GMS80C/S

EC Series

Features:

- Rotate speed governor: Mechanical governor
- Excitation system: Self excited, 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℃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
GMS80C	80kVA/64kW	88kVA/70kW
GMS80CS	80kVA/64kW	88kVA/70kW

Ratings at 0.8 power factor

Dimensions and Weights

Model	Length (L) mm	Width (W) mm	Height (H) mm	Dry Weight kg
GMS80C	2156	881	1495	1201
GMS80CS	3150	1150	1700	2120

Notes:

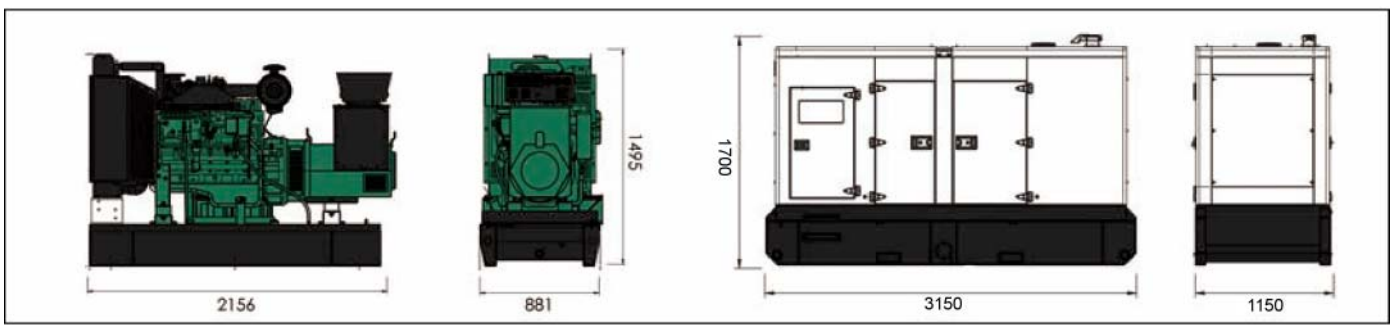
***Prime Power**
Continuous duty operation, under variable load 24/24h-10% over load permissible 1 hour/12 hours;

****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 6BT5.9-G1
Alternator Brand:	Stamford
Alternator Model:	UCI224G
Control System:	Auto Gen / AMF
Circuit Breaker Type:	3 Pole MCCB
Frequency & Phase:	50Hz & 3PH
Engine Speed: RPM	1500
Fuel Tank Capacity: L **GMS80C** **GMS80CS**	 206 300
Fuel Consumption: l/hr **(100% Load)** **- Prime Power** **-Standby Power**	 22 25



GMS80C/S

EC Series

Engine model: 6BT5.9-G1

Engine Technical Data

No. of Cylinders / Alignment:	6/ In Line
Cycle:	4 Stroke
Bore / Stroke: mm	102X120
Induction:	Turbocharged
Cooling Method:	Water
Governing Type:	Mechanical
Governing Class:	ISO 8528 G2
Compression Ratio:	16.8:1
Displacement: L	5.9
Moment of Inertia:kg.m²	0.25
Engine Electrical System: **- Voltage / Ground** **- Battery Charger**	 12/Negative 63 Amp
Weight: kg **- Dry** **- Wet**	411

Performance

Engine Speed: RPM	1500
Gross Engine Power: kWm - **- Prime** **- Standby**	 86 92
BMEP: kPa **- Prime** **- Standby**	

Lubrication System

Oil Pressure @ Idle Speed kPa **@ Rated Speed** kPa	207 345
Maximum Oil Temperature: °C	121
Total Oil Capacity: L	16.4
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	76
Exhaust Gas Flow: l/s **- Prime** **- Standby**	 250 280
Exhaust Gas Temperature: °C **- Prime** **- Standby**	 526 565

Cooling System

Cooling System Capacity: L	9.9
Maximum coolant Friction Head External to Engine: kPa	28
Maximum Static Head of Coolant Above Engine Crank Centerline : m	14
Standard Thermostat (Modulating) Range: °C	82-95
Minimum Pressure Cap: kPa	69
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

Fuel System

Injection System Type: WeiFu A pump with RSV Mechanical govemor

Recommended Fuel Type:
Diesel Fuel No.2-D(ASTMD975)

Fuel Consumption: l/hr

Prime	110% Load	100% Load	75% Load	50% Load
GMS80C	25	22	17	11
GMS80CS	25	22	17	11

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

Air Systems

Air Filter Type:	Dry type replaceable Element
Intake Air Flow: l/s **- Prime** **- Standby**	 100 108
Max. Air Intake Restriction: mmH_2O **-With Dirty Filter Element** **-With Normal Duty and Clean Filter Element** **-With Heavy Duty and Clean Filter Element**	 635 254 381

The weights are approximate and without fuel.

GMS80C/S

EC Series

Alternator model: UCI224G

Alternator Physical Data	
Manufactured by:	Stamford
Model:	UCI224G
No. of Bearings:	Single
Insulation Class:	H
Winding Pitch Code:	2/3
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	Self excited, SHUNT
AVR Model:	AS440

Alternator Operating Data	
Overspeed: rpm	2250rpm
Voltage Reguation: (Steady state)	±1.0%
Wave Form NEMA = TIF:	< 50
Wave Form IEC = THF:	< 2%
Air Flow: m^3/s	0.216
Altitude: m	≤1000

Alternator Performance Data:	GMS80C	GMS80CS
Time constants/400V:Ms		
T'd	30	30
T''d	8	8
T'do	750	750
Ta	7	7
Short Circuit Capacity %**	1/Xd	1/Xd
Reactances: Per Unit	2.2	2.2
Xd		
X'd	0.17	0.17
X"d	0.12	0.12

