

# **SPECIFICATION**



## **MODEL R1250B RG SERIES (FOR 50Hz DIESEL GENSET)**

Revision: A7 (02/23)

# RS series

## R1250B

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.

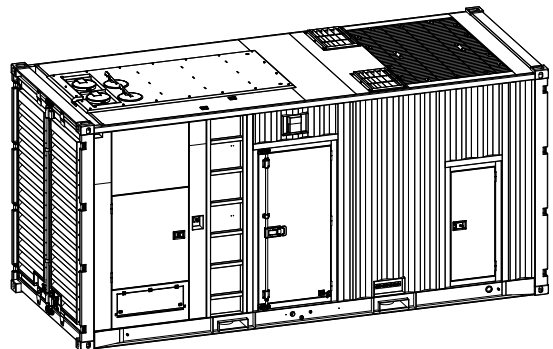
### 2 General Features

- Cummins engine 12M33G8D3/5
- Close coupled to Leroy Somer alternator LSA50.2M6
- Microprocessor controller PLC500
- ABB main circuit breaker: 2500A
- Rotate speed governor: ECU
- Excitation System: AREP
- A.V.R.Model: D350
- 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 forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank with 4 hours running
- Drain points for fuel tank
- Operator's Manual / Specifications

### 3 Equipment Specification

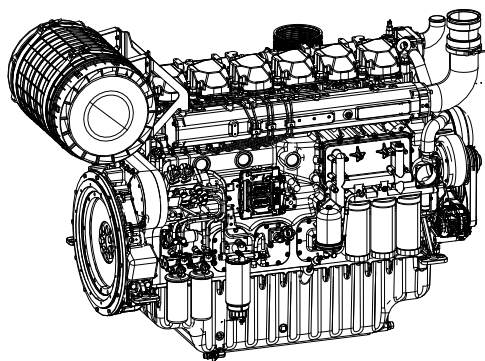
#### General technical data



|                                 |                  |
|---------------------------------|------------------|
| Model.....                      | R1250B           |
| Tank capacity.....              | 1100L            |
| Dry weight.....                 | 14984kg          |
| Sound pressure level @ 7m ..... | 74dBA            |
| Dimensions L×W×H.....           | 6058x2438x2896mm |
| Standby Power .....             | 1375kVA/1100kW   |
| Prime Power .....               | 1250kVA/1000kW   |

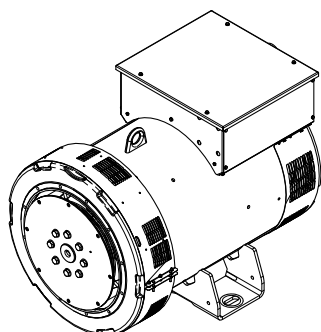
|                         |       |       |       |       |      |
|-------------------------|-------|-------|-------|-------|------|
| Voltage                 | 380V  | 400V  | 415V  | 440V  |      |
| Ampere                  | 1899A | 1804A | 1739A | 1640A |      |
| Genset Fuel Consumption |       |       |       |       |      |
| Frequency/Load          | 25%   | 50%   | 75%   | 100%  | 110% |
| 50Hz (L/h)              | 73.8  | 147.2 | 209.2 | 269.4 | N/A  |

## Power System



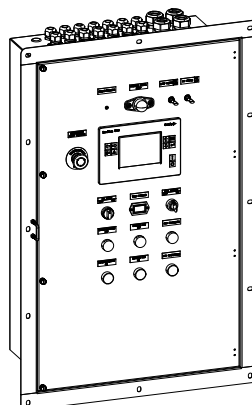
|                                    |                              |
|------------------------------------|------------------------------|
| Engine Manufacturer/Brand.....     | Cummins                      |
| Engine Model.....                  | 12M33G8D3/5                  |
| Dimensions L×W×H.....              | 3525×2241.5×2243mm           |
| Dry Weight (approx.) .....         | 4575kg                       |
| Number of Cylinders.....           | 12                           |
| Bore .....                         | 150mm                        |
| Stroke .....                       | 185mm                        |
| Displacement.....                  | 39.2L                        |
| Compression Ratio .....            | 15                           |
| Type of injection.....             | Direct injection             |
| Intake System.....                 | Turbocharged and Aftercooled |
| Intake Resistance .....            | ≤6.5kPa                      |
| 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 .....                 | 160L                         |
| Type of Coolant .....              | Glycol mixture               |
| Coolant Capacity engine only ..... | 303L                         |
| Back Pressure .....                | ≤7.5kPa                      |
| Standby Power .....                | 1240kW                       |
| Prime Power.....                   | 1130kW                       |
| Fuel Consumption(100%load).....    | 269.4L/h                     |

## Alternator



|                                                           |                     |
|-----------------------------------------------------------|---------------------|
| Alternator Manufacturer/Brand .....                       | Leroy Somer         |
| Alternator Model .....                                    | LSA50.2M6           |
| 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       |

