

EC Series

GMS22CS

— **Generator Set Specification**



Super Quiet, Superior Life!



GMS22CS



3-Phase, 50Hz@1500RPM

	Voltage	kW	kVA	Amps
Prime Power	380	18	22	33.4
	400	18	22	31.8
	415	18	22	30.6
	440	18	22	28.9
Standby Power	380	20	24	37.1
	400	20	24	35.3
	415	20	24	34.0
	440	20	24	32.1
Noise Level at 7 meters (dBA)				63

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

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	Craftwork <ul style="list-style-type: none"> ● Steel base frame with AV mounting ● standard 8h fuel tank with flexible rubber fuel tube, fuel level indicator and drainage ● Overall sprayed powder coating ● Whole set documents, including Installation Manual, Operation Manual, Spare Parts Catalog, Circuit Diagram Criterion <ul style="list-style-type: none"> ● ISO3046, ISO8528, BS4999, BS5514, ● BS5000PT99、AS1359, IEC34 ● UTE5100, VDE0530 ● ISO9001:2000 	
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	4B3.9G1		Model	PI144E	
No. of Cylinders and Cycle	4L, 4 Stroke		Rated Output (kVA)	22.5	
Induction System	NA		Rated current (A)	32	
Compression Ratio	16.5: 1		Exciter	Brushless	
Displacement (L)	3.9		THF (BS EN60034- 1)	<2%	
Bore x Stroke (mm)	102 x 120		Bearing number	Single	
Torque (N.m)	153		Windings	100% Copper	
Speed RPM	1500		Connection Type	Star Connection	
Piston speed (m/s)	6.0		Insulation Class	H	
Air intake flow (L/s)	32.8		Winding Pitch	2/3	
Exhaust flow (L/s)	67.5		Amortisseur Winding	Full	
Net weight (kg)	308		A.V.R. Model	SX460	
Starting System	Electronic		Voltage Regulation (no load- full load)	± 1.0%	
Engine coolant flow (L/s)	2.2		Underspeed Protection	Standard	
Base Output power (kW)	24		Protection	IP23	
Fuel Consumption (L/h)	110% load		Phase Sequence	A(U), B(V), C(W)	
	100% load	6.7	TIF (NEMA MG 1-22)	<50	
	75% load	5.2	Excitation System	Self-excited, PMG optional	
	50% load	4.0	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	BYC A 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)	508	
Coolant capacity-engine only (L)	7.2		Total fuel overflow amount (L/h)	30	
Exhaust System			Lubricating System		
Max. Back Pressure (kPA)	10.2		Normal oil pressure range		
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)	10.9	

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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



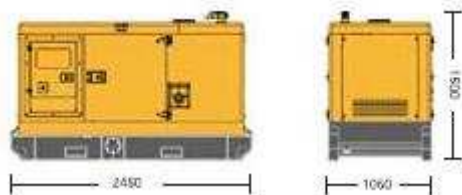
PLC-5220

DSE-5220 control pannel 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



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Length × Width × Height, mm
2450×1050×1500

Weight (kg):
1038

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Optional

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



Local Distributor