

SPECIFICATION



MODEL R650B RG SERIES (FOR 50Hz DIESEL GENSET)

Revision: B2 (02/23)

RS series

R650B

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

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 45°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 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.

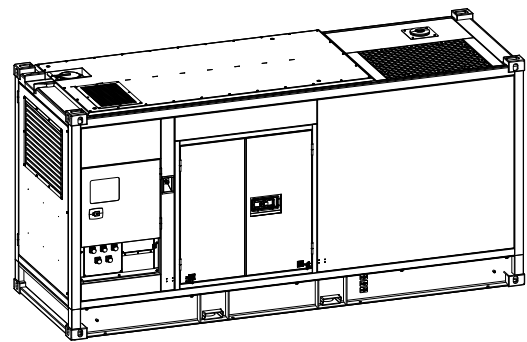
2 General Features

- Cummins engine 6M33G6D3/5
- Close coupled to Leroy Somer alternator LSA47.3L10
- Microprocessor controller PLC500
- ABB main circuit breaker: 1250A
- Rotate speed governor: ECU
- Excitation System: Self Excited, SHUNT
- A.V.R. Model: R250
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- Remote run connector

- 2x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Steel base frame with forklift slots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank with 8 hours running
- Drain points for fuel tank
- Operator's Manual / Specifications

3 Equipment Specification

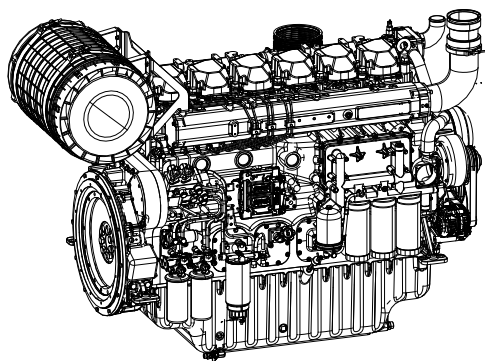
General technical data



Model.....	R650B
Tank capacity.....	1100L
Dry weight.....	7608kg
Sound pressure level @ 7m	73dBA
Dimensions L×W×H.....	4982.5x1700x2456mm
Standby Power	713kVA/570kW
Prime Power	650kVA/520kW

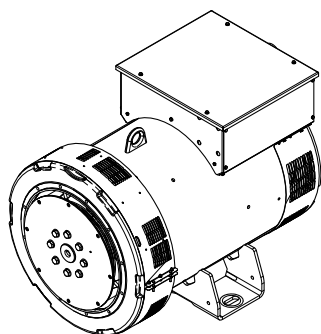
Voltage	380V	400V	415V	440V	
Ampere	967.6A	938.2A	904.3A	853.0A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	37.9	67.1	100	136.3	153.3

Power System



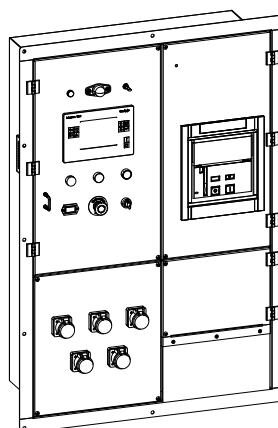
Engine Manufacturer/Brand.....	Cummins
Engine Model.....	6M33G6D3/5
Dimensions L×W×H.....	2798 x 1600 x 1900mm
Dry Weight (approx.)	2090kg
Number of Cylinders.....	6
Bore	150mm
Stroke	185mm
Displacement.....	19.6L
Compression Ratio	15
Type of injection.....	Direct injection
Intake System.....	Turbocharged and Charge Air Cooled
Intake Resistance	≤5kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	24V
Type of Fuel.....	No.2 or ASTM D975
Type of Oil	API CD/SE or CCMCD4
Oil Capacity	64L
Type of Coolant	Glycol mixture
Coolant Capacity engine only	44L
Back Pressure	≤6.8kPa
Standby Power	633kW
Prime Power.....	575kW
Fuel Consumption(100%load).....	136.3L/h

Alternator



Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA47.3L10
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	2250rpm
Air Flow.....	N/A
Voltage Regulation	±1.0%
Total Harmonic TGH / THCat no load < 1.5 % - on load < 5%	
Telephone Interference.....	THF<2%;TIF<50

