
15	BATTERY VOLTAGE	12V
16	TYPE OF FUEL	EPA2D 89.330-96
17	TYPE OF OIL	API-CC/SE or CCMC-D1
18	OIL CAPACITY	8.0 L
19	TYPE OF COOLANT	Glycol Mixture
20	COOLANT CAPACITY	12.6 L
21	BACK PRESSURE	18 kPa
22	STANDBY POWER	103 kW
23	PRIME POWER	93.6 kW
24	FUEL CONSUMPTION (100% LOAD)	22.6 L/h

DIESEL GENERATION AUSTRALIA

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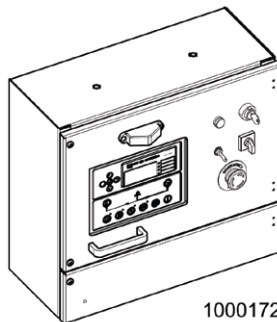
ALTERNATOR



ALTERNATOR SPECIFICATIONS

1	ALTERNATOR MANUFACTURER/BRAND	Leroy Somer
2	ALTERNATOR MODEL	LSA44.3S5
3	EXCITER	Brushless
4	COOLING FAN	Cast Alloy Aluminum
5	WINDINGS	100% Copper
6	INSULATION CLASS	H
7	WINDING PITCH	2 / 3
8	TERMINALS	12
9	DRIP PROOF	IP23
10	ALTITUDE	≤ 1000m
11	OVERSPEED	2250rpm
12	AIR FLOW	0.25m³/s(50Hz),0.3m³/s(60Hz)
13	VOLTAGE REGULATION	± 0.5%
14	Total harmonic TGH / THC	at no load < 2% - on load < 2%
15	TELEPHONE INTERFERENCE	THF < 2%; TIF <50

PLC-7420 CONTROL SYSTEM

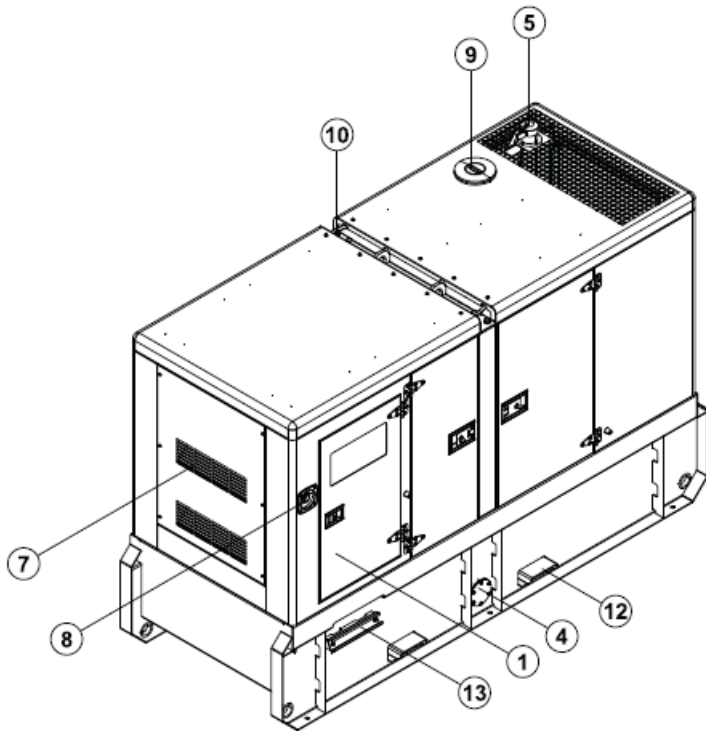


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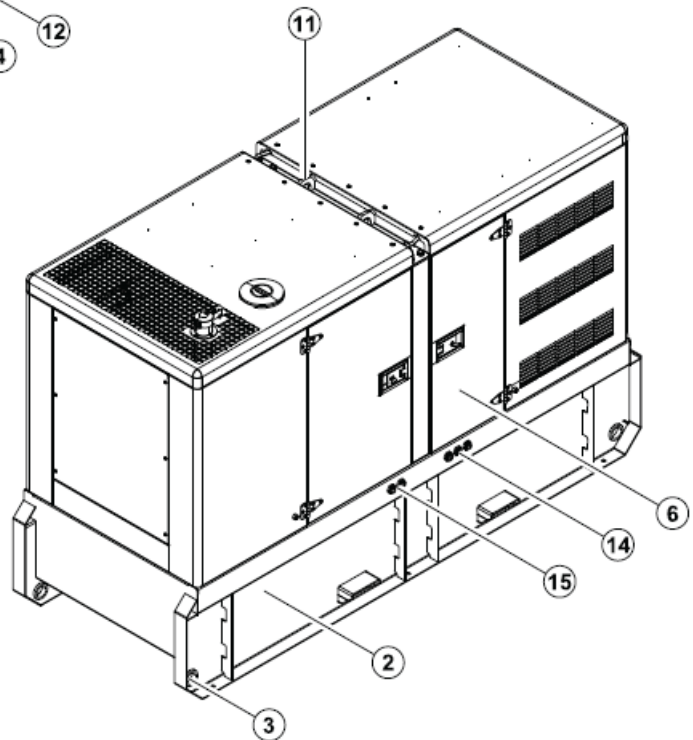
PLC-7420 is an advanced control module based on microprocessor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

