

GMS175C/S

EC Series



**MULTIPHASE
POWER**

Features:

- Rotate speed governor: Electrical governor S6700E
- Excitation system: Self excited
- 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 |
|----------------------|--------------|----------------|
| GMS175C | 175kVA/140kW | 187kVA/149.6kW |
| GMS175CS | 175kVA/140kW | 187kVA/149.6kW |

Ratings at 0.8 power factor

Dimensions and Weights

| Model | Length (L) mm | Width (W) mm | Height (H) mm | Dry Weight kg |
|-----------------|------------------|-----------------|------------------|------------------|
| GMS175C | 2353 | 921 | 1675 | 1709 |
| GMS175CS | 3450 | 1150 | 1750 | 2733 |

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;

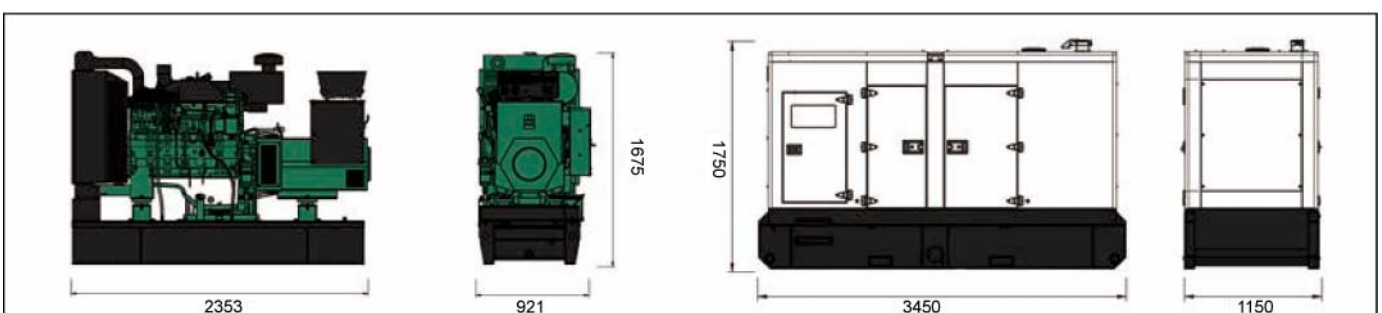
Standard Reference Conditions

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 6CTA8.3-G2 |
| Alternator Brand: | Stamford |
| Alternator Model: | UCI274G |
| Control System: | Auto Gen / AMF |
| Circuit Breaker Type: | 3 Pole MCCB |
| Frequency & Phase: | 50Hz & 3PH |
| Engine Speed: RPM | 1500 |
| Fuel Tank Capacity: L | |
| GMS175C | 290 |
| GMS175CS | 300 |
| Fuel Consumption: l/hr (100% Load) | |
| - Prime Power | 40 |
| - Standby Power | 45 |



Engine model:6CTA8.3-G2

Engine Technical Data

| | |
|---|----------------------|
| No. of Cylinders / Alignment: | 6 / In Line |
| Cycle: | 4 Stroke |
| Bore / Stroke: mm | 114(4.49)/135 (5.32) |
| Induction: | Turbocharged |
| Cooling Method: | Water |
| Governing Type: | Mechanical |
| Governing Class: | ISO 8528 G2 |
| Compression Ratio: | 16.5:1 |
| Displacement: L | 8.3 (201.4) |
| Moment of Inertia:kg.m² | 0.25 |
| Engine Electrical System: | |
| - Voltage / Ground | 12/Negative |
| - Battery Charger | 24 |
| Weight: kg | |
| - Dry | 629 |
| - Wet | |

Performance

| | |
|--------------------------------|-----------|
| Engine Speed: RPM | 1500 |
| Gross Engine Power: kWm | |
| - Prime | 163 (219) |
| - Standby | 180 (241) |
| BMEP: kPa | |
| - Prime | |
| - Standby | |

Lubrication System

| | |
|--------------------------------------|------------------|
| Oil Pressure @ Idle Speed kPa | 207 |
| @ Rated Speed kPa | 345 |
| Maximum Oil Temperature: °C | 55 |
| Total Oil Capacity: L | 24 |
| 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 | 7.0 (247) |
| - Standby | 7.7 (272) |
| Exhaust Gas Temperature: °C | |
| - Prime | 492 (918) |
| - Standby | 537 (999) |

