



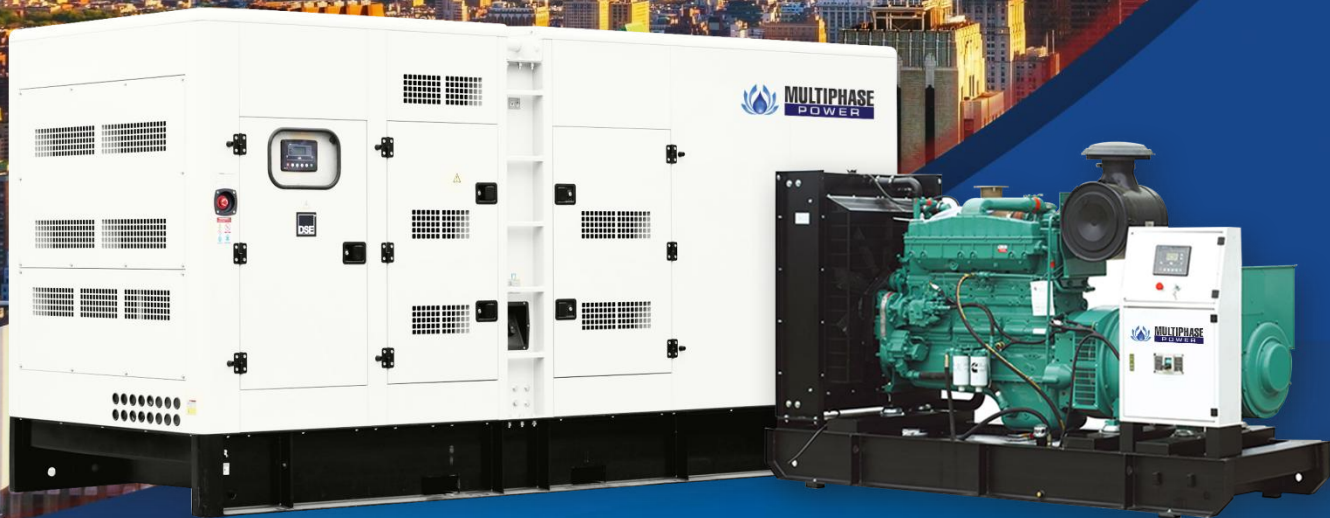
**MULTIPHASE
POWER**

Diesel Generator Set

MPY55SC

Powered By SDEC

50 Hz / 1500 RPM



MULTIPHASE CORPORATION CO., LTD.

90 CW Tower, Room No.A2102, 21st Floor, Ratchadapisek Road,
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MPY55SC



| MODEL | FREQUENCY / RPM | STANDBY POWER | PRIME POWER |
|----------------------------|-----------------|---------------|-------------|
| MPY55SC Powered by SDEC | 50 Hz/1500 RPM | n/a | 40 kW |
| | | n/a | 50 kVA |

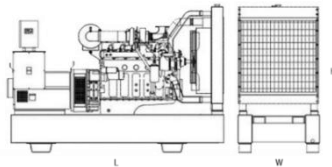
- Available for voltages 400/230V, 480/277V, 380/220V, 440/254V, 416/240V, 220/127V, 208/120V
- All datas based on ISO 3046, altitude 100m (328ft), barometric pressure 100kPa (29.53 inHg), air temperature 25 °C (77 °F), relative humidity 30%.
- Diesel generators comply with standards : ISO8528, ISO14000, ISO3046, GB755, BS5000, VDE0530, IEC34-1
- Model : MPYxxCS – S Suffer for silent type

GENERAL CHARACTERISTICS

| | |
|--------------------|-----------------------|
| Model | MPY55SC |
| Engine | SDEC 4HTAA4.3-G31 |
| Alternator | Leroy Somer TAL-A42-G |
| Voltage (V) | 400/230 |
| Current (A) | 72 |
| Connection | 3 Phase, 4W/Y |
| Frequency | 50 Hz |
| Engine Speed (RPM) | 1500 |
| Rated Power Factor | 0.8 |
| Controller Model | Smartgen HGM6120 |

