

GMS250C/S

EC Series



**MULTIPHASE
POWER**

Features:

- Rotate speed governor: Electrical governor FP801
- Excitation system: SHUNT
- A.V.R model: AS440
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy (Only for Soundproofed sets)
- 50°C radiator
- Oil pump on the engine
- Steel base frame with fork holes
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for daily running
- Drain points for fuel tank
- Operation Manual / Specifications



Output Ratings

Generating Set Model	Prime Power	Standby Power
GMS250C	250kVA/200kW	265kVA/212kW
GMS250CS	250kVA/200kW	265kVA/212kW

Ratings at 0.8 power factor

Dimensions and Weights

Model	Length (L) mm	Width (W) mm	Height (H) mm	Dry Weight kg
GMS250C	2932	1277	1828	2700
GMS250CS	4250	1400	2150	4554

Notes:

* Prime Power

Continuous duty operation, under variable load 24/24h-10% over load permissible 1 hour/12 hours;

**Standby Power

Standby duty, operation under variable load, without over load;

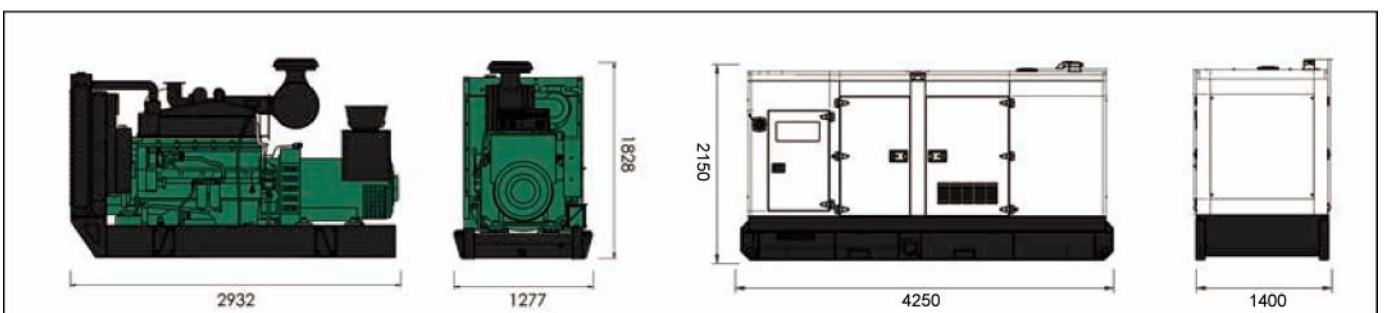
Standard Reference Conditions

Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m(328 ft) A.S.L. 30% relative humidity.

Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.

Ratings and Performance Data

Engine Make & Model:	Cummins NT855-GA
Alternator Brand:	Stamford
Alternator Model:	UCDI274K
Control System:	Auto Gen / AMF
Circuit Breaker Type:	3 Pole MCCB
Frequency & Phase:	50Hz & 3PH
Engine Speed: RPM	1500
Fuel Tank Capacity: L	410
GMS250C	660
GMS250CS	
Fuel Consumption: l/hr (100% Load)	53.0
- Prime Power	59.0
- Standby Power	



Engine model:NT855-GA

Engine Technical Data	
No. of Cylinders / Alignment:	4 / In Line
Cycle:	6 Stroke
Bore / Stroke: mm	140 (5.5)/152 (6)
Induction:	Turbocharged
Cooling Method:	Water
Governing Type:	Electrical
Governing Class:	ISO 8528 G2
Compression Ratio:	15.0:1
Displacement: L	14 (855)
Moment of Inertia:kg.m ²	4.99 (118.5)
Engine Electrical System:	
- Voltage / Ground	24/Negative
- Battery Charger	35
Weight: kg	
- Dry	1270 (2800)
- Wet	1320 (2900)

Cooling System	
Cooling System Capacity: L	20.8
Maximum coolant Friction Head External to Engine: kPa	41
Maximum Static Head of Coolant Above Engine Crank Centerline : m	14.0
Standard Thermostat (Modulating) Range: °C	82-94
Minimum Pressure Cap: kPa	48.2
Maximum Top Tank Temperature for Standby / prime Power: °C	104/100

Designed to operate in ambient conditions up to 50°C (122°F). Contact your local Multiphase Power Dealer for power ratings at specific site conditions

