



Super Silent, Superior Life!

GMS50C6/S - Technical Data Sheet



STANDARD SPECIFICATION

General features:

- Composed of Cummins diesel engine and Stamford
- Leroy Somer alternator
- Engine Charge alternator 24 V
- Single bearing alternator IP 23 , insulation class H
- 40°C radiator as standard, 45°C is optional, water-cooled
- Skid and vibration isolators
- Dry type air filter, Main line circuit breaker
- Microprocessor control panel, Key start panel be optional
- 4 pole MCB, 24 V battery, rack and cable
- 8-hour operation base tank
- Special Integrated Steel Base tank and sprayed overall in gloss enamel pain
- Optional soundproof or weatherproof canopy, Industrial or residential silencer be optional



CUMMINS Engine, 1800RPM

| Model | Tank (L) | Noise Level Db(A)7m | kVA | | kW | | Model | Bore/ stroke mm | Cyl. | Asp. | Gov. |
|----------|----------|---------------------|-----|-----|-----|-----|----------|-----------------|------|------|------|
| | | | ESP | PRP | ESP | PRP | | | | | |
| GMS50C6 | 160 | 98 | 62 | 56 | 50 | 45 | 4BT3.9G1 | 102/120 | 4L | TC | E |
| GMS50C6S | 240 | 68.9 | | | | | | | | | |

(1) Ambient reference conditions: 1,000 m bar, 27 °C , 30% relative humidity. Rating according to ISO 3046 and 8528.

(2) Available in the following voltages: 480/277V-440/254V-416/240V-220/127V-208/120V.

(3) ESP: Standby Power Standby duty, operation under variable load, without over load.

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

(4) **M**: Mechanical speed governor, **E**: Electronic speed governor.

(5) **NA**: Naturally aspirated, **TC**: Turbocharged, **TCA**: Turbocharged and air-air after-cooled. **TW**: Water-cooled Turbocharged.

Reliable Performance

Voltage Regulation

Voltage regulation maintained within $\pm 0.5\%$ as follow :

- Between 0.8 and 1.0 lagging and unity
- From no load to full load
- At speed droop variation up to 4.5%

Frequency Adjustable Ratio

- Change load from 0-100%, within 1.0% (electric speed regulator), within 4.5% (mechanical speed regulator)

Frequency Undulation

- Load from 0-100%, Frequency undulation within 0.25%
- No load wire volts max undulation ratio within 1.8%
- Three phrase balanced load in the order of 5%

Effect factor of telecom

- TIF better than 50
- THF to BS4999 Part 40 better than 2%

Electromagnetism

- In compliance with BS800 and VDE levels G and N

CRITERION

ISO3046, ISO8528, BS4999, BS5514,
BS5000PT99, AS1359, IEC34
UTE5100, VDE0530
ISO9001:2000, ISO14001

ENGINE SPECIFICATION

Cummins Diesel Engine

Designed with Safety in Mind

Cummins water cooled diesel engine, oil and fuel filter fitted, water separator, Lube-oil drain valve fitted.

Cast Iron Skirted Block:

With main bearing supports between each cylinder, for maximum strength and rigidity, low weight, and optimum crankshaft support.

Compact Size:

For ease of installation and easy access for routine maintenance.

Direct Fuel Injection System:

With high swirl intake ports for thorough mixing of air and fuel to provide low fuel consumption.

Forged Steel, I-Beam Cross Section Connecting Rods:

With angle split cap-to-rod interface and cap screw attachment
For maximum structural strength and ease of service.

Filters:

Air cleaner with dry element and restriction indicator.
Spin full flow lube oil filter.

Cooling:

40 °C radiator as standard, Oil cooler, Drain tap.

Technical Data

| Engine Model | 4BT3.9G1 | |
|----------------------------|-----------------------|-----------|
| Engine Manufacturer /Brand | Cummins (China) | |
| Type and Cylinder | 4L, 4-cycle | |
| Induction system | TC | |
| Bore x Stroke | mm | 102 x 120 |
| Compress the ratio | 16.5:1 | |
| Engine Speed | rpm | 1800 |
| Continuous Rated Output | kW | 40 |
| Oil Capacity | L | / |
| Coolant Capacity | L | 8 |
| Starting System | Electric - 24 volt DC | |
| Displacement | L | 3.9 |
| Capacity | L | 11 |
| Battery Voltage /Capacity | 24VDC/160A/200 | |
| Exhaust Gas Flow | m³/h | 254 |
| Exhaust Temperature | °C | 410 |
| Fuel Consumption 100% | L/hr | 13 |
| Fuel Consumption 75% | L/hr | / |
| Fuel Consumption 50% | L/hr | / |
| Governing Type | M | |

AC ALTERNATOR

LEROY SOMER GENERATOR

LEROY SOMER has a long history of producing high-quality reliable products for the power generation market. Their portfolio of high quality generator ends is recognized as an industry standard.