DIMENSIONS

| DIMENSIONS | OPEN TYPE | SILENT TYPE |
|-----------------|-----------|-------------|
| Length (L) | 1900 mm | 2600 mm |
| Width (W) | 900 mm | 1100 mm |
| Height (H) | 1200 mm | 1240 mm |
| Net Weight (KG) | 950 kg | 1320 kg |



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STANDARD CONFIGURATION

| | |
|--------------------------|--|
| Engine | SDEC, including air filters, fuel filters, oil filter, starting motor and charging alternator etc. |
| Alternator | LEROY SOMER brushless AC alternator |
| Radiator | Silent Type 50 °C (Open Type 40 °C), fan protective shroud |
| Base Frame | ≤ 550 KW : base mounted fuel tank, anti-vibration pads, battery holder > 550 KW : channel steel base frame, anti-vibration pads, battery holder |
| Circuit Breaker | ≤ 63A: Micro Circuit Breaker (MCB) > 63A ≤1250A: Molded case circuit breaker (MCCB) , > 1250A: Air Circuit Breaker (ACB) |
| Control System | Smartgen HGM6120 |
| Start Battery | Dry charged battery, available for 6 times starts under standard condition; connection cables. |
| Installation Accessories | Bellow, Elbow and Flange, Exhaust Silencer, etc. |
| Documents | Electric drawing, Operation & Maintenance Manual, Certification etc. |

OPTIONAL CONFIGURATION

| | |
|----------------------------|--|
| Engine Accessories | <ul style="list-style-type: none"> • Heavy-Duty Air Filter • Coolant Heater • Lube Oil Heater • Fuel and Water Separator |
| Alternator and Accessories | <ul style="list-style-type: none"> • Stamford or Leroy Somer or Others |
| Cooling System | <ul style="list-style-type: none"> • High Voltage ___ kV • 50 °C Radiator • Heat Exchanger + Water Cooling Tower + External Water Circulation Pumping System • Remote Horizontal Water Tank System |
| Control System | <ul style="list-style-type: none"> • AMF • Parallel • Practical Type in Low Temperature Environment • Control Screen Heater • Other |
| Circuit Breaker | <ul style="list-style-type: none"> • ¾ Poles • Fixed/Handcart Type • Electric Mechanism |
| Automatic Transfer Switch | <ul style="list-style-type: none"> • ATS Cabinet |
| Start Battery | <ul style="list-style-type: none"> • Nickel-Cadmium Battery • Maintenance-Free Battery • Power Charger and Selector • Charging Current Meter |
| External Fuel Tank | <ul style="list-style-type: none"> • 500 L, 1000 L, 1500 L, 2000 L, 2500L, 3000L, 4000L, 5000L |

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ENGINE DATA

| | |
|--|---|
| Engine Model | SDEC 4HTAA4.3-G31 |
| Engine Power | 56 kW. |
| Aspiration | Water-cooled, Turbocharged with aftercooler |
| Displacement (L) | 4.3 |
| Type | In-Line |
| Bore x Stroke (mm) | 105 x 124 |
| No. of Cylinders | 4 |
| Compression Ratio | 16 : 1 |
| Governor Type | ECU |
| Rated Speed (RPM) | 1500 |
| Prime Power Fuel Consumption (L/h) | 11.9 |
| Standby Power Fuel Consumption (L/h) | 13.2 |
| Fuel | Sumer: GB 252-2000 top ASTM D975 No.2-D or BS2869 1998 Class A1, A2 |
| Injection System | Japan Denso Electric Control Oil Pump |
| Lube Oil Capacity (L) | 13 |
| Lube | API CF-4 15W40 |
| Lub. Method | Fully forced pressure feed type |
| Coolant Capacity (L) | 32 |
| Cooling fan | 2 |
| Std. Thermostat (Modulating) Range (°C) | 82-95 |
| Fan Drive Method | Belt Drive |
| Cooling Fan Air Flow (m ³ /min) | 120 |
| Combustion Air Flow (m ³ /min) | 4.5 |
| Maximum Air Intake Restriction (kPa) | 3 |
| Exhaust Gas Flow (m ³ /min) | 10.2 |
| Max. Back Pressure (kPa) | 6 |
| Exhaust Gas Temp (°C) | 600 |
| Exhaust Pipe Size (mm) | 1 x ϕ 76.5 |
| Start Mode | DC24V Electric Start |
| Battery | 2 x 120 Ah |

