

Generator set

Containerized type

GMS1500CS

SPECIFICATIONS



1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- ISO8528
- GB/T2820
- YD/502-2007
- JB/T20136-2006

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 45°C. The coolant heater is needed when the temperature is below 5°C
- Humidity: Less than 80%.
- Altitude: Below one thousand (1000) meters above sea Level.

Factory Inspection

- Inspection items.
- Protection devices working test.
- Starting ability in normal temperature.
- 50% rated power load moment capability.
- Voltage deviation and speed variation: 0%, 25%, 50%, 75%, 100%, 110% Load.

Painting Process

- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

2 General Features

- Cummins engine KTA50-GS8
- Close coupled to a Leroy Somer LSA50.2L8
- Microprocessor control module PLC-7420
- Main circuit breaker
- Schneider RCQ 30mA-1000mA(adjustable recom-mended above 100mA)
- Rotate speed governor: Electrical governor FP801
- Excitation System: PMG
- A.V.R.Model: MX341
- Key switch
- Emergency stop switch
- Frequency/voltage change-over switch

- Fuel adding device
- 2x ventilation fan + 1x cooling fan
- Variable speed AC drive: Vacon NXL
- 2x12V sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Oil pump on the engine
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Drain points for fuel tank
- Double packing
- Operation Manual / Specifications

3 Equipment

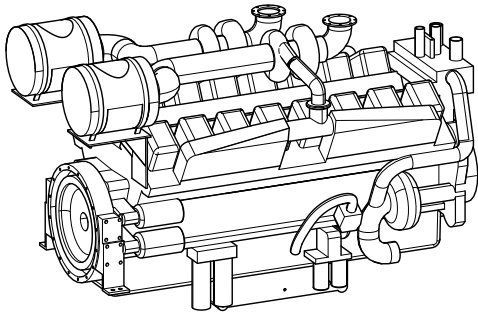
General technical data



Model.....	GMS1500CS
Structure type	C
Tank capacity.....	900L
Dry weigh.....	15310kg
Noise level @7m	82.6dBA
Dimensions L×W×H.....	6058×2438×2795mm
Standby Power	1650kVA/1320kW
Prime Power	1500kVA/1200kW

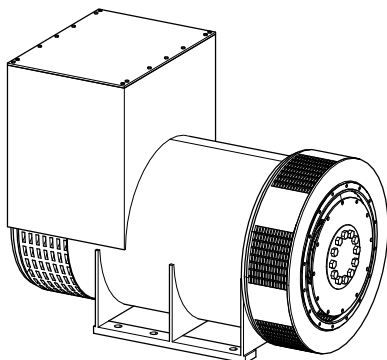
Genset Electrical Parameters					
Voltage	380V	400V	415V	440V	
Ampere	2279	2165	2087	1968	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	88	167	238	309	345

Diesel engine



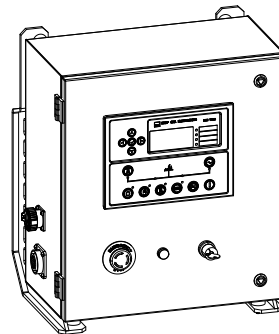
Engine Manufacturer/Brand.....	Cummins
Engine Model.....	KTA50-GS8
Dimensions L×W×H.....	2735x1421x1785mm
Dry Weigh (approx.)	5360kg
Number of Cylinders.....	16
Bore.....	159mm
Stroke.....	159mm
Displacement.....	50.3L
Compression Ratio.....	13.9
Type of injection.....	Direct injection
Intake System.....	Turbocharged and aftercooled
Intake Resistance.....	6.23kPa
Cooling System	Water cooled
Fan	Push
Battery Voltage	24V
Type of Fuel.....	NO.2 or ASTM D975
Type of Oil	CF4/SG15W-40
Oil Capacity	178L
Type of Coolant	Glycol mixture
Coolant Capacity engine only.....	161L
Back Pressure	≤6.7kPa
Standby Power	1429kW
Prime Power.....	1287kW
Fuel Consumption(100%load).....	345L/h

Alternator



Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA50.2L8
Exciter.....	Brushless
Cooling Fan	Cast alloy aluminum
Windings.....	100% copper
Insulation Class	H
Winding Pitch.....	2/3
Terminals	6
Drip Proof	IP23
Altitude.....	≤1000m
Overspeed	2250rpm
Air Flow.....	2.69m³/s(50HZ),3.45m³/s(60HZ)
Voltage Regulation	±1.0 %
Total harmonic TGH / THCat no load < 1.5 % - on load < 5%	
Telephone Interference.....	THF<2%;TIF<50