Alternator Technical Data

Leroy Somer AC alternator

- ◆ Brushless, self exciting
- ◆ Class 'H' insulation
- ◆ Standard degree of protection is IP23
- ◆ Self regulating
- ◆ With fan cooling
- ◆ Resist humid grease
- ◆ AC excitation, rotating rectification tube
- ◆ Stator grease insulation covered
- ◆ Rotator and excitation high polymer
- ◆ Resist the corruption of oil and acid.
- ◆ Rotator balance is in accordance with BS5625 standard 12.5
- ◆ High-quality lubrication sealed long-time bearing
- ◆ Rotator silicon steel close tight

Alternator Technical Data

| | |
|----------------------------|-----------------------------|
| Generator Model | LSA43.2S15 |
| Exciter | Brushless |
| Cooling Fan | Cast alloy aluminum |
| Bearing | Single, double shielded |
| Windings | 100% copper |
| Connection Type | Re-connectable |
| Insulation Type | Class H |
| Pitch | 2/3 |
| Amortisseur Winding | Full |
| A.V.R. Model | R438 |
| Voltage Regulation NL - FL | ± 0.5% |
| Under-speed Protection | Standard |
| Over-excitation Protection | IP23 |
| Standards | NEMA, IEC, IEEE, CSA, BS |
| Phase Sequence | A(U), B(V), C(W) |
| TIF (1960 Weightings) | <50 |
| Excitation System | Self-exciting, PMG optional |

★ In line with our policy of continuous product development, we reserve the right to make changes in model, technical specifications color, equipment and accessories without prior notice .

CONTROL SYSTEMS

PLC-1F CONTROL SYSTEM
--Controlled by Module GC-1F +B3

The Generator Controller GC-1F is a microprocessor- based control unit containing all necessary functions for protection and control of a diesel engine. Furthermore, it contains a three-phase AC voltage measuring circuit. The unit is equipped with an LCD display presenting all values and alarms. GC-1F is a compact all-in-one unit designed for the following applications:

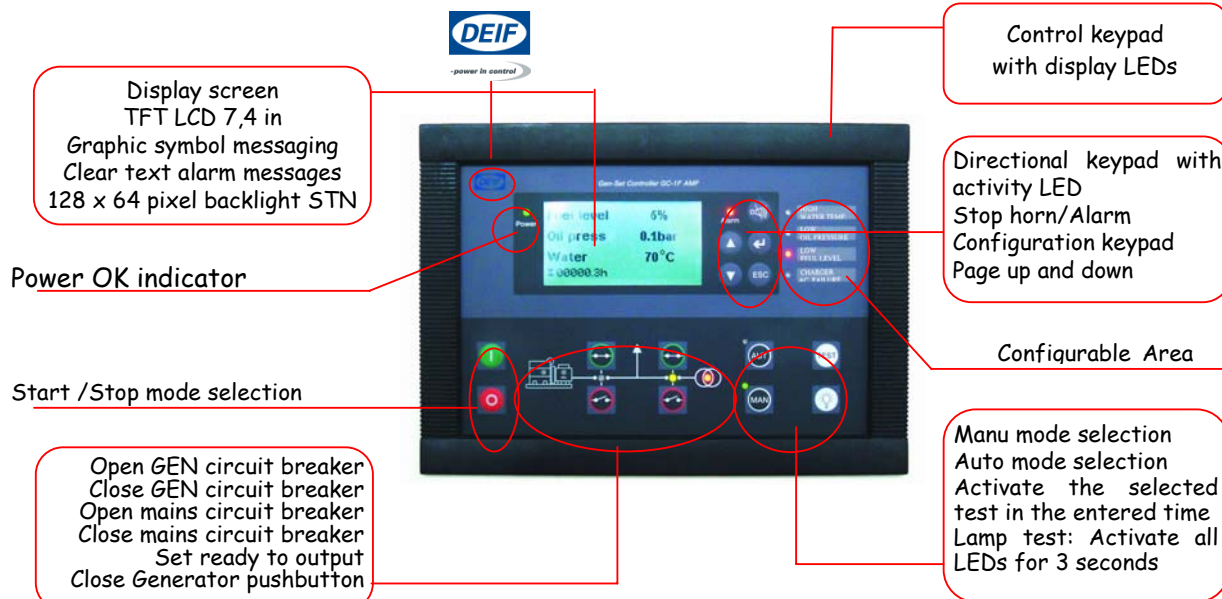
1. Automatic engine start/stop
2. Engine protection
3. Breaker control
4. Generator protection
5. Automatic Mains Failure

Optional applications:

6. CANbus J1939 engine communication



Description for Module GC-1F +B3:



| Standard functions | Shutdown | Warning |
|---|---|---|
| Engine Control Generator Monitoring Generator Protection Engine Monitoring Clear Text Display | Loss of Speed Signal Alternator Under / Over Voltage Alternator Under/ Over Frequency Mains Under / Over Voltage Mains Under/ Over Frequency Under / Over Speed Low Oil Pressure High Engine Temperature Phase Sequence Electrical (Option) Earth Fault (Option) | Alternator Under / Over Voltage Alternator Under/ Over Frequency Mains Under / Over Voltage Mains Under/ Over Frequency Under / Over Speed Low Oil Pressure Pre-Alarm High Engine Temperature Pre-Alarm High/Low Battery Voltage Over-current Periodic maintenance |

