

Generator set
Sound-proof type
GMS450CS

SPECIFICATIONS



1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformance Europeenne (CE)
- China Compulsory Certification (CCC)
- ISO8528-1995
- GB/T2820-1997

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 50°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.

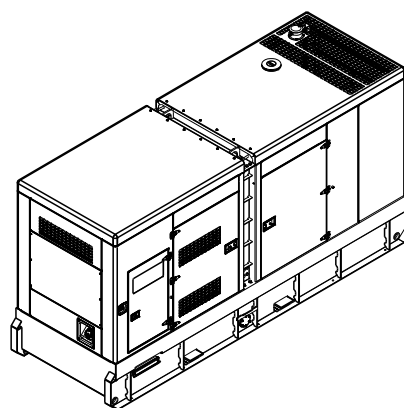
2 General Features

- Cummins engine QSZ13-G2
- Close coupled to a Leroy Somer alternator LSA47.2S5
- Microprocessor control module PLC-7420
- NADER main circuit breaker: 3-Phase 700A
- Rotate speed governor: Electrical governor FP801
- Excitation System: Self excited
- A.V.R.Model: AS440
- Key switch

- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Oil pump on the engine
- Steel base frame with forklifts
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 8 hours running
- Drain points for fuel tank
- Operation Manual / Parts List / Specifications

3 Equipment Specification

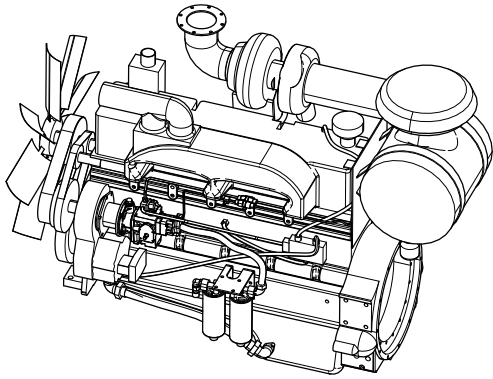
General technical data



Model.....	GMS450CS
Structure type	R
Tank capacity.....	1020L
Dry weigh.....	4820kg
Noise level @7m	74.7dB(A)
Dimensions L×W×H.....	4225×1517×2415mm
Standby Power	481kVA/385kW
Prime Power	438kVA/350kW

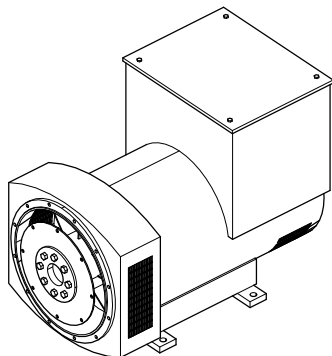
Voltage	380V	400V	415V	440V
Ampere	665.5A	632.2A	609.4A	574.7A

Diesel engine



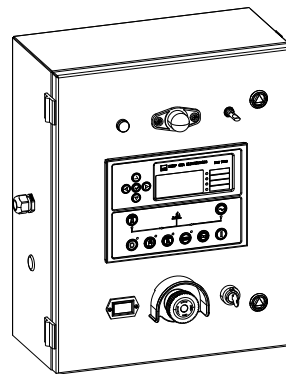
Engine Manufacturer/Brand	Cummins
Engine Model	QSZ13-G2
Dimensions L×W×H.....	1964×987×1610mm
Dry Weigh (approx.)	1200kg
Number of Cylinders.....	6
Bore.....	130mm
Stroke	163mm
Displacement.....	13L
Compression Ratio	17
Type of injection.....	Direct injection
Intake System.....	Turbocharged, air-to-air charged cooled
Intake Resistance	≤6.22KPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	24V
Type of Fuel.....	No.2 or ASTM D975
Type of Oil	API CD/SE or CCMCD4
Oil Capacity	45.2L
Type of Coolant	Glycol mixture
Coolant Capacity	23.1L
Standby Power	415kW
Continuous Power	340kW
Fuel Consumption(100%load).....	88.8L/h

Alternator



Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA47.2S5
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.....	1m³/s(50Hz), 1.2m³/s(60Hz)
Voltage Regulation	±0.5%
Total harmonic TGH / THC at no load < 4 % - on load < 4%	
Telephone Interference.....	THF<2%;TIF<50