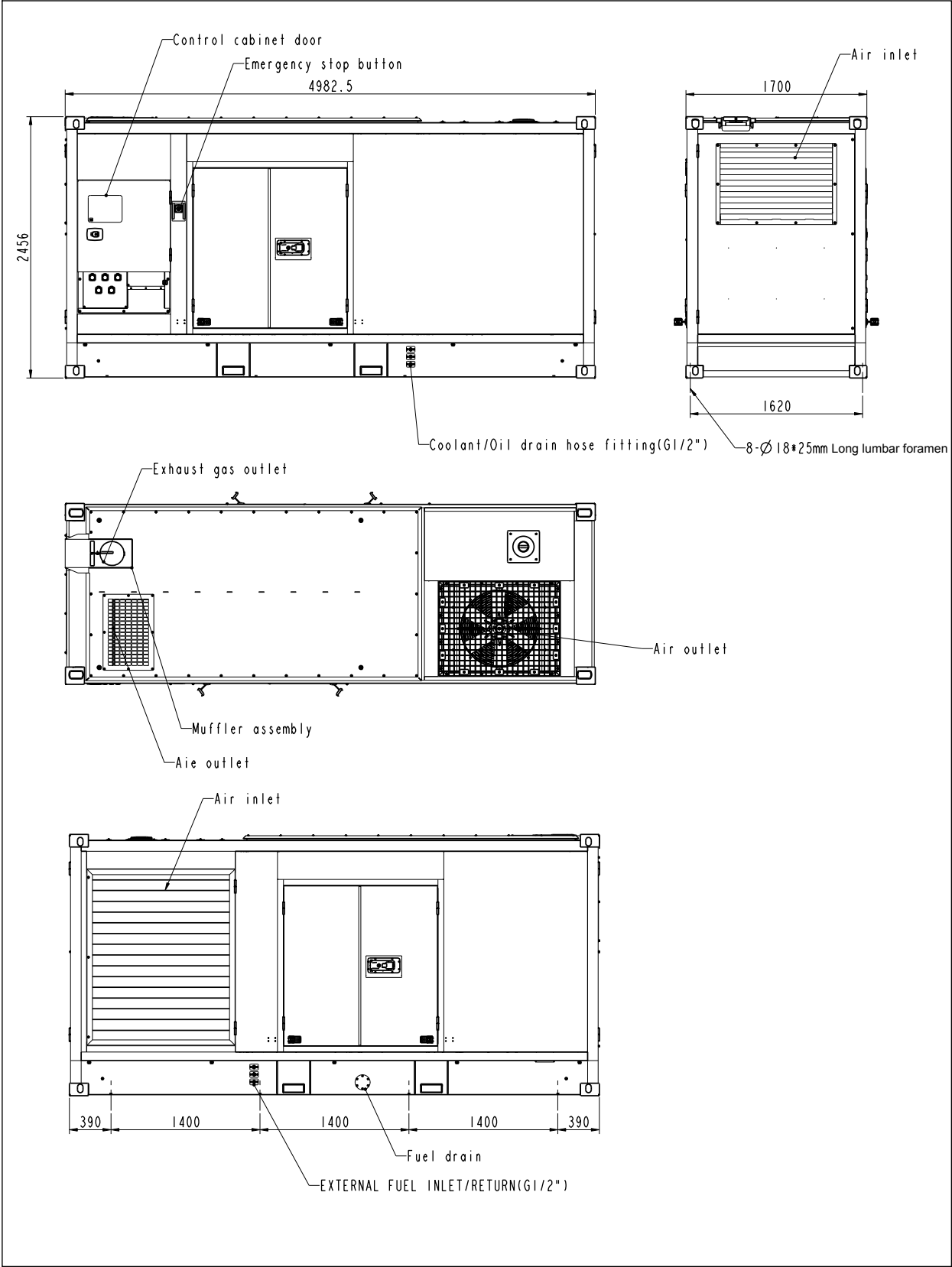
PLC500 Control System



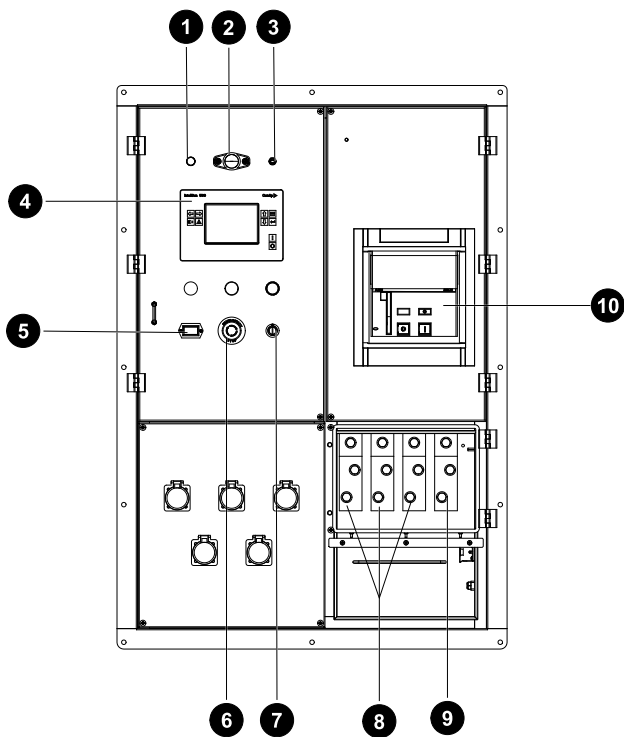
PLC-500 is a microprocessor based control unit containing all necessary functions for protection of the genset and the breaker control. Furthermore, it contains all necessary three-phase measuring circuits and presents all values and alarms on the LCD display. The module has the function of load sharing 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



5 Control System



Ref.		Description
1		Charge indicator
2		Not ready
3		Control panel lamp
4		Control module
5		Timer
6		Emergency stop button
7		Key switch
8		Live wire terminals
9		Neutral wire terminal
10		Main circuit breaker