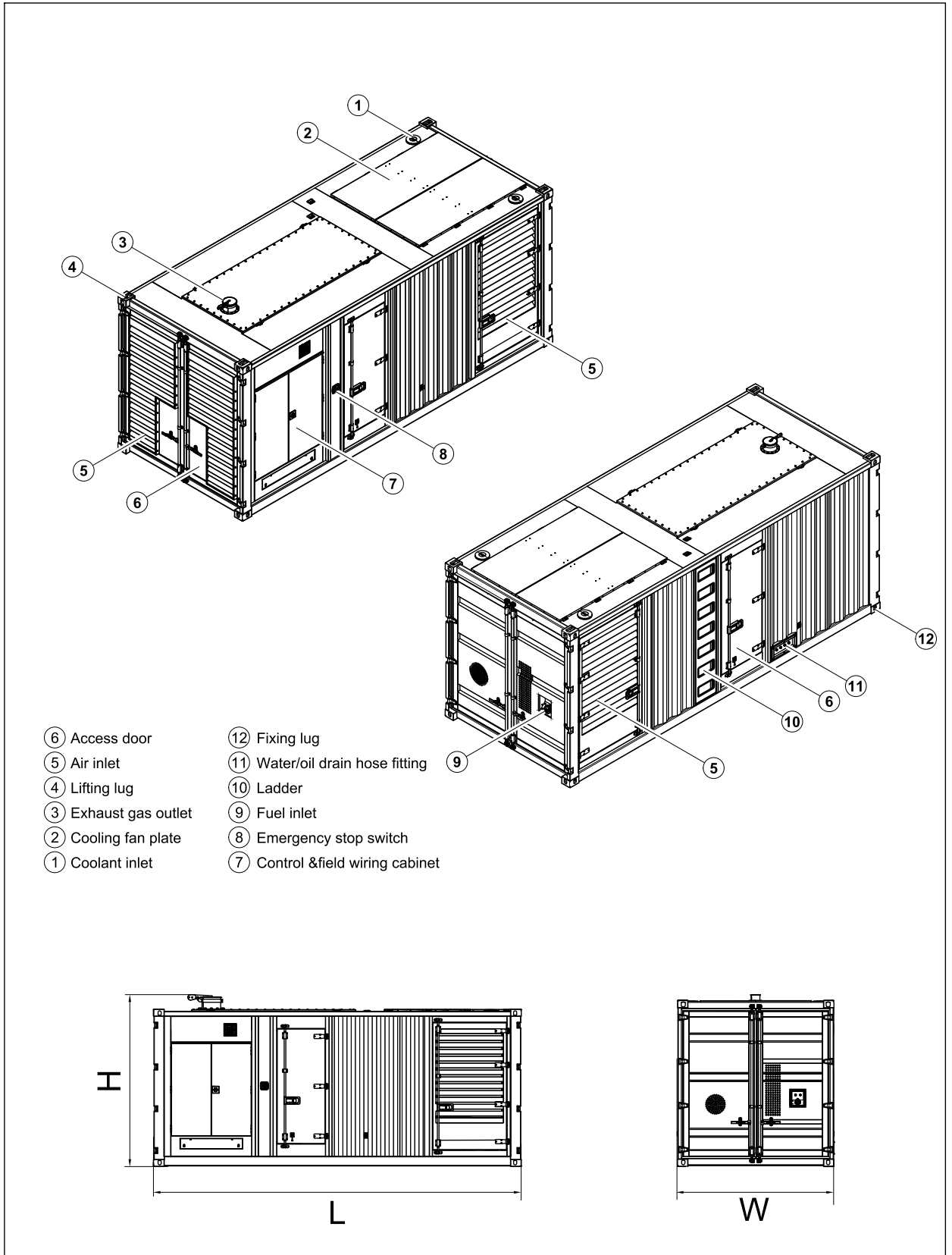
PLC-7420 Control System



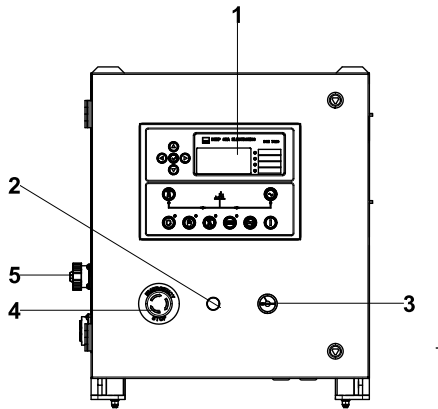
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and display all values and alarms information on the LCD. In addition, the control module can automatically shut down the engine and indicate the engine failure.

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the mains supply and genset
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections; multiple parameters display, like pressure, temp. etc.
- Manual, automatic and remote work mode selectable
- Real time clock for time and date display, overall runtime display, 250 log entries
- Overall power output display
- Integral speed/frequency detecting, telling status of start, rated operation, overspeed etc.
- Communication with PC via RS485 OR RS232 interface, using MODBUS protocol

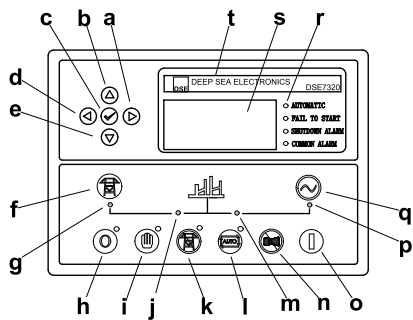
4 Overall Dimensions



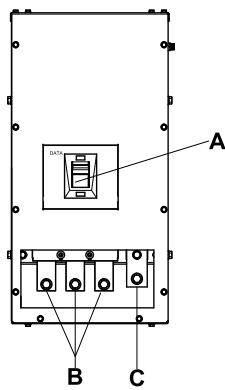
5 Control System



Control cabinet



Control module



Field wiring cabinet

Ref.	Description
1	Control module
2	Charge indicator
3	Key switch
4	Emergency stop switch
5	Mains input/remote/AMF communication connector

a	Button (next page)
b	Button (increase value / previous item)
c	Button (accept)
d	Button (previous page)
e	Button (decrease value / next item)
f	Button (transfer the load to the mains supply, when in Manual mode only)
g	Mains supply available LED
h	Stop / Reset button
i	Manual button (Manual control mode)
j	Mains supply on load LED
k	Test button (Test mode)
l	Auto button (Auto mode)
m	Genset on load LED
n	Mute/Lamp test button
o	Start button (Manual)
p	Genset available LED
q	Button (transfer the load to the genset, when in Manual mode only)
r	Alarm LED (4 alarm items)
s	LCD display
t	Control module name

A	Main circuit breaker
B	Live wire terminals
C	Neutral wire terminal

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