PLC-702HC CONTROL SYSTEM

Standard Control Function

- ▶ Manual Engine Control Module
- ▶ Low Oil Pressure
- ▶ High Engine Temperature
- ▶ Auxiliary Shutdown
- ▶ Overspeed Protection
- ▶ Protection hold-off timer
- ▶ Charge Failure warning

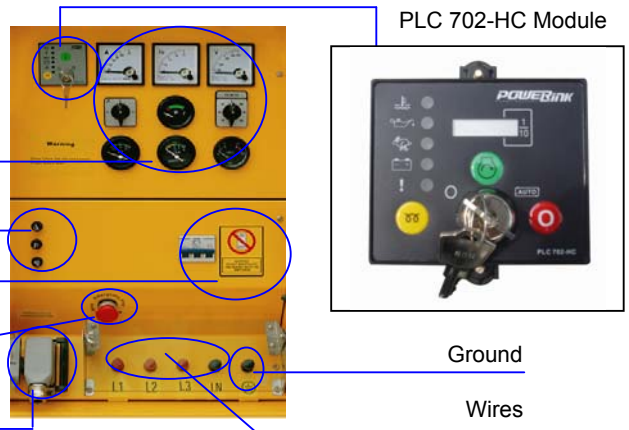
Meters for Hz, Speed, Temp., Voltage, Current

Fuse Protection

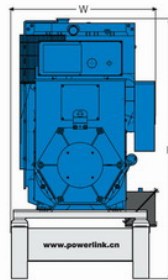
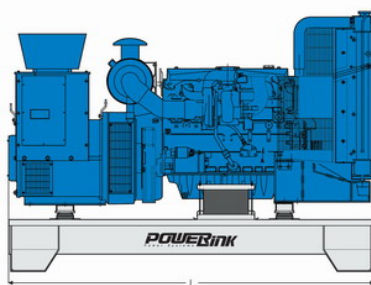
Circuit Breaker

Emergency Stop Button

Heavy Load Connector

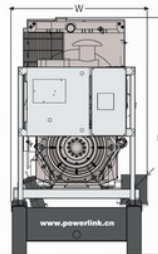
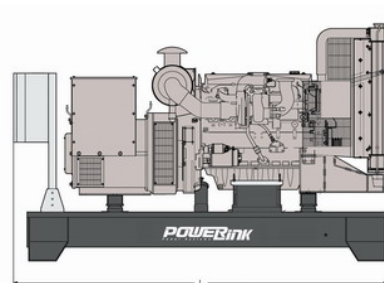


Weight and Dimensions



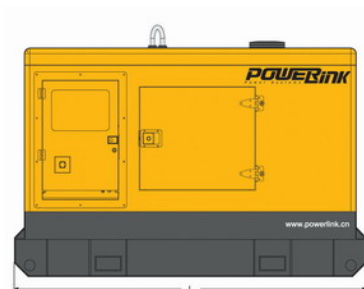
GMS50C6 (Open set)

Overall size (L*W*H), m
1.68×0.88×1.45
Weight (kg):780



GMS50C6 (Open set)

Overall size (L*W*H), m
1.99×0.88×1.35
Weight (kg):840



GMS50C6S (Soundproof set)

Overall size (L*W*H), m
2.45×1.05×1.50
Weight (kg):1300

*The weights are approximate.

OPTIONAL FEATURES

Fuel System Options

- Low fuel level shutdown
- Engine Oil Heater
- Manual Sump Oil Drain Pump

Exhaust Options

- Exhaust Silencer-industrial(9dB),In-Line
- Exhaust Silencer-Residential (25dB),In-line
- Flexible and fixing kit for industrial silencer
- Flexible and fixing kit for Residential silence

Control Panels

- Earth Fault Relay
- Remote Monitor Interface
- Protection for Alarm Module & Auxiliary Relay
- Parallel control panels

Switchgear

- Circuit Breaker MCCB & ACB
- Mains auto-charger
- Auto Transfer Switch

Canopy

- Mobile Sets /Trailer
- Weatherproof/Acoustic Enclosures

Voltage Connections

- 277/480V,3 Phase
- 254/440V,3 Phase
- 240/416V,3 Phase
- 230/400V,3 Phase
- 220/380V,3 Phase
- 127/220V,3 Phase
- 115/200V,3 Phase
- 110/190V,3 Phase

Miscellaneous Options

- Coolant heater-240/120V
- Battery Charger 110-277V,3A
- PCC2100 with barograph
- Earth Fault Relay
- Packing-Export Box



Air Switch



BGC Paralleling Control System



ATS



Trailer Set

If you have any question or inquiry, please contact Sales organization

Local Distributor