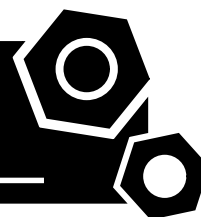


Generator set
Sound-proof type
GMS312CS-AU

SPECIFICATIONS



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1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- ISO8528-5:2005
- AS 3000-2018
- AS 3010-2017

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.

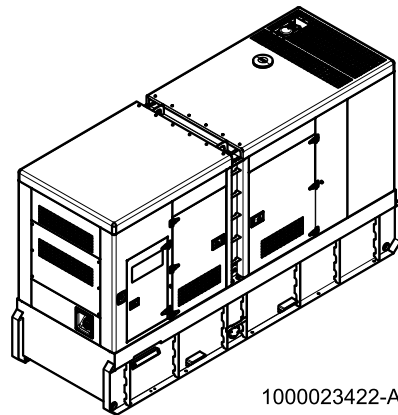
2 General Features

- Cummins engine NTA855-G1B
- Close coupled to a Stamford alternator S4L1D-E4
- 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

General technical data

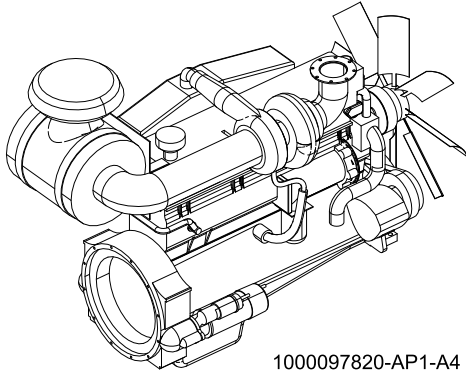


1000023422-AP1-B5

Model.....	GMS312CS-AU
Structure type	R
Tank capacity.....	1650L
Dry weigh.....	4779 kg
Noise level @7m	75.5dBA
Dimensions L×W×H.....	4242x1423x2426mm
Standby Power	344kVA/275kW
Prime Power	312kVA/250kW
Voltage/Ampere	415V/434A

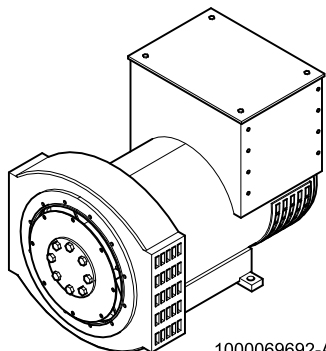
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	20.9	36.2	51.5	67.8	76.6

Power System



1000097820-AP1-A4

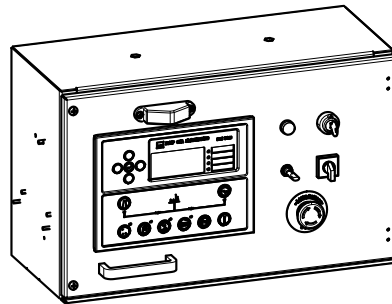
Engine Manufacturer/Brand	Cummins
Engine Model	NTA855-G1B
Dimensions L×W×H.....	1950.1*948.8*1588.4
Dry Weigh (approx.)	1410Kg
Number of Cylinders.....	6
Bore.....	140mm
Stroke	152mm
Displacement.....	14L
Compression Ratio	14
Type of injection.....	Direct injection
Intake System.....	Turbocharged
Intake 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



1000069692-AP1-A1

Alternator Manufacturer/Brand	Stamford
Alternator Model	S4L1D-E4
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



