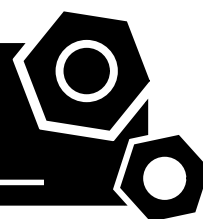


Generator set

Sound-proof type

GMS312CS-AU

SPECIFICATIONS



1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- China Compulsory Certification (CCC)
- ISO8528-5:2005
- GB/T2820.5-2009
- AS 3000-2018
- AS 3010.1-2017

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 90%.
- 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.

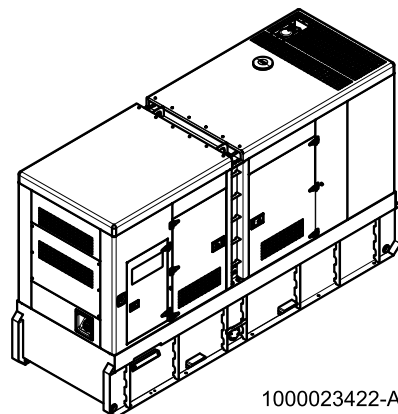
2 General Features

- Cummins engine NTA855-G1B
- Close coupled to a Stamford alternator HCI444ES
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 500A
- Rotate speed governor: Electrical governor FP801
- Excitation System: Self Excited, SHUNT
- A.V.R. Model: AS440
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- Remote run connector

- 2x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Oil pump on the engine
- Non-returning valve for fuel inlet hose of the engine
- Steel base frame with forklifts
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 24 hours running
- Drain points for fuel tank
- Breather valve for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data

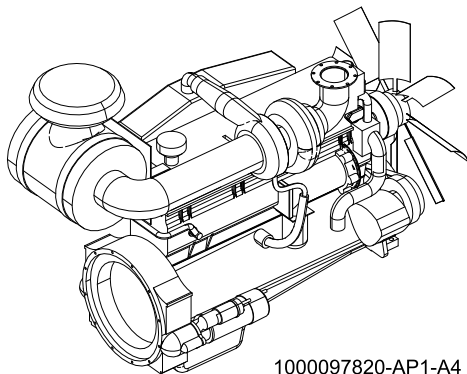


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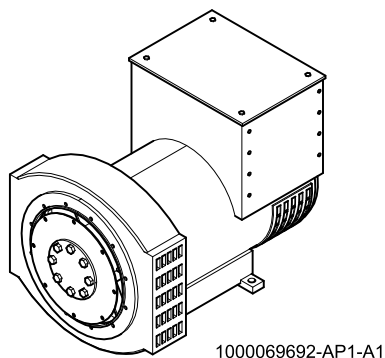
Model..... GMS312CS-AU
 Structure type R
 Tank capacity.....1650L
 Dry weigh.....4773 kg
 Noise level @7m82.0dB(A)
 Sound power level acc. 2000/14/EC109.9dB(A)
 Dimensions L×W×H..... 4242x1423x2425mm
 Standby Power 344kVA/275kW
 Prime Power 312kVA/250kW
 Voltage/Ampere 415V/434A

Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	20.9	36.2	51.5	67.8	76.6

Power System

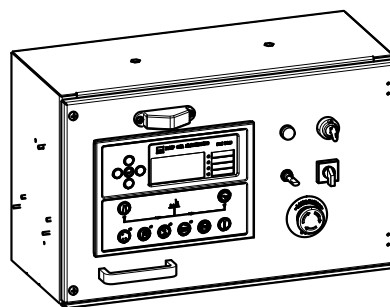


Engine Manufacturer/Brand	Cummins
Engine Model	NTA855-G1B
Dimensions L×W×H	1950.1*948.8*1588.4
Dry Weigh (approx.)	1410Kg
Number of Cylinders	6
Bore	140mm
Stroke	152mm
Displacement	14L
Compression Ratio	14
Type of injection	Direct injection
Intake System	Turbocharged
Intake Resistance	≤6.22kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	24V
Type of Fuel	No.2-ASTM D975
Type of Oil	API CD/SE or CCMCD4
Oil Capacity	38.6L
Type of Coolant	Glycol mixture
Coolant Capacity	60.6L
Back Pressure	≤10kPa
Standby Power	321kW
Prime Power	284kW
Fuel Consumption(100%load)	208.8g/kW.h



Alternator Manufacturer/Brand	Stamford
Alternator Model	HCI444ES
Exciter	Brushless
Cooling Fan	Cast alloy aluminum
Windings	100% copper
Insulation Class	H
Winding Pitch	2/3
Terminals	12
Drip Proof	IP23
Altitude	≤1000m
Overspeed	2250rpm
Air Flow	0.8m³/s(50Hz), 0.99 m³/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