D. OVERALL DIMENSION

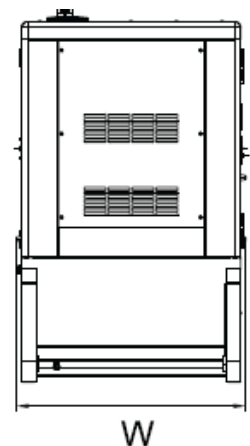
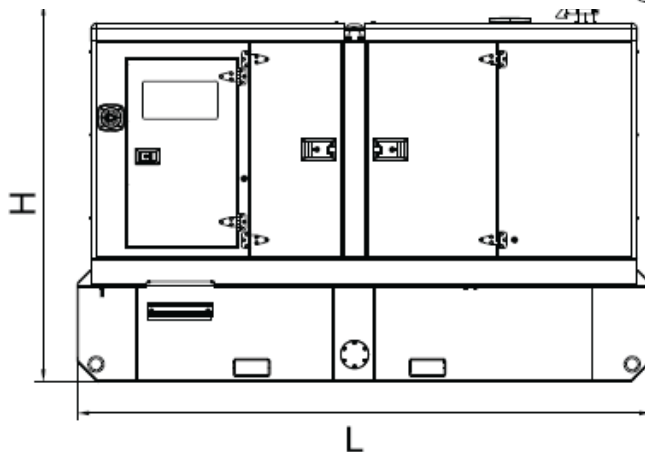


Dry weight	1971kg
Fuel tank capacity	550L
Dimensions L x W x H	2888x1165x1900mm

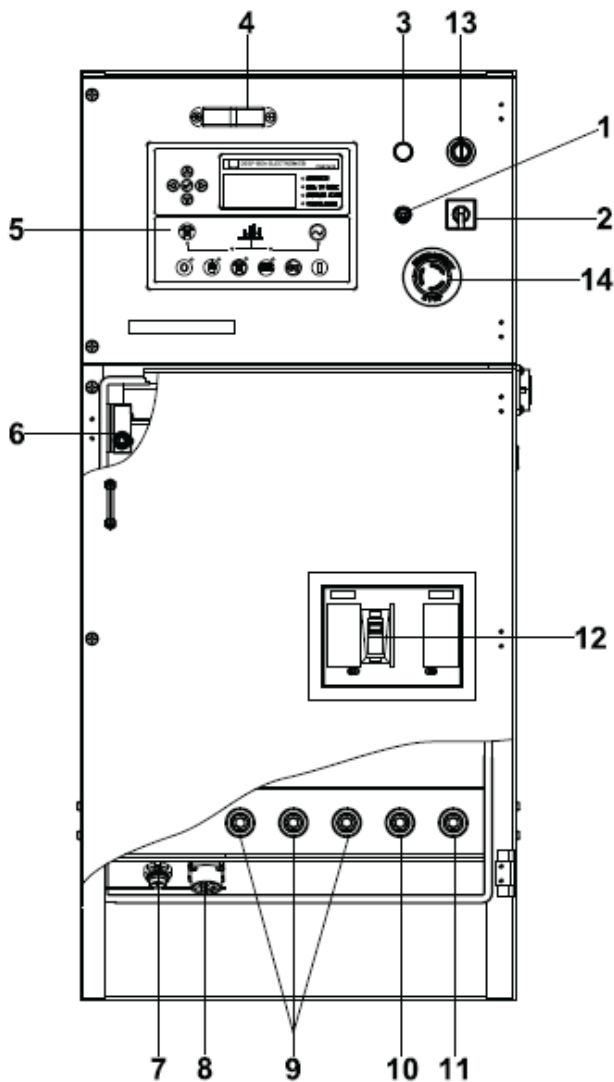


- ⑧ Emergency stop switch
- ⑦ Air inlet
- ⑥ Access door
- ⑤ Exhaust gas outlet
- ④ Fuel drain
- ③ Tie down
- ② Base frame
- ① Control cabinet
- ⑮ External fuel inlet/return hose fitting
- ⑭ Coolant/Oil drain hose fitting
- ⑬ Cable trench
- ⑫ Fork lift channel
- ⑪ Lifting lug
- ⑩ Roping lug
- ⑨ Coolant inlet

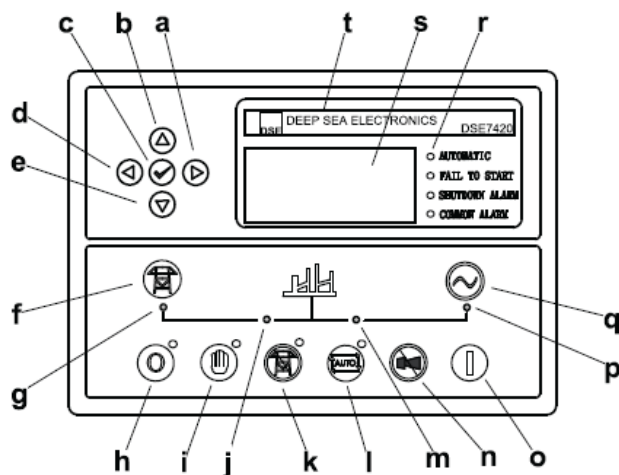
DIMENSIONS	2888 × 1171 × 1900 mm
DRY WEIGHT	1979 kg



E. CONTROL SYSTEM



Control & Field wiring cabinet



Control Module

Ref.	Description
1	Control Cabinet Lamp Switch
2	Mains Input Changeover Switch
3	Charge Indicator
4	Control Cabinet Lamp
5	Control Module
6	Limit Switch
7	Remote Communication Interface
8	ATS Communication Interfae
9	Live Wire Terminals
10	Neutral Wire Terminal
11	Ground Wire Terminal
12	Main Circuit Breaker
13	Key Switch
14	Emergency Stop Switch

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)
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)
r.	Alarm LED (4 alarm items)
s.	LCD Display
t.	Control Module Name

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10.2020