

## DGPL88C - 3

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

**88kVA**  
**CUMMINS**  
**DGPL88C - 3**

### A. STANDARDS & CONDITIONS

#### Design Standards

The designs and the productions are in conformity with:

- Conformite Europeenne (CE)
- China Compulsory Certification (CCC)
- ISO8528-5:2005
- GB/T2820.5-2009
- AS 3000-1997
- AS 3010.1-1988

#### 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

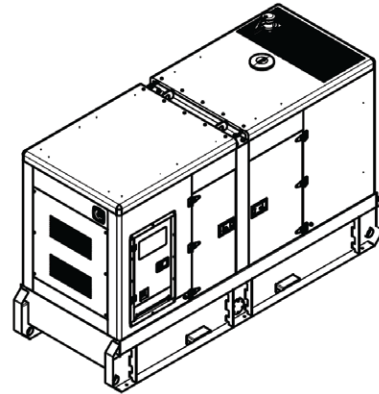
- Inspection items
- Protection devices working test
- Starting ability in normal temperature
- 50% rated power load moment capability
- Voltage deviation and speed varying: 0%, 25%, 50%, 75%, 100%, 110% Load

#### 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

- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 30 hours running
- Drain points for fuel tank
- Breather valve for fuel tank
- Operation Manual / Specifications

### C. GENERAL TECHNICAL DATA



<b>MODEL</b>	GMS80CS-AU
<b>STRUCTURE TYPE</b>	R
<b>TANK CAPACITY</b>	540 L
<b>DRY WEIGHT</b>	2103 kg
<b>NOISE LEVEL @ 7M</b>	69.0 dBA
<b>DIMENSIONS</b>	3162 x 1172 x 1974 mm
<b>STANDBY POWER</b>	88 kVA / 70 kW
<b>PRIME POWER</b>	80 kVA / 64 kW
<b>VOLTAGE / AMPERE</b>	415V/111.2A

### B. GENERAL FEATURES

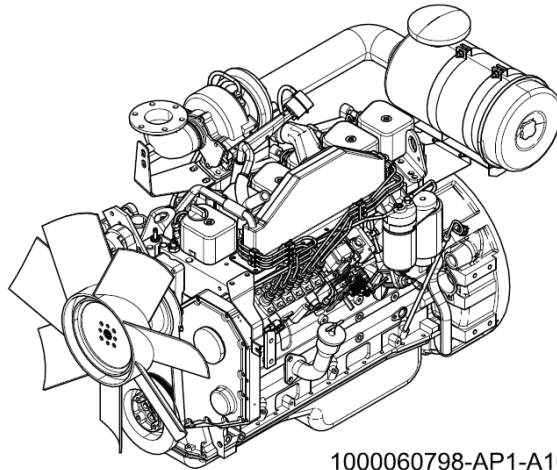
- Cummins engine 4BTA3.9-G11
- Close coupled to a Stamford alternator UCI224G
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 125A
- Rotate speed governor: Mechanical governor
- Excitation System: Self ExcitedSHUNT
- A.V.R.Model: AS440
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- Remote run connector
- 2x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Oil pump on the engine
- Non-returning valve for fuel inlet hose of the engine
- Steel base frame with forkslots

#### GENSET FUEL CONSUMPTION

Freq./Load	25%	50%	75%	100%	110%
<b>50Hz (L/h)</b>	5.3	9.1	13.2	17.6	20

**DIESEL GENERATION AUSTRALIA**

**DIESEL ENGINE**



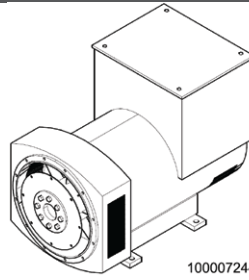
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**ENGINE SPECIFICATIONS**

