

**EC Series**

**GMS100CS**

— **Generator Set Specification**



**Super Quiet, Superior Life!**



# GMS100CS



3-Phase, 50Hz@1500RPM				
	Voltage	kW	kVA	Amps
<b>Prime Power</b>	380	80	100	151.9
	400	80	100	144.3
	415	80	100	139.1
	440	80	100	131.2
<b>Standby Power</b>	380	88.9	111.1	168.8
	400	88.9	111.1	160.4
	415	88.9	111.1	154.6
	440	88.9	111.1	145.8
<b>Noise Level at 7 meters (dBA)</b>			67.8	

**Notes:**

- 1) Ambient reference conditions: 1,000 mbar, 27°C, 30% relative humidity;
- 2) Standby Power: the maximum power available under varying loads. Only for standby and emergency use. No overload is permissible. Prime Power: the maximum power available under varying loads for continuous operation. A 10% overload is permissible for 1 hour every 12 hours.

Features	Benefits
<ul style="list-style-type: none"> <li>I Tightly structure, excellent design and craft</li> <li>I Designed with safety in mind</li> <li>I Earth leakage protection</li> <li>I Quick fix electrical power connections</li> <li>I Extensive option list</li> <li>I Well enclosed canopies with high protection against water and dust</li> </ul>	<ul style="list-style-type: none"> <li>I Beautiful appearance</li> <li>I Low operating cost results in optimal economy</li> <li>I Ease of installation, operation, and maintenance</li> <li>I Customization</li> <li>I Good quality ensure</li> </ul>

## Performance Specification and Craftwork

Performance Specification		Telephone Interference, Electromagnetism	
Efficiency of Rated Power	96.3%	TIF	≤50
Time needed from start-up to full load (inductive)	125 seconds	THF	≤2%
Time needed from start-up to 50% load (inductive) allowed	8 seconds	Radio interference in compliance with BS800 and VED LEVELS G and N.	
1.1 times overload operation time (hour)	1	<b>Craftwork</b> <ul style="list-style-type: none"> <li>• Steel base frame with AV mounting</li> <li>• standard 8h fuel tank with flexible rubber fuel tube, fuel level indicator and drainage</li> <li>• Overall sprayed powder coating</li> <li>• Whole set documents, including Installation Manual, Operation Manual, Spare Parts Catalog, Circuit Diagram</li> </ul> <b>Criterion</b> <ul style="list-style-type: none"> <li>• ISO3046, ISO8528, BS4999, BS5514,</li> <li>• BS5000PT99、AS1359, IEC34</li> <li>• UTE5100, VDE0530</li> <li>• ISO9001:2000</li> </ul>	
2.0 time overload operation time (minute)	1		
Voltage Regulation, steady state	≤±1%		
Voltage Regulation, transient state	20%-15%		
Voltage Settle Time	≤5 seconds		
Voltage Fluctuation Ratio	0.5%		
Frequency Regulation, steady state	±0.5% adjustable		
Frequency Regulation, transient state	±5%		
Frequency Settle Time	5 seconds		
Frequency Fluctuation Ratio	0.5%		
Recovery Time	0.5 seconds		

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Engine Specification			Alternator Specification	
Brand	Cummins		Brand	Stamford
Model	6BT5.9G1		Model	UCI274C
No. of Cylinders and Cycle	6L, 4 Stroke		Rated Output (kVA)	100
Induction System	TC		Rated current (A)	144.3
Compression Ratio	16.8: 1		Exciter	Brushless
Displacement (L)	5.9		THF (BS EN60034- 1)	<2%
Bore x Stroke (mm)	102 x 120		Bearing number	Single
Torque (N.m)	548		Windings	100% Copper
Speed RPM	1500		Connection Type	Star Connection
Piston speed (m/s)	6		Insulation Class	H
Air intake flow (L/s)	100		Winding Pitch	2/3
Exhaust flow (L/s)	250		Amortisseur Winding	Full
Net weight (kg)	411		A.V.R. Model	SX460
Starting System	Electronic		Voltage Regulation (no load- full load)	± 1.0%
Engine coolant flow (L/s)	2		Underspeed Protection	Standard
Base Output power (kW)	86		Protection	IP23
Fuel Consumption (L/h)	110% load		Phase Sequence	A(U), B(V), C(W)
	100% load	22	TIF (NEMA MG 1-22)	<50
	75% load	17	Excitation System	Self-excited, PMG optional
	50% load	11	Ambient Temp. (°C)	40
Governor Type	Mechanical		Stator Rated Temp. (°C)	125

