

Perkins series P750D5

50 Hz @ 1500rpm, 3-Phase/4-wiring

POWER
A Guangdong Power Company

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- ISO8528-5:2005
- GB/T2820.5-2009

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 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 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.

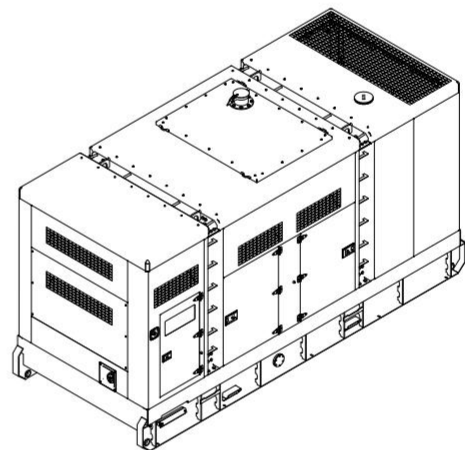
2 General Features

- Perkins engine 2806A-E18TTAG5
- Close coupled to Leroy Somer alternator LSA49.3M8
- Microprocessor control module PLC-7420
- Main circuit breaker: 1250A
- Rotate speed governor: Electronic governor
- Excitation system: AREP
- A.V.R.Model: D350
- 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
- Oil pump on the engine
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank with 7 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

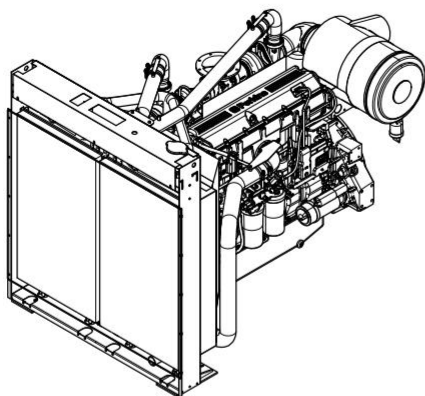
General technical data



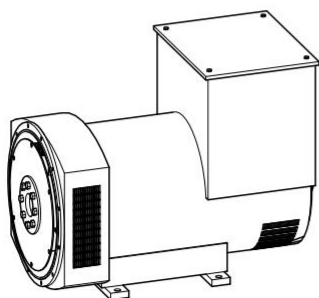
Model.....P750D5
Structure typeR
Tank capacity.....1250L
Dry weight..... 7800kg
Noise level @7m 76.5dBA
Dimensions L×W×H..... 4800x1600x2450mm
Standby Power 850kVA/678kW
Prime Power 717kVA/617kW

Voltage	380V	400V	415V	440V	
Ampere	1089A	1034A	998A	941A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	48	81	118	162	179

Power System

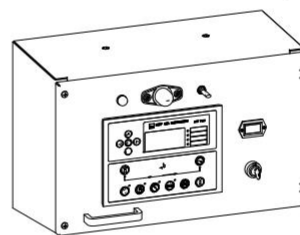


Engine Manufacturer/Brand.....	Perkins
Engine Model.....	2806A-E18TTAG5
Dimensions L×W×H.....	2538×1691×2126mm
Dry Weigh (approx.)	2361kg
Number of Cylinders.....	6
Bore.....	145mm
Stroke	183mm
Displacement.....	18.1L
Compression Ratio.....	14.0
Type of Injection	MEUI
Intake System.....	Turbocharged, air-to-air charge cooled
Intake Resistance.....	≤6.2kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	24V
Type of Fuel.....	BS2869 class A2 or BS EN590
Type of Oil	API CG4 or APEA E5
Oil Capacity	68L
Type of Coolant	Glycol Mixture
Coolant capacity.....	109.5L
Back Pressure	≤10kPa
Standby Power	743kW
Prime Power	676kW
Fuel Consumption(100%load).....	162L/h



Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA49.3M8
Exciter.....	Brushless
Cooling Fan	Cast alloy aluminum
Windings.....	100% copper
Insulation Class	H
Winding Pitch.....	2/3
Terminals	12
Drip Proof	IP23
Altitude.....	≤1000m
Overspeed	2250 rpm
Air Flow.....	1.035m³/s(50HZ), 1.312m³/s(60HZ)
Voltage Regulation	±1.0%
Total harmonic TGH / THCat no load < 1.5 % - on load < 5%	
Telephone Interference.....	THF<2%;TIF<50