Cooling System

| | |
|---|---------|
| Cooling System Capacity: L | 26 |
| Maximum coolant Friction Head External to Engine: kPa | 28 |
| Maximum Static Head of Coolant Above Engine Crank Centerline : m | 14.0 |
| 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: PB pump_GAC governor/BYC ASIMCO | | | | |
|--|-----------|-----------|-----------|----------|
| Recommended Fuel Type: Diesel Fuel No.2-D(ASTM D975) | | | | |
| Fuel Consumption: l/hr | | | | |
| Prime | 110% Load | 100% Load | 75% Load | 50% Load |
| GMS175C | 45 | 40 | 30 | 20 |
| GMS175CS | 45 | 40 | 30 | 20 |

(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 | 3.7 |
| - Standby | |
| Max. Air Intake Restriction: mmH₂O | |
| -With Dirty Filter Element | 635 |
| -With Normal Duty and Clean Filter Element | 254 |
| -With Heavy Duty and Clean Filter Element | 381 |

The weights are approximate and without fuel.

Alternator model: UCI274G

| Alternator Physical Data | |
|----------------------------|--------------|
| Manufactured by: | Stamford |
| Model: | UCI274G |
| No. of Bearings: | Single |
| Insulation Class: | H |
| Winding Pitch Code: | 2/3 |
| Wires: | 12 |
| Ingress Protection Rating: | IP23 |
| Excitation System: | Self excited |
| 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 | 0.514 |
| Altitude: m | ≤1000 |

| Alternator Performance Data: | GMS175C | GMS175CS |
|-----------------------------------|---------|----------|
| Time constants/400V:Ms | | |
| T'd | 38 | 38 |
| T''d | 12 | 12 |
| T'do | 1000 | 1000 |
| Ta | 10 | 10 |
| Short Circuit Capacity** % | 1/Xd | 1/Xd |
| Reactances: Per Unit | | |
| Xd | 1.94 | 1.94 |
| X'd | 0.17 | 0.17 |
| X''d | 0.12 | 0.12 |