1	ENGINE MANUFACTURER/BRAND	Cummins
2	ENGINE MODEL	4BTA3.9-G11
3	DIMENSIONS	N/A
4	DRY WEIGHT (APPROX.)	350 kg
5	NUMBER OF CYLINDERS	4
6	BORE	102 mm
7	STROKE	120 mm
8	DISPLACEMENT (LITER)	3.9 L
9	COMPRESSION RATIO	17.3
10	TYPE OF INJECTION	Direct Injection
11	INTAKE SYSTEM	Turbo charged
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	10.9 L
19	TYPE OF COOLANT	Glycol Mixture
20	COOLANT CAPACITY	8.3 L
21	BACK PRESSURE	10.1 kPa
22	STANDBY POWER	80 kW
23	PRIME POWER	70 kW
24	FUEL CONSUMPTION (100% LOAD)	208 g/kWh
25	HEAT REJECTED TO EXHAUST SYSTEM	N/A
26	HEAT REJECTED TO WATER & OIL	49kW( 2744BTU/min)

## DIESEL GENERATION AUSTRALIA

### ALTERNATOR

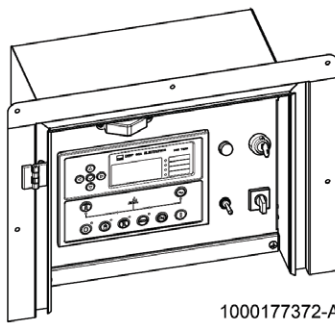


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### ALTERNATOR SPECIFICATIONS

1	ALTERNATOR MANUFACTURER/BRAND	Stamford
2	ALTERNATOR MODEL	UCI224G
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	0.216 m³/s[50HZ], 0.281 m³/s[60HZ]
13	VOLTAGE REGULATION	± 0.5%
14	TOTAL HARMONING TGH / THCat No Load < 1.5%	on load < 5%
15	TELEPHONE INTERFERENCE	THF < 2%; TIF <50

### PLC-7420 CONTROL SYSTEM



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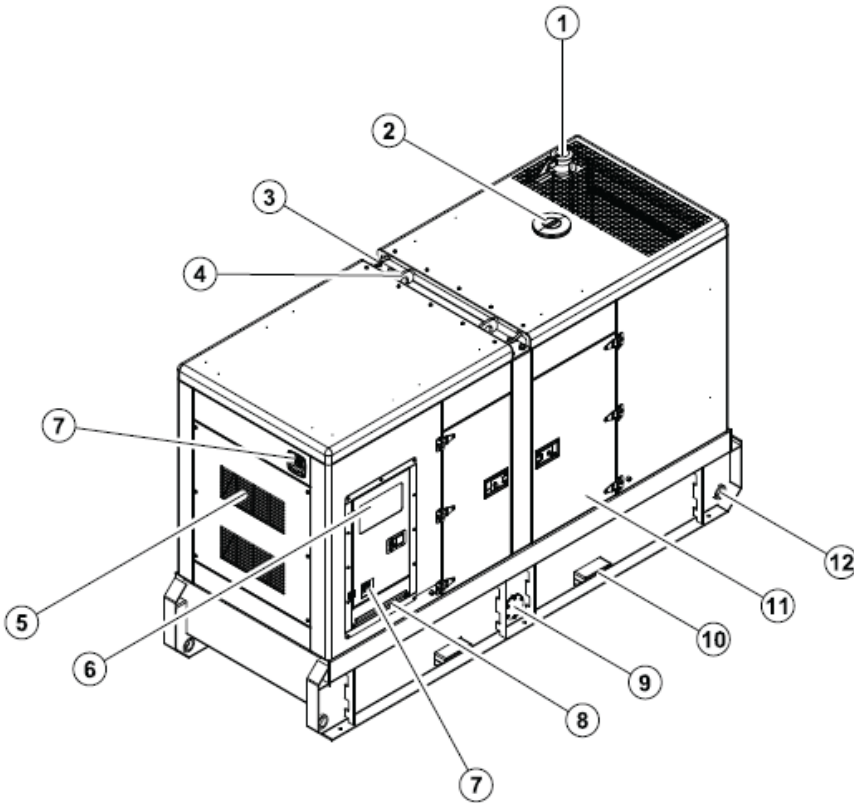
PLC-7420 is an advanced control module based on microprocessor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