ALTERNATOR DATA

| | | | |
|----------------------|-----------------------|--------------------|--------------|
| Alternator Model | Leroy Somer TAL-A42-G | Rate Power | 40/50 kW/kVA |
| PF. | 0.8 | Voltage | 400/230 V |
| Phase | 3 | Frequency | 50 Hz. |
| Connection | 3P 4W/Y | Bearing | 1 |
| Winding Pitch | 2/3 | Protection Class | IP23 |
| Insulation Class | H | Efficiency | 88.2% |
| Tel. Influence | TIF < 50 | Voltage Regulation | ±1% |
| Harmonic Coefficient | THF < 2% | AVR | R180 |
| Voltage Adjust Scope | ≥±5% | Excitation System | PMG |

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CONTROL SYSTEM DATA (Smartgen HGM6120CAN)



Main Feature

Smartgen HGM6120CAN automatic controller uses micro-processing technique which can achieve precision measurement, value adjustment, timing and threshold setting etc. All the parameters can be configured from front panel or use USB interface (or RS485 interface) to adjust via PC. It can be widely used in all types of automatic control system for its compact structure, simple connections and high reliability

Characteristics

1. 132*64 LCD display with backlight, optional language interface (Chinese, English, Spanish, Russian, Portuguese, Turkey, Polish and French), push-button operation;
2. Acrylic screen, improved wearable and scratch resistance property;
3. Silica-gel panel and keys can well adapt to higher and lower temperature;
4. With RS485 communication port, can achieve "three remote" functions via MODBUS protocol;
5. With CANBUS port which can be connected to electronic injection with J1939, it not only can monitor frequently-used data (such as water temperature, oil pressure, rotated speed and fuel consumption, etc.) but also can control start, stop, high speed and low speed (controller with CANBUS port is needed) via CANBUS port.
6. Adapt to 3P4W, 3P3W, 1P2W and 2P3W (120V/240V), 50Hz/60Hz AC power system;
7. Can measure and display 3 phase voltage, 3 phase current, frequency, power parameter of mains/gens;
8. Mains have functions of over/under voltage and lack of phase; Gens have functions of over/under voltage, over/under frequency, over current and over power;
9. Precision measure and display of parameters about engine,
10. Control protection: Automatic start/stop of genset, load transfer (ATS control) and perfect failure display and protection;
11. With ETS, idle speed control, pre-heat control, speed droop/raising control, all of them are relay output;
12. Parameter setting: Allow user to modify setting and store them in internal FLASH memory. The parameters cannot be lost even when power off. All of parameters can be set not only from the front panel, but also use USB interface (or RS485 interface) to adjust them via PC.;
13. Multi sensors of temperature, pressure and fuel level can be used directly, parameters can be defined by user;
14. Multi conditions of crank disconnect (speed sensor, oil pressure, generator) can be selected;
15. With emergency start function;
16. With flywheel teeth numbers automatic identification function;
17. Power supply range: (8~35) VDC, accommodating to different starting battery volts;
18. All parameters use digital modulation, instead of analog modulation using conventional potentiometer, having improved reliability and stability;
19. With maintenance function. Types (date or running time) can be selected and actions (warning or alarm shutdown) can be set when maintenance time out;
20. Event log, real-time clock, scheduled start & stop pump unit (can be set as start pump unit once a day/week/month whether with load or not);
21. Add rubber gasket between shell and controller screen, the waterproof can reach IP55;
22. Controller is fixed by metal fixing clips;
23. Modular design, flame-retardant ABS shell, embedded mounting, compact structure and easy installation.

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