

DG110C-3

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

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

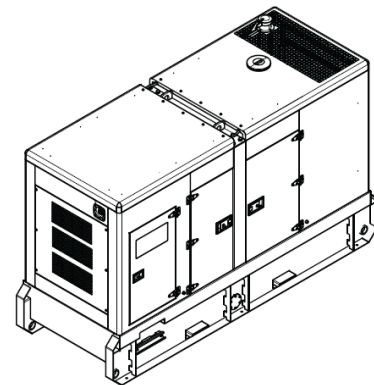
- Painting process specifications and colors are based on the manufacturer's standard
- The customer could also choose the color which the manufacturer offers

B. GENERAL FEATURES

- Cummins engine 6BT5.9G2
- Close coupled to a Stamford alternator UCI274C
- 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 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

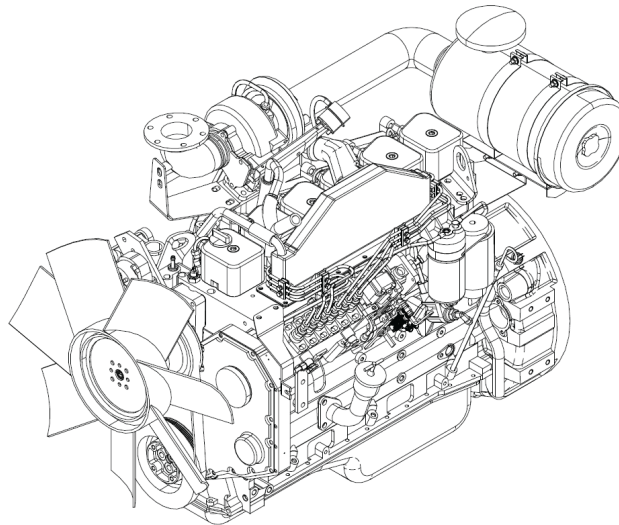
C. GENERAL TECHNICAL DATA



MODEL	GMS100CS-AU
STRUCTURE TYPE	R
TANK CAPACITY	540 L
DRY WEIGHT	2081 kg
NOISE LEVEL @ 7M	70.1 dBA
DIMENSIONS	2970 × 1172 × 1803 mm
STANDBY POWER	110 kVA / 88 kW
PRIME POWER	100 kVA / 80 kW
VOLTAGE/AMPERE	415 V / 139 A

GENSET FUEL CONSUMPTION					
Freq./Load	25%	50%	75%	100%	110%
50Hz (L/h)	7.0	11.0	17.0	22.0	25.0

DIESEL ENGINE

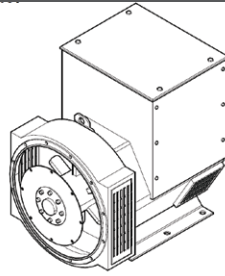


ENGINE SPECIFICATIONS

1	ENGINE MANUFACTURER/BRAND	Cummins
2	ENGINE MODEL	6BT5.9G2
3	DIMENSIONS	1198 x 716.8 x 1008 mm
4	DRY WEIGHT (APPROX.)	411 kg
5	NUMBER OF CYLINDERS	6
6	BORE	102 mm
7	STROKE	120 mm
8	DISPLACEMENT (LITER)	5.9 L
9	COMPRESSION RATIO	17.3
10	TYPE OF INJECTION	Direct Injection
11	INTAKE SYSTEM	Turbocharged,water-to-air charge cooled
12	INTAKE RESISTANCE	6.28 kPa
13	COOLING SYSTEM	Water Cooled
14	FAN	Pusher
15	BATTERY VOLTAGE	12/24V
16	TYPE OF FUEL	Diesel
17	TYPE OF OIL	15W40-CF4
18	OIL CAPACITY	14.2 L
19	TYPE OF COOLANT	Glycol Mixture
20	COOLANT CAPACITY	29.7 L
21	BACK PRESSURE	10.1 kPa
22	STANDBY POWER	92 kW
23	PRIME POWER	86 kW
24	FUEL CONSUMPTION (100% LOAD)	214 g/kWh
25	HEAT REJECTED TO WATER & OIL	49kW (2744BTU/min)