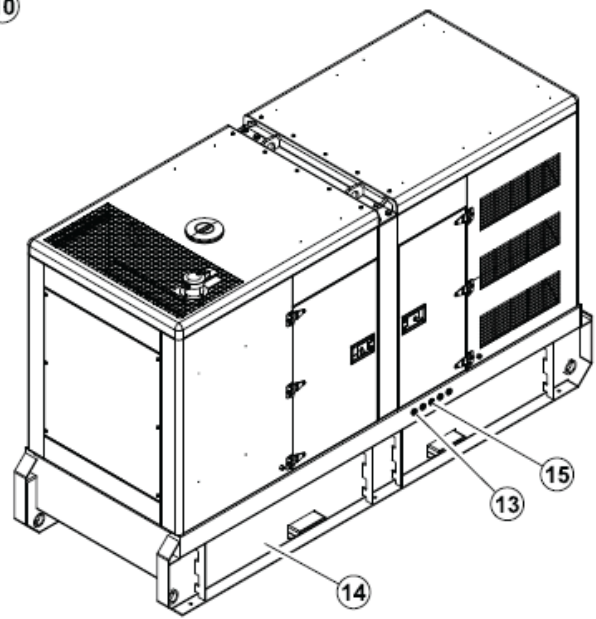
## DIESEL GENERATION AUSTRALIA

### D. OVERALL DIMENSION

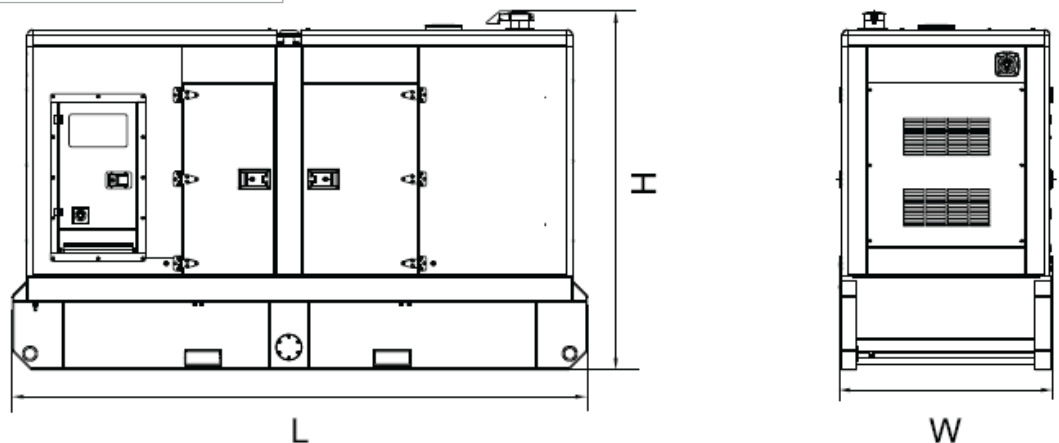
Dry weight	2100kg
Fuel tank capacity	540L
Dimensions L x W x H	3162x1174x1974mm



