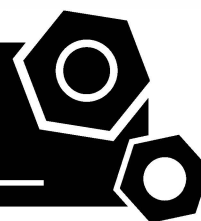


**Generator set**

**Sound-proof type**

**GMS100CS-AU**

# **SPECIFICATIONS**



## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (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 45°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.

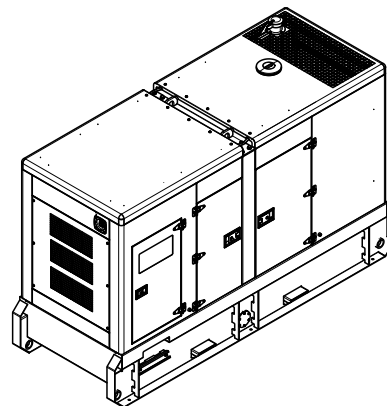
## 2 General Features

- Cummins engine 6BT5.9G2
- Close coupled to a LSA alternator LSA44.3S5
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 160A
- Rotate speed governor: Mechanical governor
- Excitation system: Self excited, SHUNT
- A.V.R model: AS440
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- Remote run connector
- 2x12V/72AH sealed for life maintenance free battery

- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Oil pump on the engine
- Non-returning valve for fuel inlet hose of the engine
- Steel base frame with forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 25 hours running
- Drain points for fuel tank
- Breather valve for fuel tank
- Operation Manual / Specifications

## 3 Equipment Specification

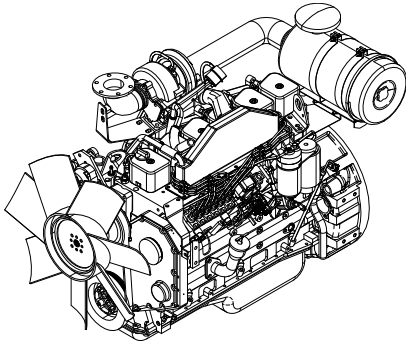
### General technical data



Model.....	GMS100CS-AU
Structure type .....	R
Tank capacity.....	540L
Dry weight.....	2081kg
Noise level @7m .....	70.1dBA
Dimensions LxWxH.....	2970x1172x1803mm
Standby Power .....	110kVA/88kW
Prime Power .....	100kVA/80kW
Voltage/Current.....	415V/139A

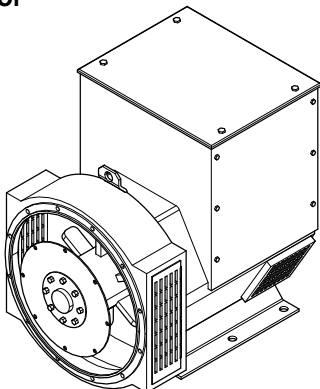
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	7.0	11.0	17.0	22.0	25.0

## Diesel Engine



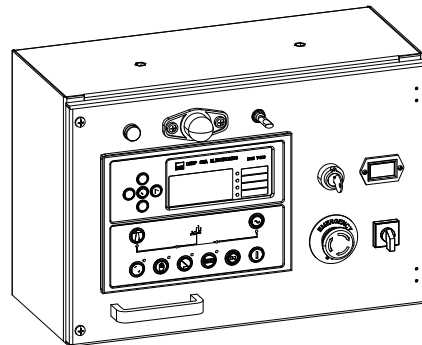
Engine Manufacturer/Brand.....	Cummins
Engine Model.....	6BT5.9G2
Dimensions LxWxH.....	1198*716.8*1008
Dry Weigh (approx.) .....	411kg
Number of Cylinders.....	6
Bore.....	102mm
Stroke .....	120mm
Displacement.....	5.9L
Compression Ratio.....	17.3
Type of injection.....	Direct injection
Intake System.....	Turbocharged, air-to-air charge cooled
Intake Resistance.....	$\leq 6.28\text{kPa}$
Cooling System .....	Water cooled
Fan .....	Pusher
Battery Voltage .....	12/24V
Type of Fuel.....	Diesel
Type of Oil .....	15W40-CF4
Oil Capacity .....	14.2L
Type of Coolant .....	Glycol mixture
Coolant Capacity .....	29.7L
Heat Rejected To Water&Oil.....	49kW( 2744BTU/min)
Back Pressure .....	$\leq 10.1\text{kPa}$
Standby Power.....	92kW
Prime Power.....	86kW
Fuel Consumption(100%load) .....	214g/kW.h