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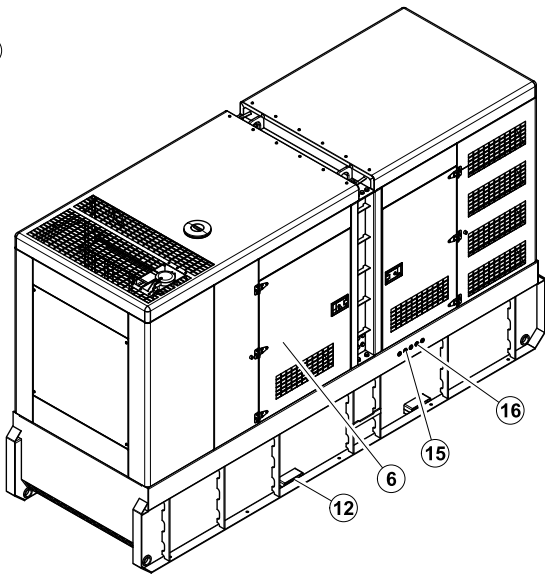
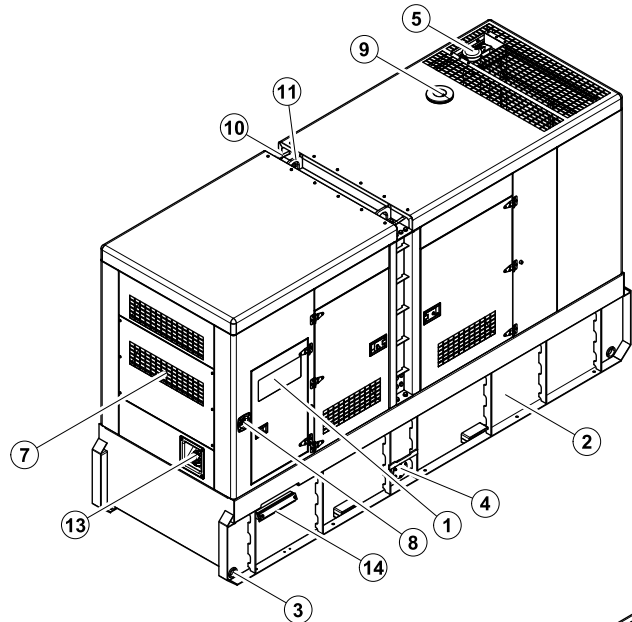
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

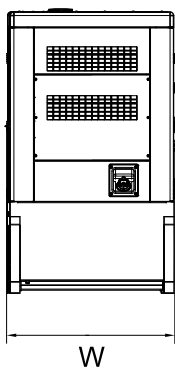
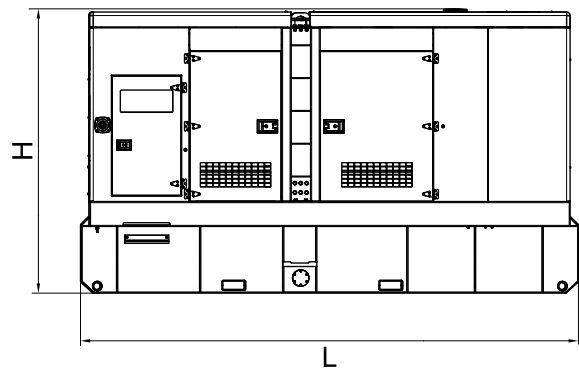
4 Overall Dimensions

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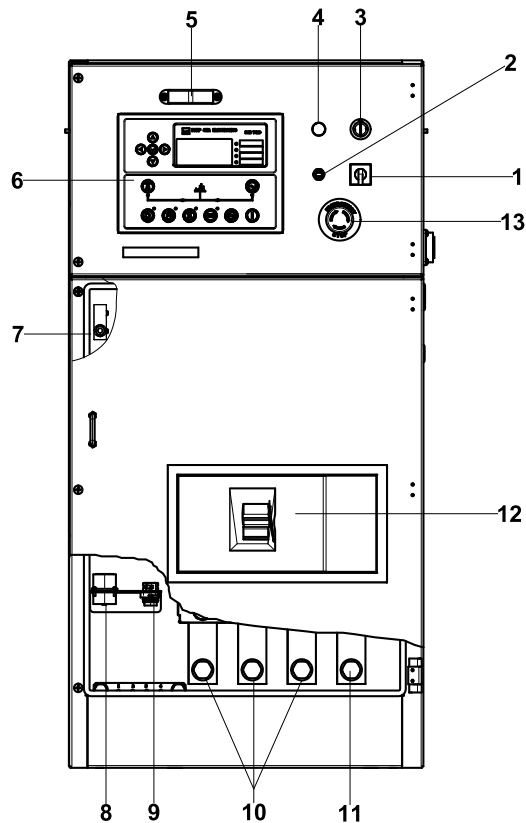
Dry weight	4773kg
Fuel tank capacity	1650L
Dimensions L x W x H	4242x1423x2425mm



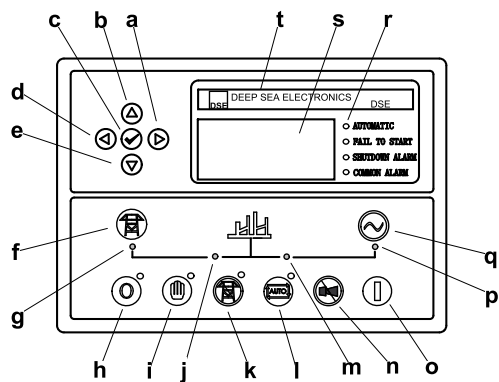
- ⑧ Emergency stop switch
- ⑦ Air inlet
- ⑥ Access door
- ⑤ Exhaust gas outlet
- ④ Fuel drain
- ③ Tie down
- ② Base frame
- ① Control cabinet
- ⑩ External fuel inlet/return hose fitting
- ⑨ Coolant/Oil drain hose fitting
- ⑧ Cable trench
- ⑦ Fuel inlet
- ⑥ Fork lift channel
- ⑤ Lifting lug
- ④ Roping lug
- ③ Coolant inlet



5 Control System



Control & Field wiring cabinet



Control module

Ref.	Description
1	Mains input changeover switch
2	Control cabinet lamp switch
3	Key switch
4	Charge indicator
5	Control cabinet lamp
6	Control module
7	Limit switch
8	ATS connector
9	Remote run connector
10	Live wire terminals
11	Neutral wire terminal
12	Main circuit breaker
13	Emergency stop switch

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

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06.2019