Voltage Technical Data GMS80C

Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
380/220	75.0	60.0	87.5	70.0
400/230	75.0	60.0	87.5	70.0
415/240	75.0	60.0	87.5	70.0
440/254	67.4	53.9	76.9	61.5

Voltage Technical Data GMS80CS

Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
380/220	75.0	60.0	87.5	70.0
400/230	75.0	60.0	87.5	70.0
415/240	75.0	60.0	87.5	70.0
440/254	67.4	53.9	76.9	61.5

GMS80C/S

EC Series

Diesel Generator Sets	6-2250 kVA	
	MODEL	PLC-7420	PLC-920
General accessory	AVR	●	●
	Electronic Governing	×	×
	Glow plug control	●	●
	Cycle Cranking	●	●
	(MODBUS) Networking	●	×
	Fault History	●	●
Operator Interface	manual start/stop	●	●
	Auto/remote start	●	●
	Regular Test	●	●
	Auto operation LED	●	●
	Manual operation LED	●	●
	Common Shutdown LED	●	●
	Common warning LED	●	●
	Fail to start LED	●	●
	Emergency stop(local)	●	●
	Alphanumeric screen	●	●
	Remote start input active LED	●	×
	Alarm reset	●	●
Measurement and Instrumentation	Engine: Oil pressure	●	●
	Engine: Water Temperture	●	●
	Engine: Engine Speed	●	●
	Engine: Hours Run	●	●
	Engine: Number of Starts	●	●
	Engine: Battery Voltage	●	●
	Engine: Coolant Temperature	●	●
	Alternator: 3Phase(L-L Voltage&Frequency	●	●
	Alternator: 3phase Current	●	●
	Alternator: Frequency	●	●
	Alternator: kWh	●	●
	Alternator: Apparent Power	●	●
	Alternator: Active Power and Reactive Power	●	●
	Alternator: Power Factor	●	●
	Alternator: Per Phase(W, kW)	●	●
	Alternator: Per Phase kVA	●	●
	Alternator: Phase Voltage	●	●
	Alternator: Output Power	●	×
	Mains Expression: Grid Line Voltage	●	×
	Mains Expression: Grid Phase Voltage	●	×
	Mains Expression: Grid Frequency	●	×
Shutdown Protection and Indication	Engine: Low Fuel Level	●	●
	Engine: High Fuel Level	○	×
	Engine: Low Oil Pressure	●	●
	Engine: High Water Temperature	●	●
	Engine: Failure to Stop	●	●
	Engine: Failure to Start	●	●
	Engine: Controlable start circles/times	●	×
	Engine: Overspeed	●	●
	Alternator: Under&Over Voltage	●	●
	Alternator: Under&Over Frequency	●	●
	Alternator: Overcurrent	●	●
	Alternator: Earth Leakage	○	○
	Alternator: Reverse Power	×	×
	Alternator: Reverse kWr	×	×
Threshold Warning&Indication	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	Synchroscope(Independent Bus)	×	×
	Active and Reactive Power Control	×	×
	Synchroscope(Shared Bus)	×	×
	Synchronization Dector	×	×
	Peak Lopping	×	×
Power Transfer Function	Automatic Transfer	●	○
	Hard Closed Transition	●	●
	Soft Closed Transtion	×	×
	Gen/Mains Breaker	●	×
	Gen/Mains Breaker Status Protection	●	×
	Speed/Voltage Control	×	×
	Power Indication	●	×
	Fuel&solenoid Valve Control	●	●
	Startor 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

ControlSystem

PLC-7420 (Optional)

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

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.

GMS80C/S

EC Series

Optional

Engine	Alternator	Generator Set	Fuel System	Canopy
● Water Jacket Preheater ● Oil Preheater	● Winding Temperature ● Measuring Instrument ● Alternator Preheater ● PMG ● Anti-damp andanti-corrosion treatment ● Anti-condensationheater	● Tools with the machine	● Low fuel level alarm ● Automatic fuel feedingsystem ● Fuel T-valves	● Trailer

LubricatingSystem	Exhaust System	Cooling System	Control System	Voltages
● Oil with the machine	● Protection board fromhotness	● Front heat protection ● Coolant (-30°C)	● Remote control panel ● PLC-7420 ● ATS	● 415/240V ● 400/230V ● 380/220 ● 220/127V ● 200-115V

The following lists are optional by the needs of customers.

6B Series 1000 Hour Maintaining List				
No.	**Part Name**	**Part No.**	**Qty**	**Remark**
1	CARTRIDGE,LUB	1012N-010(3937743)	5	
2	FILTER,FUEL	C3931063	5	
3	WATER FUEL SEPERATOR	C3930942	5	
4	CLEANER,AIR	6BT-6BTA(KW1833)	3	
5	CLEANER,AIR	6BTAA(KW2140)	3	
6	BELT,V RIBBED	3288790	2	
7	FRON OIL SEAL	C4991305	1	
8	REAR OIL SEAL	C4982415	1	
9	BEARING,CRANKSHAFT THRUS	A3906230	1	
10	BEARING,MAIN, UPPER	C3929016	6	
11	BEARING,MAIN, BOTTOM	C3929021	7	
12	BEARING,CONNECTING ROD	A3901170	12	
13	AIR RING, PISTON	C3918315	6	
14	MID RING, PISTON	C3904531	6	
15	OIL RING, PISTON	C3932520	6	
16	GASKET,VALVE COVER	A3902666	12	
17	SOLENOID，FUEL PUMP	C4942879	1	
18	NOZZLE TIP	P277	6	

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.

EC Series / 2017 1st Edition

Local Distributor