Performance	
Engine Speed: RPM	1500
Gross Engine Power: kWm	
-Prime	231 (310)
- Standby	254 (340)
BMEP: kPa	
- Prime	1320 (191)
- Standby	1451 (210)

Fuel System				
Injection System Type: Direct Injection Cummins PT				
Recommended Fuel Type: Diesel Fuel No.2-D(ASTM D975)				
Fuel Consumption: l/hr				
Prime	110% Load	100% Load	75% Load	50% Load
GMS250C	59.0	53.0		
GMS250CS	59.0	53.0		

(Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)

Lubrication System	
Oil Pressure @ Idle Speed kPa	103
@ Rated Speed kPa	241-345
Maximum Oil Temperature: °C	121
Total Oil Capacity: L	38.6(10.2)
Oil Type:	API CH4 / 15W-40

Exhaust System	
Silencer Type	Industrial
Silencer Quantity:	1
Silencer Noise Reduction Level:	15-20dBA
Maximum Allowable Back Pressure: mmhg	10
Exhaust Gas Flow: l/s	
- Prime	650 (1373)
- Standby	690 (1458)
Exhaust Gas Temperature: °C	
- Prime	459 (859)
- Standby	469 (877)

Air Systems	
Air Filter Type:	Dry type replaceable Element
Intake Air Flow: l/s	
- Prime	288
- Standby	306
Max. Air Intake Restriction: mmH ₂ O	
-With Dirty Filter Element	25
-With Normal Duty and Clean Filter Element	15
-With Heavy Duty and Clean Filter Element	25

The weights are approximate and without fuel.

Alternator model: UC DI274K

Alternator Physical Data	
Manufactured by:	Stamford
Model:	UCDI274K
No. of Bearings:	Single
Insulation Class:	H
Winding Pitch Code:	2/3
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	SHUNT
AVR Model:	AS440

Alternator Operating Data	
Overspeed: rpm	2250rpm
Voltage Regulation: (Steady state)	±1.0%
Wave Form NEMA = TIF:	< 50
Wave Form IEC = THF:	< 2%
Air Flow: m ³ /s	0.58
Altitude: m	≤1000

Alternator Performance Data:	GMS250C	GMS250CS
Time constants/400V:Ms		
T'd	49	49
T''d	20	20
T'do	1270	1270
Ta	18	18
Short Circuit Capacity** %	1/Xd	1/Xd
Reactances: Per Unit		
Xd	2.550	2.550
X'd	0.119	0.119
X''d	0.078	0.078

Voltage Technical Data GMS250C				
Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
380/220	229.0	183.2	265.0	212.0
400/230	229.0	183.2	265.0	212.0
415/240	229.0	183.2	265.0	212.0
440/254	N/A	N/A	N/A	N/A

Voltage Technical Data GMS250CS				
Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
380/220	229.0	183.2	265.0	212.0
400/230	229.0	183.2	265.0	212.0
415/240	229.0	183.2	265.0	212.0
440/254	N/A	N/A	N/A	N/A

ControlSystem

PLC-7420

FEATURES

- Microprocessor control, with high stability and credibility .
- Mains supply and generator operation monitoring.
- Indicating operation status and fault conditions.
- Multiple protections; multiple parameters display, such as pressure, temperature.
- 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.
- Engine ECU is available.
- Common USB cable is usable for parameter configuration.
- Multi-language is available.



PLC-920 (Optional)

FEATURES

- Parameter configuration via RS-232 serial communication;
- Log last 50 events & alarm information with measured values;
- Statistics records;
- Remote start/stop;
- Speed sensing from alternator voltage or magnetic pickup;
- Configurable 3 inputs and 6 outputs;
- ECU powers, ECU stop, STOP or fuel solenoid selection;
- Automatic transfer switching control and engine control;
- Adjustable start, load and stop timers.