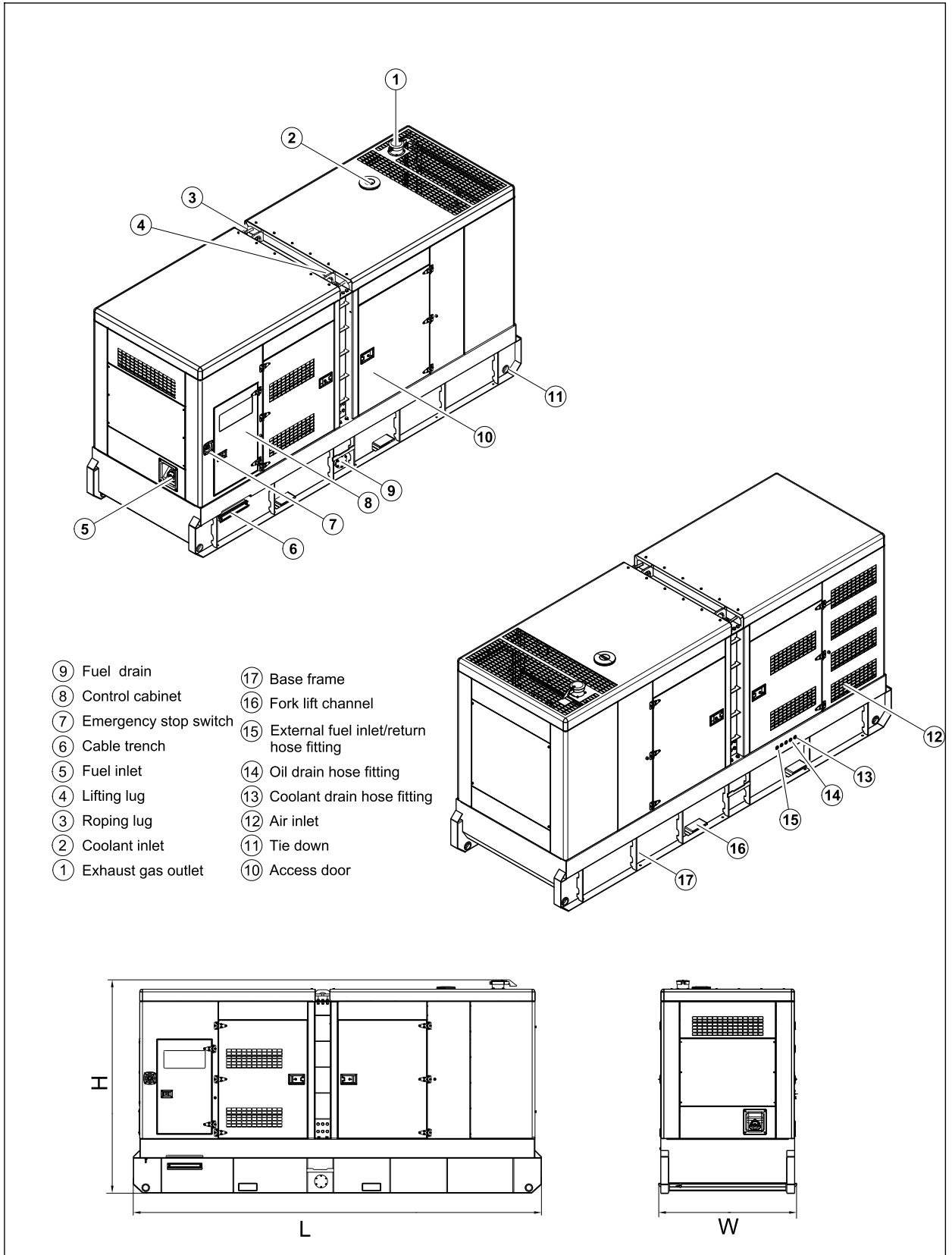
PLC-7420 Control System



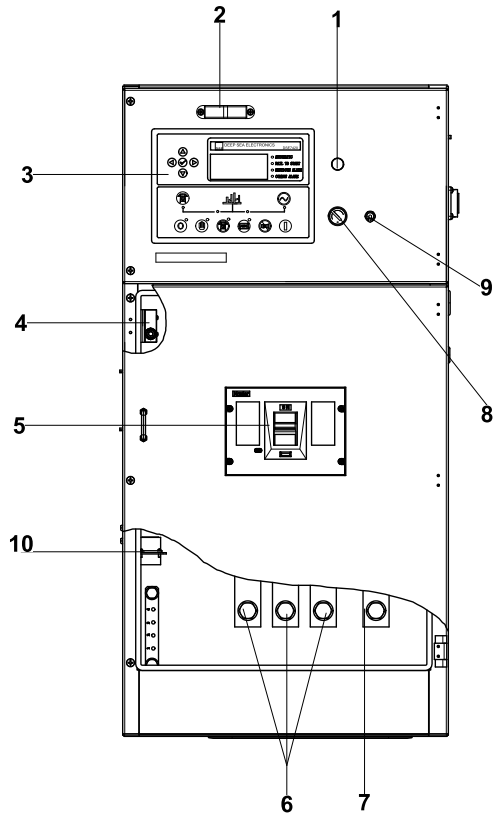
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and 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

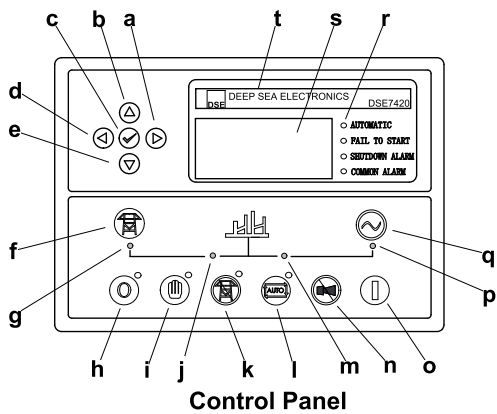
4 Overall Dimensions



5 Control System



Control & field wiring cabinet



Control Panel

Ref.	Description
1	Charge indicator
2	Control cabinet lamp
3	Control module
4	Limit switch
5	Main circuit breaker
6	Live wire terminals
7	Neutral wire terminal
8	Key switch
9	Control cabinet lamp switch
10	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

GMS450CS
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