DIESEL GENERATION AUSTRALIA

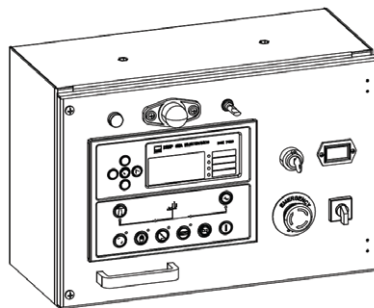
ALTERNATOR



ALTERNATOR SPECIFICATIONS

1	ALTERNATOR MANUFACTURER/BRAND	Stamford
2	ALTERNATOR MODEL	UC1274C
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	0.11m³/s(50Hz),0.135m³/s(60Hz)
13	VOLTAGE REGULATION	± 0.5%
14	TOTAL HARMONIC TGH / THCat No Load < 1.5%	on load < 5%
15	TELEPHONE INTERFERENCE	THF < 2%; TIF <50

PLC-7420 CONTROL SYSTEM

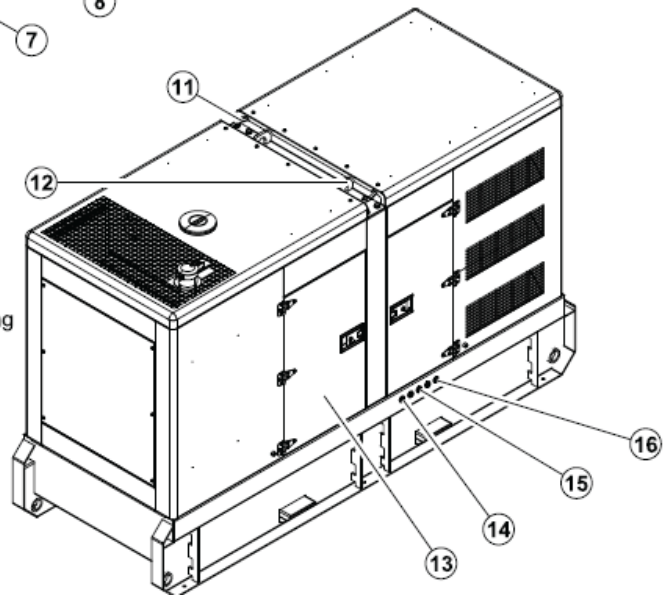
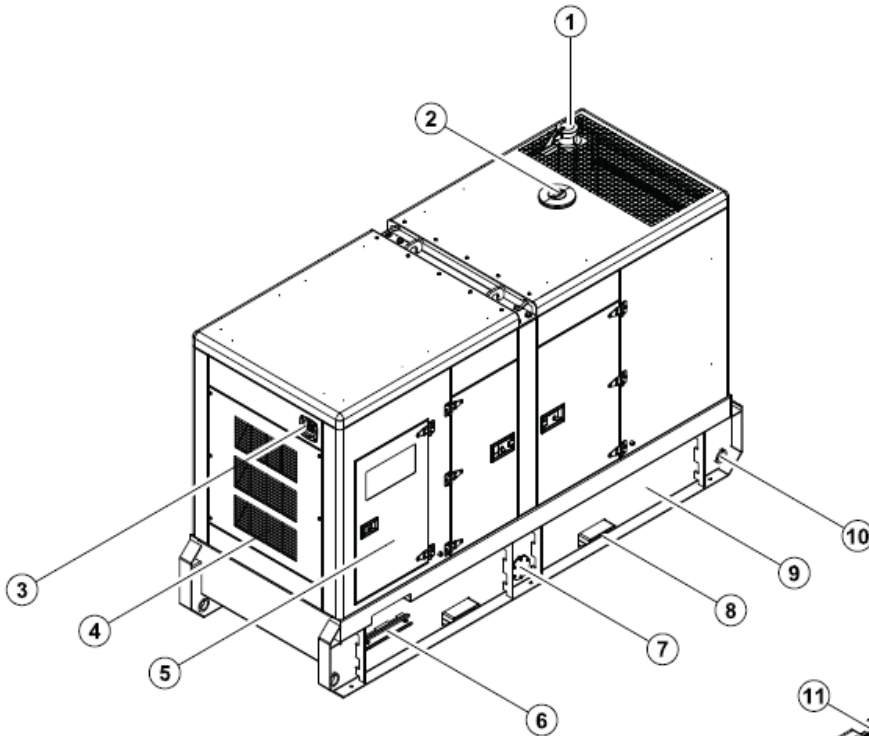