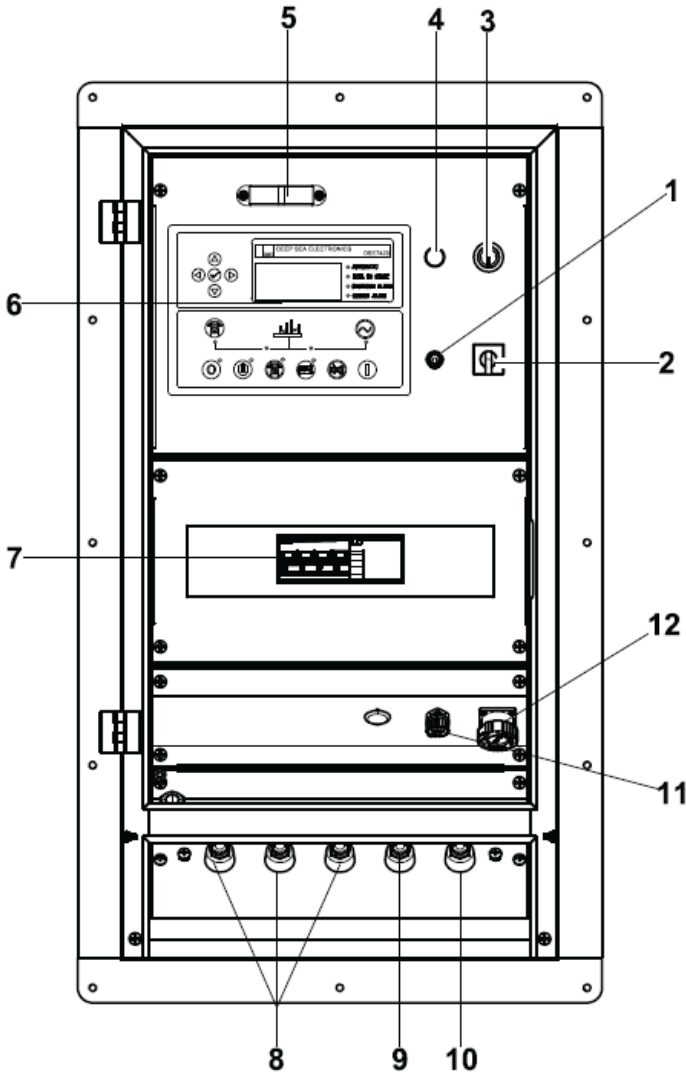
- ⑧ Cable trench
- ⑦ Emergency stop switch
- ⑥ Control cabinet
- ⑤ Air inlet
- ④ Lifting lug
- ③ Roping lug
- ② Coolant inlet
- ① Exhaust gas outlet
- ⑮ Coolant/Oil drain hose fitting
- ⑭ Base frame
- ⑬ External fuel inlet/return hose fitting
- ⑫ Tie down
- ⑪ Access door
- ⑩ Fork lift channel
- ⑨ Fuel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



<b>DIMENSIONS</b>	3162 x 1172 x 1974 mm
<b>DRY WEIGHT</b>	2103 kg



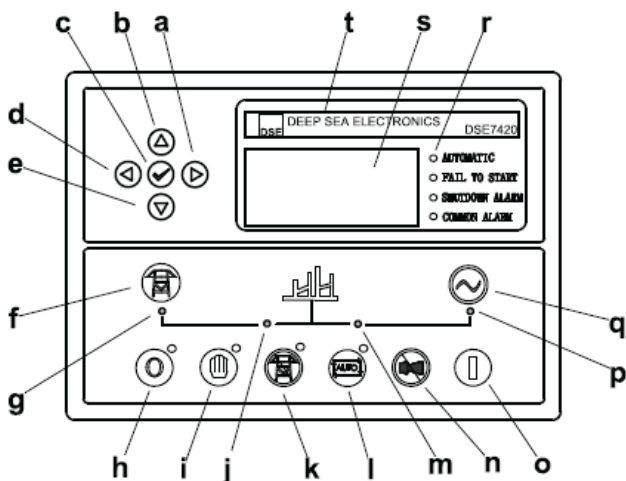
## E. CONTROL SYSTEM



**Control & Field wiring cabinet**

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	Main Circuit Breaker
8	Live Wire Terminals
9	Neutral Wire Terminal
10	Ground Wire Terminal
11	Remote Communication Interface
12	ATS Communication Interface

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



**Control module**

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