## Alternator



Alternator Manufacturer/Brand .....	Leroy Somer
Alternator Model .....	LSA44.3S5
Exciter.....	Brushless
Cooling Fan .....	Cast alloy aluminum
Windings.....	100% copper
Insulation Class .....	H
Winding Pitch.....	2/3
Terminals .....	12
Drip Proof .....	IP23
Altitude.....	$\leq 1000\text{m}$
Overspeed .....	2250 rpm
Air Flow.....	0.514m <sup>3</sup> /s(50HZ),0.617m <sup>3</sup> /s(60HZ)
Voltage Regulation .....	$\pm 1.0\%$
Total harmonic TGH / THCat no load < 1.5 % - on load < 5%	
Telephone Interference.....	THF<2%;TIF<50

## PLC-7420 Control System

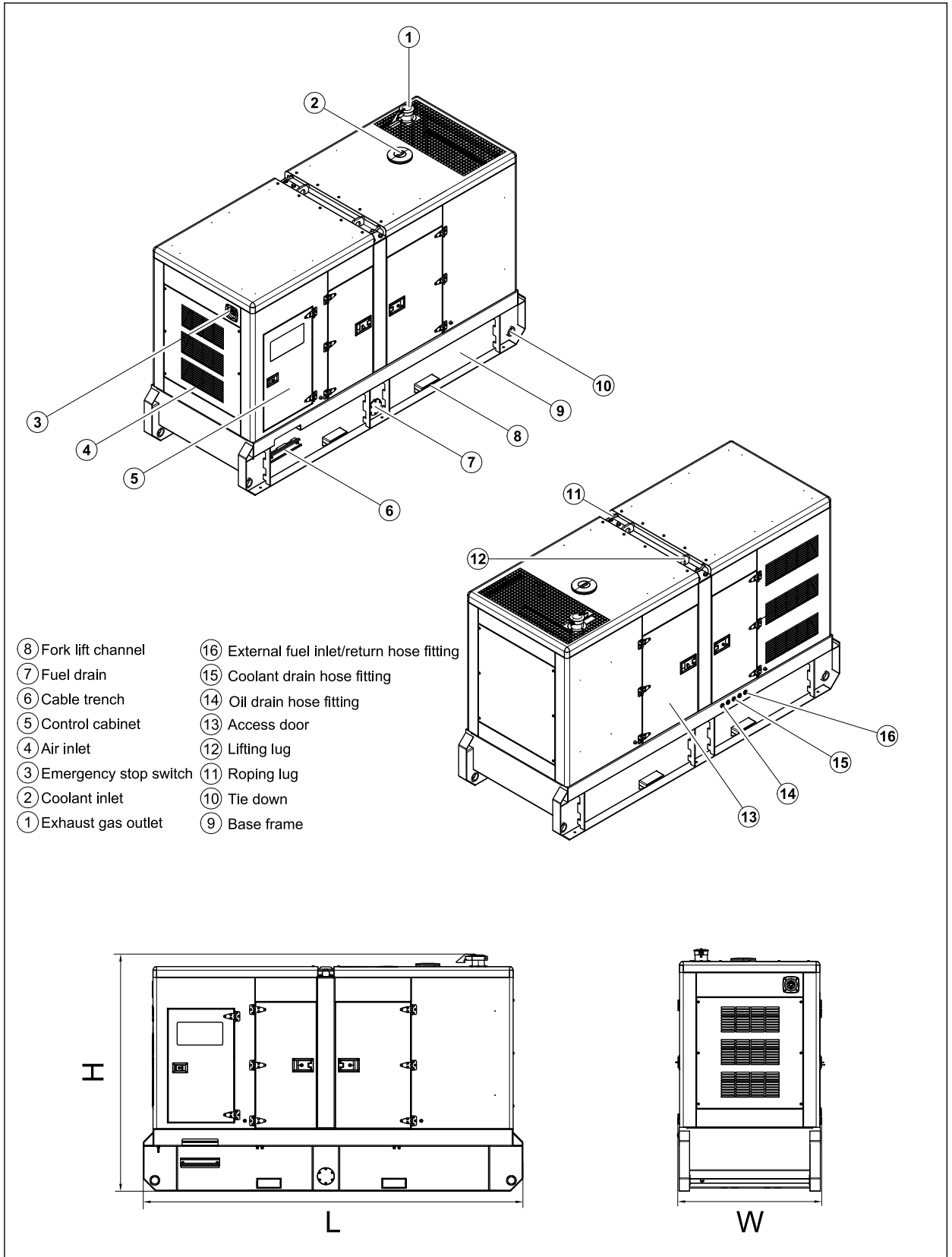


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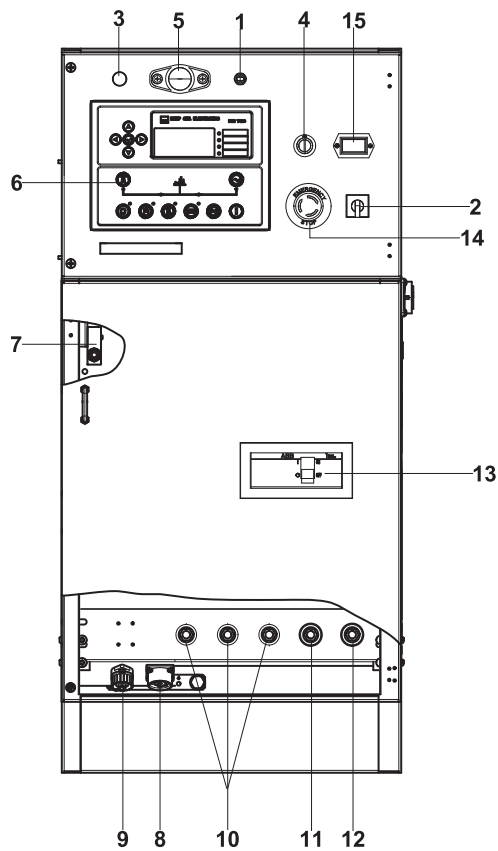
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

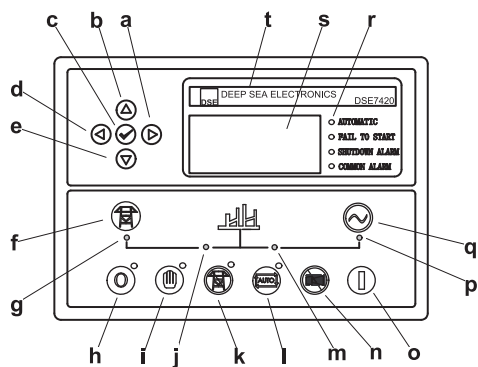
## 4 Overall Dimensions



## 5 Control System



**Control & Field wiring cabinet**



**Control module**

Ref.	Description
1	Control cabinet lamp switch
2	Mains input changeover switch
3	Charge indicator
4	Key switch
5	Control cabinet lamp
6	Control module
7	Limit switch
8	ATS connector
9	Remote run connector
10	Live wire terminals
11	Neutral wire terminal
12	Ground wire terminal
13	Main circuit breaker
14	Emergency stop switch
15	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

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<http://www.powerlinkworld.com>

*Specification may change without prior notice. For more info.,  
contact Power Link or your local distributors please.*