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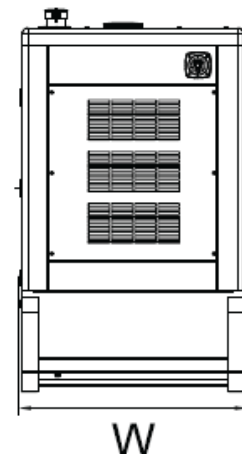
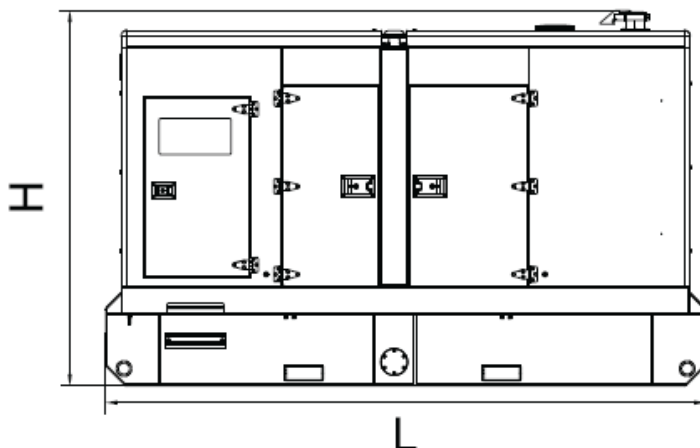
PLC-7420 is an advanced control module based on microprocessor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

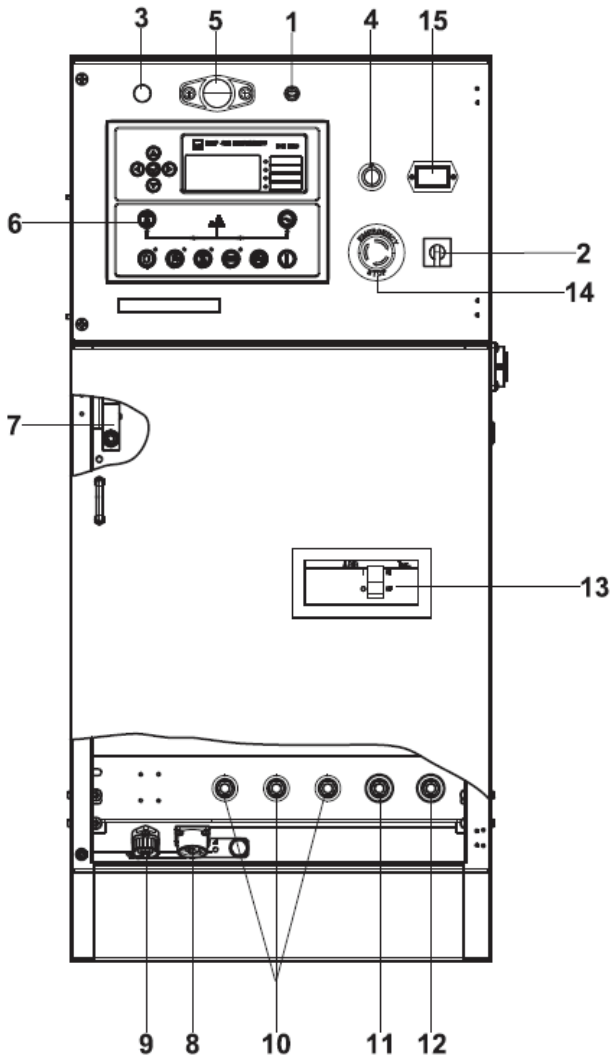


- ⑧ Fork lift channel
- ⑦ Fuel drain
- ⑥ Cable trench
- ⑤ Control cabinet
- ④ Air inlet
- ③ Emergency stop switch
- ② Coolant inlet
- ① Exhaust gas outlet
- ⑬ Access door
- ⑫ Lifting lug
- ⑪ Roping lug
- ⑩ Tie down
- ⑨ Base frame
- ⑯ External fuel inlet/return hose fitting
- ⑮ Coolant drain hose fitting
- ⑭ Oil drain hose fitting

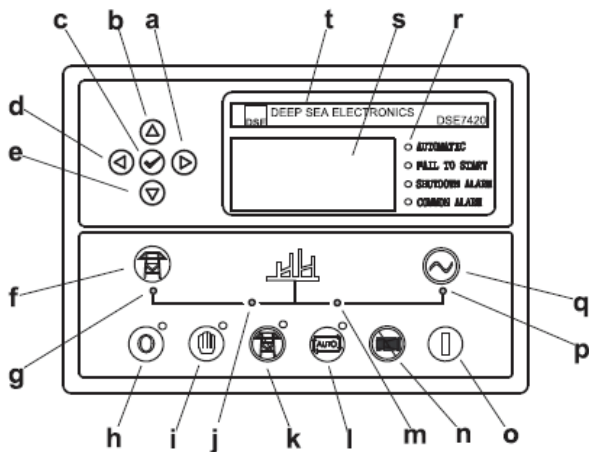


DIMENSIONS	2970 × 1172 × 1803 mm
DRY WEIGHT	2081 kg

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	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 Breaker
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)
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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