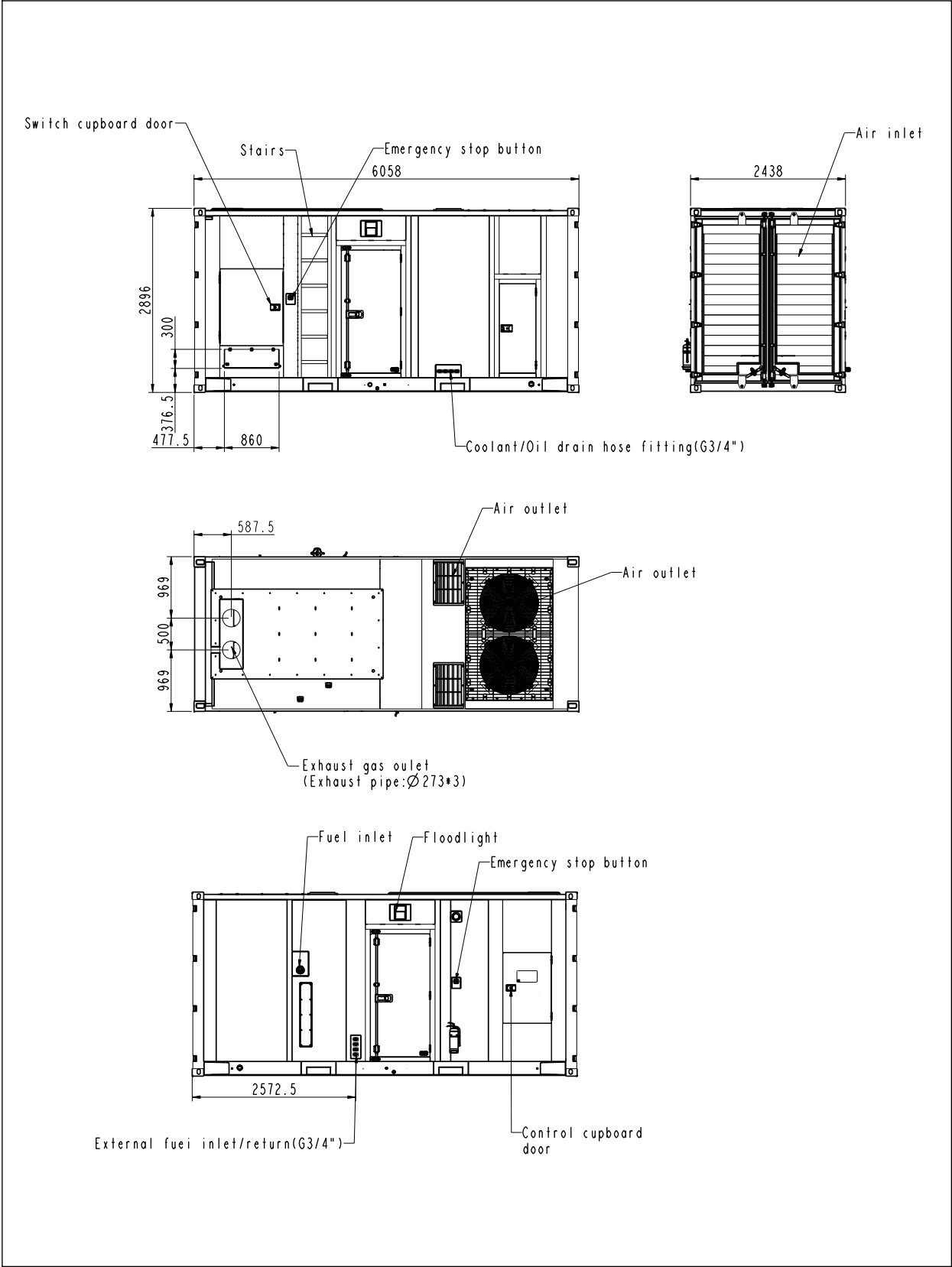
## PLC500 Control System



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.

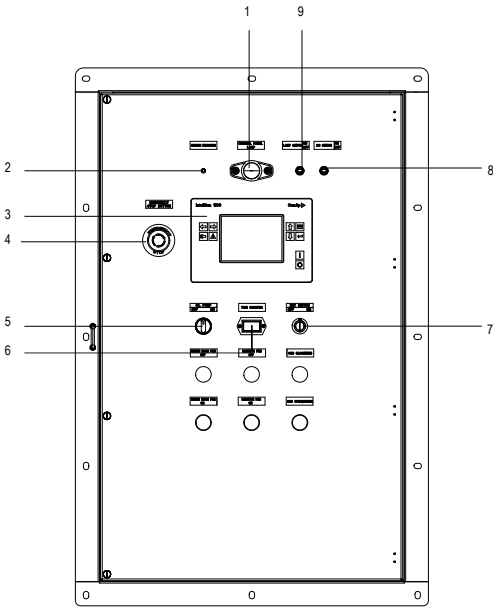
- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the genset
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections; multiple parameters display, like pressure, temp. etc.
- Manual, automatic and 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

## Control Cabinet



| Ref. | Description           |
|------|-----------------------|
| 1    | Control panel lamp    |
| 2    | Charge indicator      |
| 3    | Control module        |
| 4    | Emergency stop button |
| 5    | Oil pump              |
| 6    | Time counter          |
| 7    | Key switch            |
| 8    | DC switch             |
| 9    | Lamp switch           |
| 10   | Main circuit breaker  |
| 11   | Live wire terminals   |
| 12   | Neutral wire terminal |

## Breaker Cabinet

