



*Super Silent, Superior Life!*

## **GMS165C6/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



### Genset Main Technical Data

Genset, 60Hz at 1800 RPM, 3-PHASE, 480/277V				CUMMINS Engine, 1800RPM							
Model	Tank (L)	Noise Level Db(A)@7m	kVA		kW		Model	Bore/ stroke mm	Cyl.	Asp.	Gov.
			ESP	PRP	ESP	PRP					
GMS165C6	290	98	207	188	165	150	6CTA8.3G2	114/135	6L	TW	E
GMS165C6S	550	73.5									

(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	6CTA8.3G2	
Engine Manufacturer /Brand	Cummins (China)	
Type and Cylinder	6L, 4-cycle	
Induction system	TW	
Bore x Stroke	mm	114 x 135
Compress the ratio	17.3:1	
Engine Speed	rpm	1800
Continuous Rated Output	kW	175
Oil Capacity	L	16.4
Coolant Capacity	L	13
Starting System	Electric - 24 volt DC	
Displacement	L	8.3
Capacity	L	16.4
Battery Voltage /Capacity	24VDC/630A/600	
Exhaust Gas Flow	m <sup>3</sup> /h	670
Exhaust Temperature	°c	410
Fuel Consumption 100%	L/hr	41
Fuel Consumption 75%	L/hr	/
Fuel Consumption 50%	L/hr	/
Governing Type	E	

## 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	LSA44.22M95
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

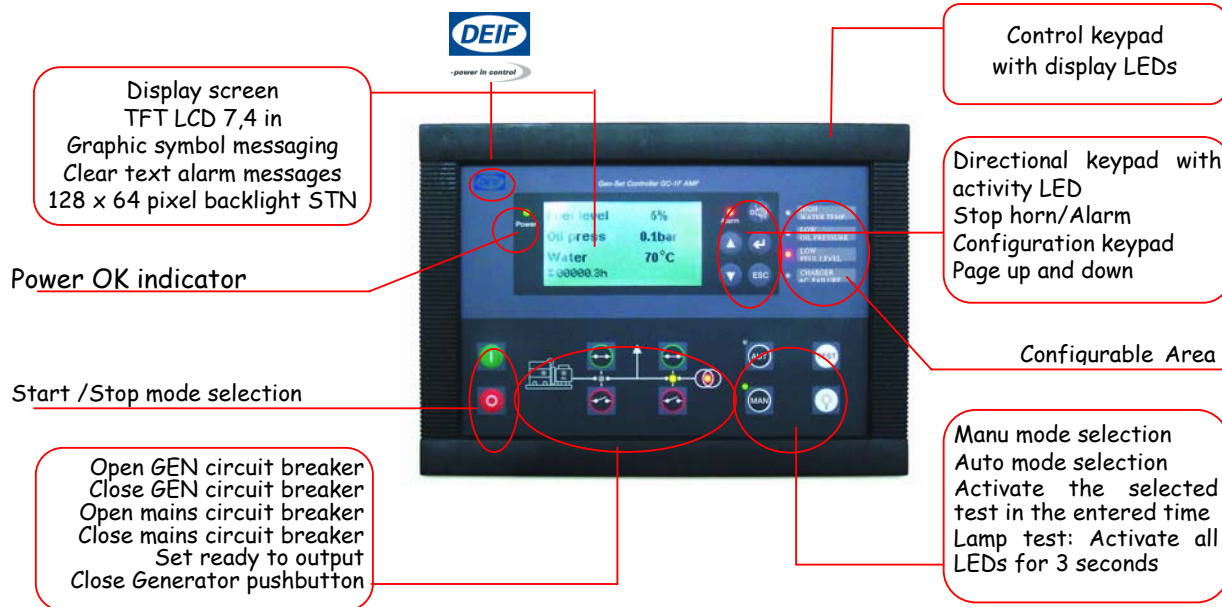


PLC-1F system- S & M Model



PLC-1F system- L & XL Model

**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
- ▶ Over-speed Protection
- ▶ Protection hold-off timer
- ▶ Charge Failure warning

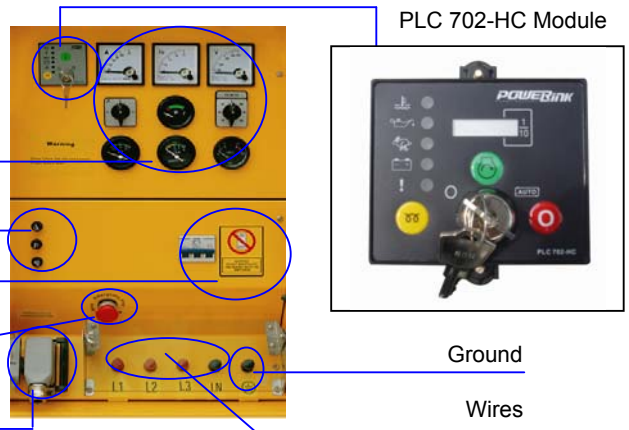
Meters for Hz, Speed, Temp., Voltage, Current

Fuse Protection

Circuit Breaker

Emergency Stop Button

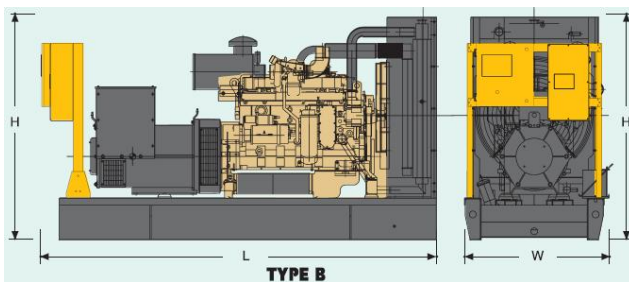
Heavy Load Connector



Ground

Wires

**Weight and Dimensions**

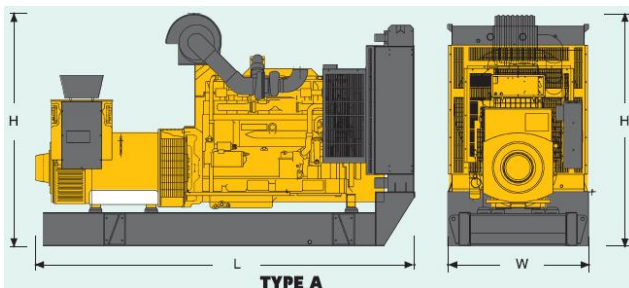


**GMS165C6 (Open set)**

Overall size (L\*W\*H), m:

2.35 × 1.00 × 1.44

Weight (kg):1720

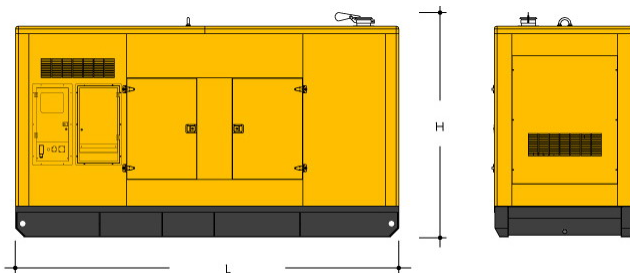


**GMS165C6 (Open set)**

Overall size (L\*W\*H), m:

2.60 × 1.00 × 1.44

Weight (kg):1720



**GMS165C6S (Soundproof set)**

Overall size (L\*W\*H), m:

3.30 × 1.36 × 1.96

Weight (kg): 2570

\*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