Cooling System		Fuel System	
Max. coolant cycling resistance exterior engine (kPA)	28	Fuel injection pump model	pump with GAC governor
Thermostat adjusting temperature (°C)	82-95	Max. fuel input resistance of transfer pump (mmHg)	102
Min. opening pressure of radiator cap (kPA)	69	Max. overflow fuel resistance at overflow pipe of injector (mmHg)	254
Coolant capacity-engine only (L)	9.9	Total fuel overflow amount (L/h)	30
Exhaust System		Lubricating System	
Max. Back Pressure (kPA)	10.2	<b>Normal oil pressure range</b>	
Electrical System		Low idle (kPA)	207
Starter (V)	12/24	Rated speed (kPA)	345
Battery charging system (A)	63/40	Max. oil temperature permitted in oil pan (°C)	121
		Lubrication system Min. capacity (L)	16.4

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## Control System

### PLC-702

DSE-702 key manual start module is a manual engine control module designed to control the engine via a key switch and push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine failure.

#### Standard Control Function

- Manual Engine Control Module
- Low Oil Pressure
- High Engine Temperature
- Auxiliary Shutdown
- Overspeed Protection
- Protection hold-off timer
- Charge Failure warning



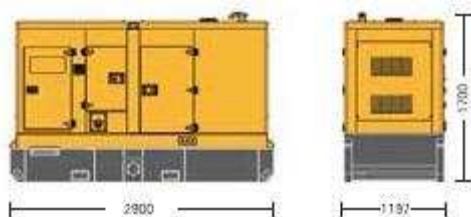
### PLC-5220

DSE-5220 control panel is applied

- | Microprocessor control, with high stability and credibility
- | Mains supply and generator operation monitoring
- | Indicating operation status and fault conditions
- | Multiple protections; multiple parameters display, like pressure, temp.
- | Manual and automatic work mode selectable
- | Real time clock for time and date display, overall runtime display, 99 log entries
- | Overall power output display
- | Integral speed/frequency detecting, telling status of start, rated operation, overspeed
- | Communication with PC via RS485 OR RS232 interface, using MODBUS protocol.



## Dimension and Weight



### GMS100CS

Length × Width × Height, mm  
2900×1197×1700

Weight (kg):  
1905

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## Optional

Engine	Alternator	Generator Set	Fuel System	Canopy
<ul style="list-style-type: none"> <li>• Coolant heater</li> </ul>	<ul style="list-style-type: none"> <li>• Space heater</li> <li>• AVR PMG with regulator</li> <li>• Anti-damp and anti-corrosion treatment</li> <li>• Anti-condensation heater</li> </ul>	<ul style="list-style-type: none"> <li>• Tools with the machine</li> </ul>	<ul style="list-style-type: none"> <li>• Low fuel level alarm</li> <li>• Automatic fuel feeding system</li> </ul>	<ul style="list-style-type: none"> <li>• Trailer</li> <li>• Container</li> </ul>
Lubricating System	Exhaust System	Cooling System	Control Panel	Voltages
<ul style="list-style-type: none"> <li>• Oil with the machine</li> </ul>	<ul style="list-style-type: none"> <li>• Protection board from hotness</li> <li>• Low frequency silencer</li> </ul>	<ul style="list-style-type: none"> <li>• Front heat protection</li> <li>• 50°C radiator</li> <li>• Coolant (-30°C)</li> </ul>	<ul style="list-style-type: none"> <li>• Remote control panel</li> <li>• Automatic paralleling control panel</li> <li>• Automatic Transfer Switch (ATS)</li> </ul>	<ul style="list-style-type: none"> <li>• 415/240V</li> <li>• 400/230V</li> <li>• 380/220V</li> <li>• 220/127V</li> <li>• 200-115V</li> </ul>



Local Distributor