1000177378-AP1-D3

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

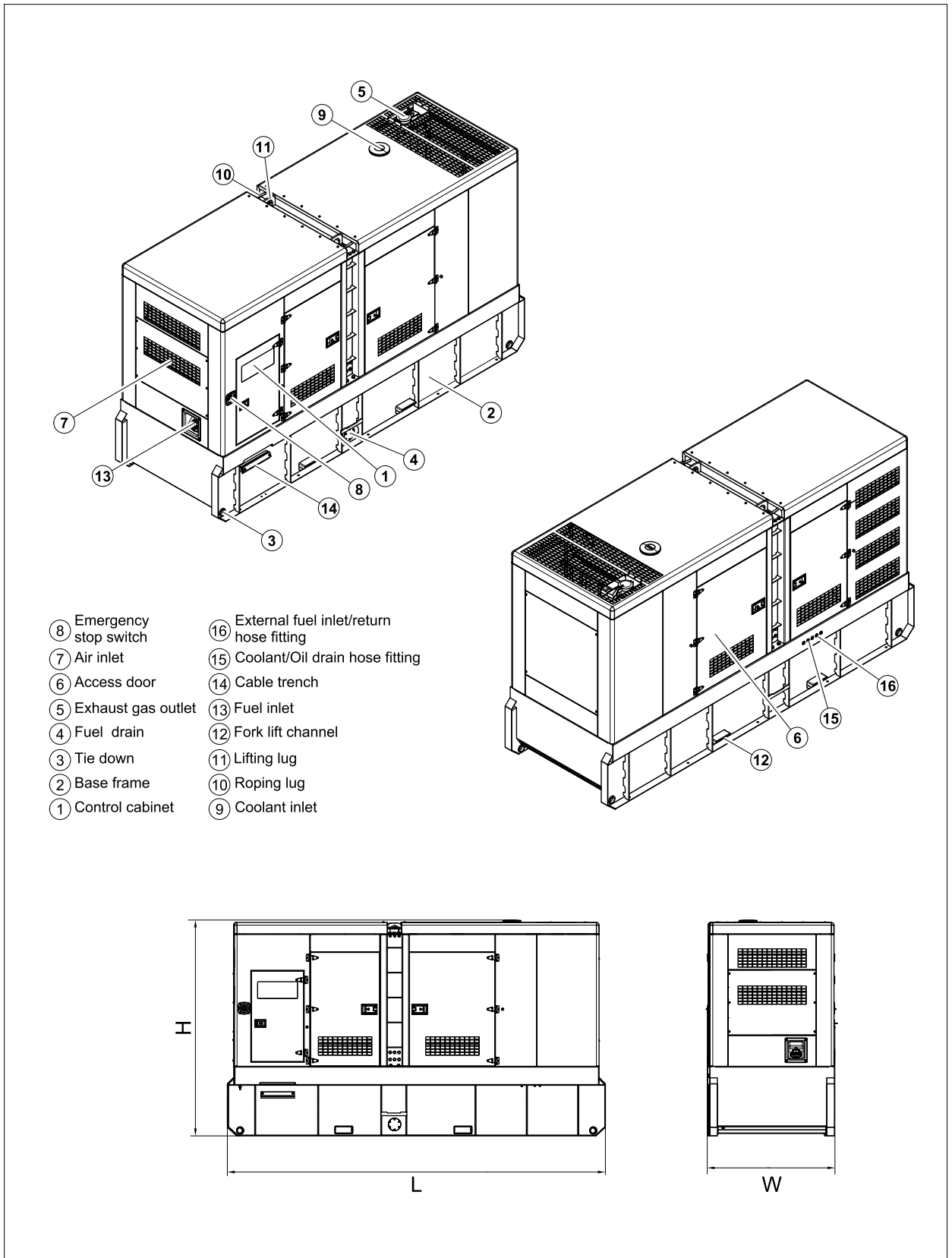
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4 Overall Dimensions



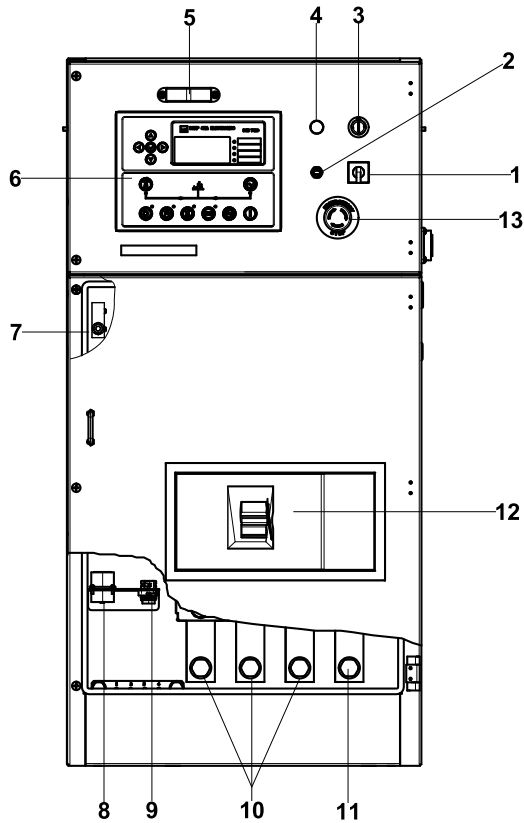
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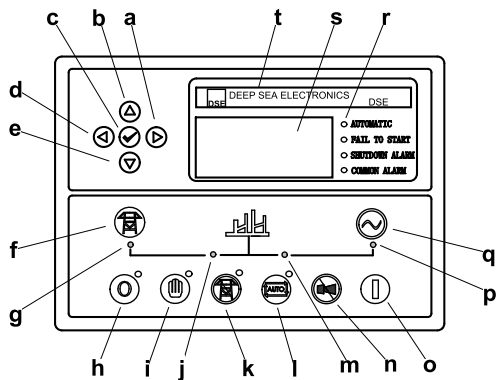
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5 Control System



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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