| Voltage Technical Data GMS175C | | | | |
|--------------------------------|--------|-------|----------|-------|
| Voltage | Prime: | | Standby: | |
| | kVA | kW | kVA | kW |
| 380/220 | 164.6 | 131.7 | 187.0 | 149.6 |
| 400/230 | 164.6 | 131.7 | 187.0 | 149.6 |
| 415/240 | 164.6 | 131.7 | 187.0 | 149.6 |
| 440/254 | N/A | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| Voltage Technical Data GMS175CS | | | | |
|---------------------------------|--------|-------|----------|-------|
| Voltage | Prime: | | Standby: | |
| | kVA | kW | kVA | kW |
| 380/220 | 164.6 | 131.7 | 187.0 | 149.6 |
| 400/230 | 164.6 | 131.7 | 187.0 | 149.6 |
| 415/240 | 164.6 | 131.7 | 187.0 | 149.6 |
| 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 | AVR | ● | ● | |
| | Electronic Governing | × | × | |
| | Glow plug control | ● | ● | |
| | Cycle Cranking | ● | ● | |
| | (MODBUS) Networking | ● | × | |
| Operator Interface | Fault History | ● | ● | |
| | 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(lock) | ● | ● | |
| Measurement and Instrumentation | Alphanumeric screen | ● | ● | |
| | Remote start input active LED | ● | × | |
| | Alarm reset | ● | ● | |
| | Engine | Oil pressure | ● | ● |
| | | Water Temperature | ● | ● |
| | | Engine Speed | ● | ● |
| | | Hours Run | ● | ● |
| | | Number of Starts | ● | ● |
| | Alternator | Battery Voltage | ● | ● |
| | | Coolant Temperature | ● | ● |
| 3Phase-L Voltage&Frequency | | ● | ● | |
| 3phase Current | | ● | ● | |
| Frequency | | ● | ● | |
| Mains Expression | kWh | ● | ● | |
| | Apparent Power | ● | ● | |
| | Active Power and Reactive Power | ● | ● | |
| | Power Factor | ● | ● | |
| | Per PhasekW, kVAr | ● | ● | |
| Shutdown Protection and Indication | Per Phase kVA | ● | ● | |
| | Phase Voltage | ● | ● | |
| | Output Power | ● | × | |
| | Grid Line Voltage | ● | × | |
| | Grid Phase Voltage | ● | × | |
| Threshold Warning&Indication | Grid Frequency | ● | × | |
| | Engine | Low Fuel Level | ● | ● |
| | | High Fuel Level | ○ | × |
| | | Low Oil Pressure | ● | ● |
| | | High Water Temperature | ● | ● |
| | | Failure to Stop | ● | ● |
| | Alternator | Failure to Start | ● | ● |
| | | Controllable start circles/times | ● | × |
| | | Overspeed | ● | ● |
| | | Under&Over Voltage | ● | ● |
| Under&Over Frequency | | ● | ● | |
| Paralleling Capability | Overcurrent | ● | ● | |
| | Earth Leakage | ○ | ○ | |
| | Reverse Power | × | × | |
| | Reverse kWh | × | × | |
| | Low Oil Pressure | ● | ● | |
| | Low Water Temperature | ○ | ○ | |
| | High Water Temperature | ● | ● | |
| | Low Water Level | ● | ● | |
| | Low/High Battery Voltage | ● | ● | |
| | Failure to Charge | ● | ● | |
| Power Transfer Function | Overcurrent | ● | ● | |
| | Overload | ● | ● | |
| | Genset Under/Over Voltage | ● | ● | |
| | Genset Under/Over Frequency | ● | ● | |
| | under/over Speed | ● | ● | |
| | High Engine Temperature | ● | ● | |
| | Earth Leakage | ● | ○ | |
| | Synchrscope(Independent Bus) | × | × | |
| | Active and Reactive Power Control | × | × | |
| | Synchrscope(Shared Bus) | × | × | |
| Environment | Synchronization Detector | × | × | |
| | Peak Lapping | × | × | |
| | 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 | ● | ● | |
| Monitoring Function | Starter Control | ● | ● | |
| | Preheating | ○ | ○ | |
| | Mains Transfer Switch (Standard) | ● | × | |
| | Mains Transfer Switch (Emergency) | ● | × | |
| | Operating Temperature [-40℃-70℃] | ● | ● | |
| | Ambient Temperature [-25℃-45℃] | ● | ● | |
| | Humidity<=80% | ● | ● | |
| | Grid Over/Under Voltage Control | ● | × | |
| | Grid Over/Under Frequency Control | ● | × | |
| | Remote Start (Output/Load/No-load) | ● | ● | |
| Monitoring Function | 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

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 |

The following lists are optional by the needs of customers.

| 6C Series 1000 Hour Maintaining List | | | | |
|--------------------------------------|--------------------------|----------------|-----|--------|
| No. | Part Name | Part No. | Qty | Remark |
| 1 | CARTRIDGE,LUB | C3401544 | 5 | |
| 2 | FILTER,FUEL | C3931063 | 5 | |
| 3 | WATER FUEL SEPERATOR | C3930942 | 5 | |
| 4 | RESISTOR,CORROTION | C3100305 | 5 | |
| 5 | CLEANER, AIR | 6CTA (KW1638) | 5 | |
| 6 | CLEANER, AIR | 6CTAA (KW2140) | 5 | |
| 7 | GASKET,VALVE COVER | C3905449 | 2 | |
| 8 | BEARING,CRANKSHAFT THRUS | C3944163 | 1 | |
| 9 | BEARING,MAIN, UPPER | C3944153 | 6 | |
| 10 | BEARING,MAIN, BOTTOM | C3944158 | 7 | |
| 11 | BEARING,CONNECTING ROD | C3950661 | 12 | |
| 12 | FRON OIL SEAL | C3968562 | 1 | |
| 13 | REAR OIL SEAL | C3968563 | 1 | |
| 14 | BELT,V RIBBED | C3288475 | 2 | |
| 15 | SOLENOID, FUEL PUMP | C4942879 | 1 | |
| 16 | AIR RING, PISTON | C3921919 | 6 | |
| 17 | MID RING, PISTON | C3919918 | 6 | |
| 18 | OIL RING, PISTON | C3922686 | 6 | |

GMS175C/S

EC Series



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

www.multiphase-power.com

Local Distributor