Diesel Generator Sets 6-2250 kVA		PLC-7420	PLC-920
General accessory	MODEL	●	●
	AVR	●	●
	Electronic Governing	×	×
	Glow plug control	●	●
	Cycle Cranking	●	●
	(MODBUS) Networking	●	×
	Fault History	●	●
	Manual start/stop	●	●
	Auto/remote start	●	●
	Regular Test	●	●
Operator Interface	Auto operation LED	●	●
	Manual operation LED	●	●
	Common Shutdown LED	●	●
	Common warning LED	●	●
	Fail to start LED	●	●
	Emergency stop(lock)	●	●
	Alphanumeric screen	●	●
	Remote start input active LED	●	×
	Alarm reset	●	●
	Alarm reset	●	●
Measurement and Instrumentation	Engine		
	Oil pressure	●	●
	Water Temperature	●	●
	Engine Speed	●	●
	Hours Run	●	●
	Number of Starts	●	●
	Battery Voltage	●	●
	Coolant Temperature	●	●
	3Phase-L Voltage&Frequency	●	●
	3phase Current	●	●
	Frequency	●	●
	kWh	●	●
	Alternator		
	Apparent Power	●	●
	Active Power and Reactive Power	●	●
	Power Factor	●	●
	Per PhasekW, kVAr	●	●
	Per Phase kVA	●	●
	Phase Voltage	●	●
	Output Power	●	×
Grid Line Voltage	●	×	
Grid Phase Voltage	●	×	
Grid Frequency	●	×	
Mains Expression			
Low Fuel Level	●	●	
High Fuel Level	○	×	
Low Oil Pressure	●	●	
High Water Temperature	●	●	
Failure to Stop	●	●	
Failure to Start	●	●	
Controllable start circles/times	●	×	
Overspeed	●	●	
Under/Over Voltage	●	●	
Under/Over Frequency	●	●	
Overcurrent	●	●	
Earth Leakage	○	○	
Reverse Power	×	×	
Reverse kWh	×	×	
Shutdown Protection and Indication	Alternator		
	Low Oil Pressure	●	●
	Low Water Temperature	○	○
	High Water Temperature	●	●
	Low Water Level	●	●
	Low/High Battery Voltage	●	●
	Failure to Charge	●	●
	Overcurrent	●	●
	Overload	●	●
	Genset Under/Over Voltage	●	●
Genset Under/Over Frequency	●	●	
under/over Speed	●	●	
High Engine temperature	●	●	
Earth Leakage	●	○	
Paralleling Capability	Synchrscope(Independent Bus)	×	×
	Active and Reactive Power Control	×	×
	Synchrscope(Shared Bus)	×	×
	Synchronization Detector	×	×
	Peak Lapping	×	×
Power Transfer Function	Automatic Transfer	●	○
	Hard Closed Transition	●	●
	Soft Closed Transition	×	×
	Gen/Mains Breaker	●	×
	Gen/Mains Breaker Status Protection	●	×
	Speed/Voltage Control	×	×
	Power Indication	●	×
	Fuel&Solenoid Valve Control	●	●
	Starter Control	●	●
	Preheating	○	○
Mains Transfer Switch (Standard)	●	×	
Mains Transfer Switch (Emergency)	●	×	
Environment	Operating Temperature (-40℃-70℃)	●	●
	Ambient Temperature (-25℃-45℃)	●	●
Humidity<=80%	●	●	
Monitoring Function	Grid Over/Under Voltage Control	●	×
	Grid Over/Under Frequency Control	●	×
	Remote Start (Output/Load/No-load)	●	●
	Optional Relay Output	●	●
	Remote Telecom Control with All Functions	●	×
	Engine Instrument Monitoring	●	●
	Alternator Output Instrument Monitoring	●	●
	Connection Point with All-around Setting For 6 Users	●	●
	3 Users Input Connection Point	●	●
	LCD Light Control of Low Light Operation Environment	●	●
Safe PIN Code	●	●	
RS232/485 Interface	●	×	
Language Selection	●	●	
Multi-Language Function	●	●	

● Standard ○ Optional × Impossible

GMS250C/S

EC Series

Optional



Engine	Alternator	Generator Set	Fuel System	Canopy
<ul style="list-style-type: none"> Water Jacket Preheater Oil Preheater 	<ul style="list-style-type: none"> Winding Temperature Measuring Instrument Alternator Preheater PMG 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 feedingsystem Fuel T-valves 	<ul style="list-style-type: none"> Trailer
Lubricating System	Exhaust System	Cooling System	Control System	Voltages
<ul style="list-style-type: none"> Oil with the machine 	<ul style="list-style-type: none"> Protection board from hotness 	<ul style="list-style-type: none"> Front heat protection Coolant (-30°C) 	<ul style="list-style-type: none"> Remote control panel PLC-920 ATS 	<ul style="list-style-type: none"> 415/240V 400/230V 380/220 220/127V 200-115V



If you have any question or inquiry, please contact Multiphase Power sales organization. Or contact by: 02-168-3193-5

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

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Local Distributor