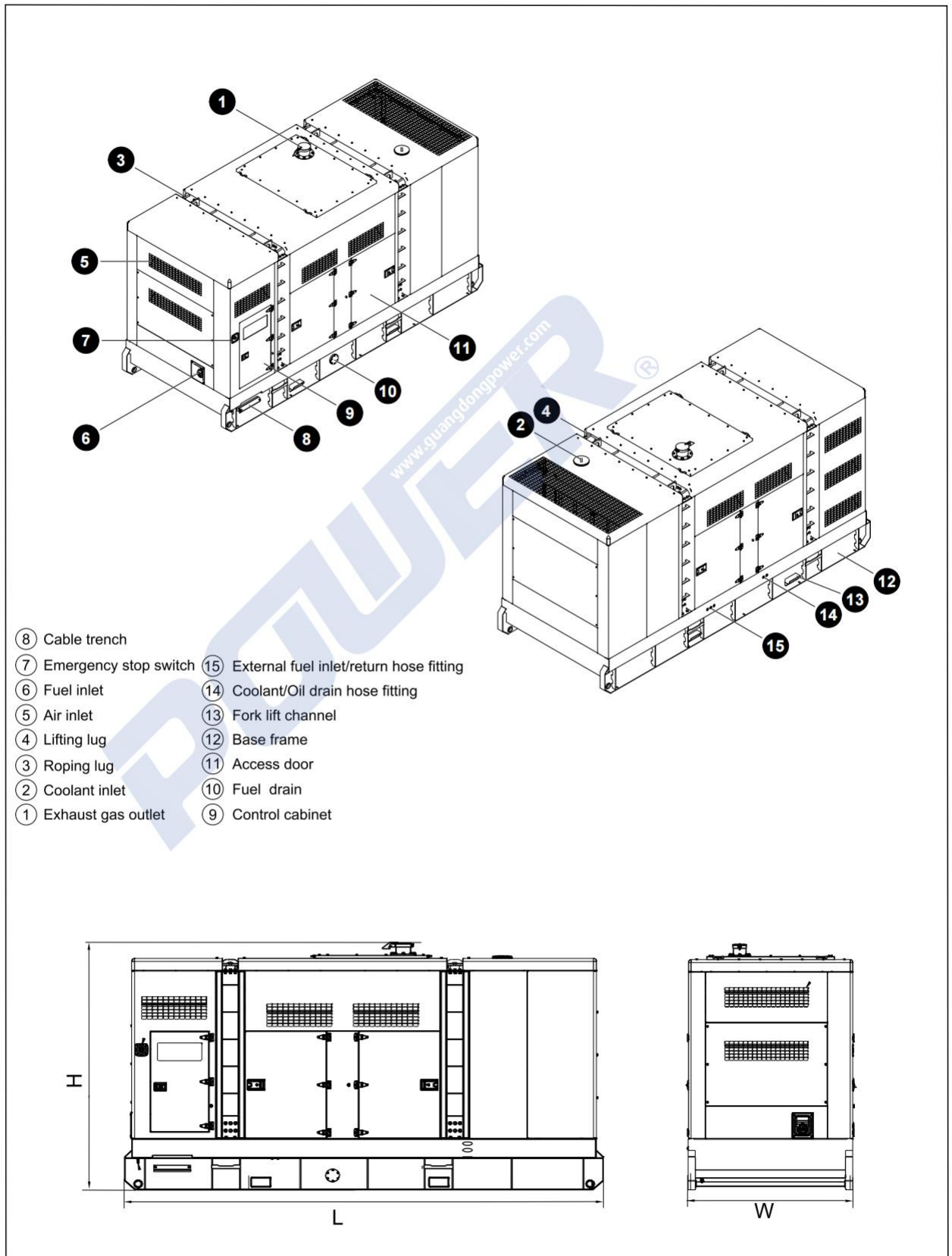
PLC-7420 Control System



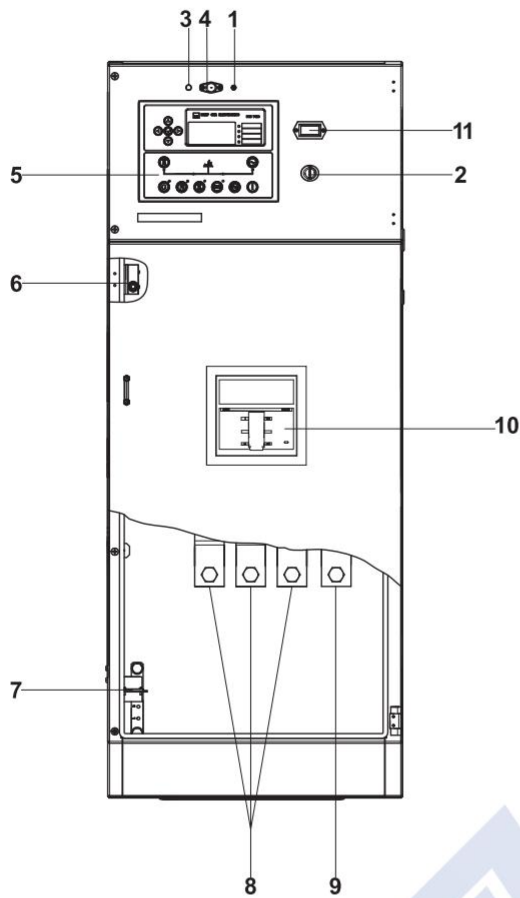
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

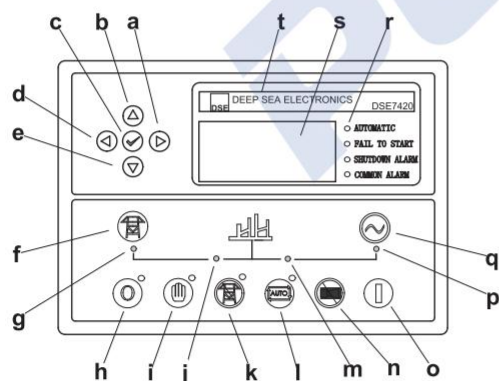
4 Overall Dimensions



5 Control system



Control & field wiring cabinet



Control module

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

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