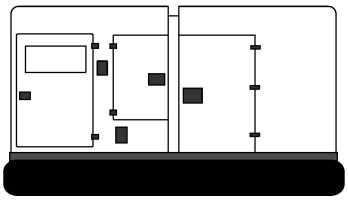
POWERLINK
Power Systems



Generator set

Sound-proof type

GMS320CS-AU

SPECIFICATIONS

www.powerlinkworld.com

EC series
GMS320CS-AU
50 Hz @ 1500rpm,3-phase/4-wiring

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformite Europeenne (CE)
- ISO8528-5:2005
- AS 3000-2018
- AS 3010-2017

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25℃ to 50℃. The coolant heater is needed when the temperature is below 5℃
- Humidity: Less than 80%.
- Altitude: Below one thousand (1000) meters.

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

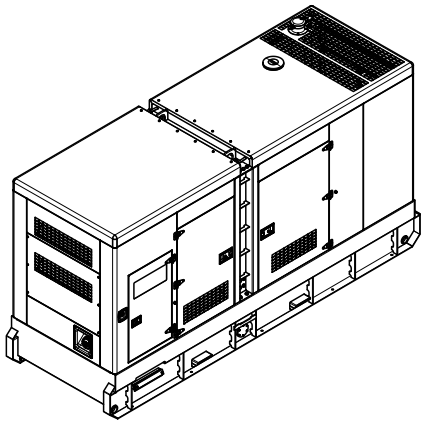
- Painting process and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

2 General Features

- Cummins engine 6LTAA9.5-G1
- Close coupled to Stamford alternator S4L1D-E4
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 500A, 4P
- Rotate speed governor: Electrical governor
- Excitation System: Self excited, SHUNT
- A.V.R.Model: AS440
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- 50℃ radiator
- Oil pump on the engine
- Steel base frame with lifting lug
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 23.5 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data



Model.....GMS320CS-AU

Structure type .....R

Tank capacity.....1650L

Dry weight.....3986kg

Noise level @7m 75.7dBA

Dimensions L×W×H.....3970×1322×2241mm

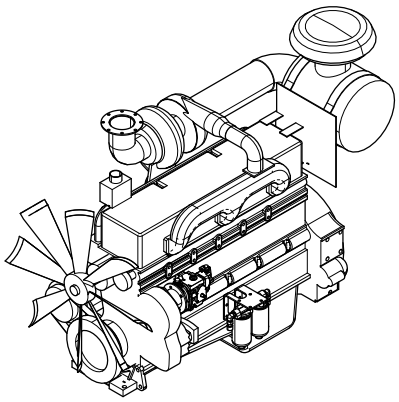
Standby Power 352kVA/282kW

Prime Power.....320kVA/256kW

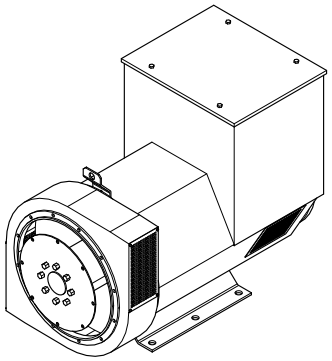
Voltage	380V	400V	415V	440V
Ampere	486.2A	461.9A	445.2A	419.0A

Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	18	35	52	70	78

Power System

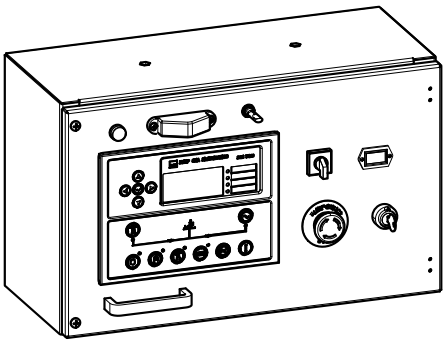


Engine Manufacturer/Brand.....Cummins
Engine Model.....6LTAA9.5-G1
Dry Weigh (approx.) 791Kg
Number of Cylinders.....6
Bore 116.5mm
Stroke 148mm
Displacement.....9.5L
Type of injection..... Direct injection
Intake System..... Turbocharged
Intake Resistance .....≤6.22kPa
Cooling System .....Water cooled
Fan ..... Pusher
Battery Voltage 24V
Type of Fuel.....No.2-D per ASTM D975.
Type of Oil ..... API CD/SE or CCMCD4
Oil Capacity 32.4L
Type of Coolant ..... Glycol mixture
Coolant Capacity 11.1L
Back Pressure .....≤10kPa
Standby Power 320kW
Prime Power.....290kW



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),0.96m³/s(60Hz)
Voltage Regulation .....±1.0%
Total Harmonic TGH / THCat no load < 1.5 % - on load < 5%
Telephone Interference..... THF<2%;TIF<50

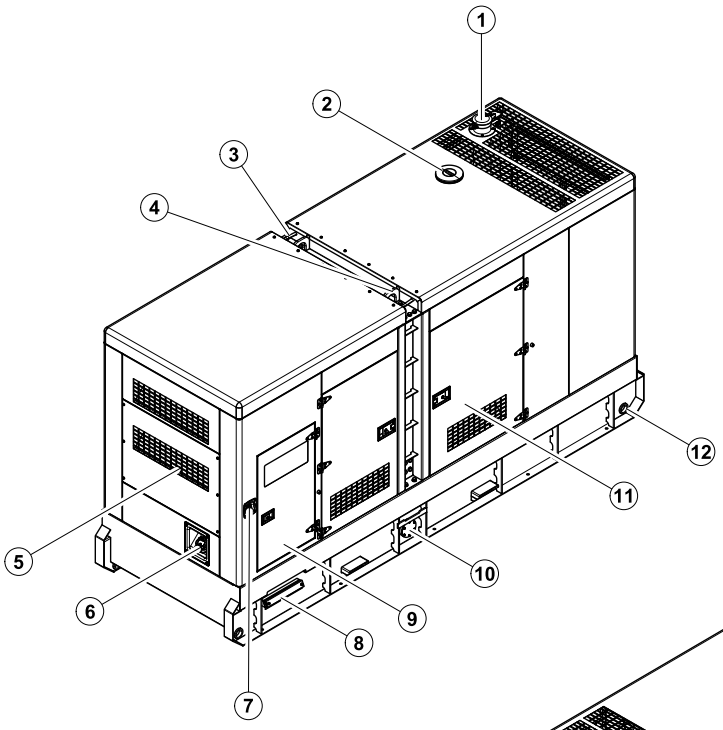
PLC-7420 Control System

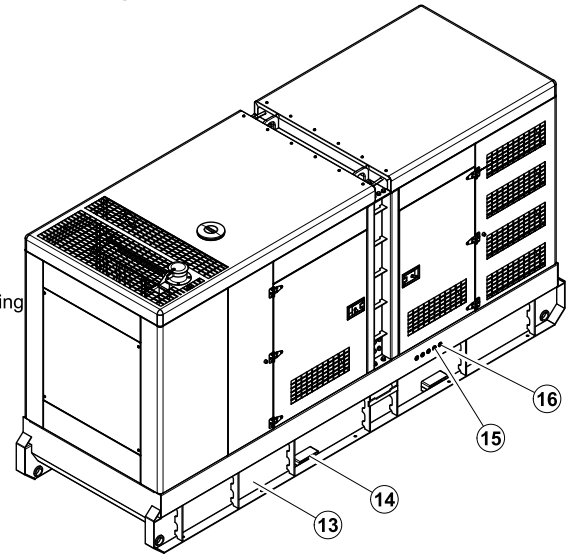


PLC-7420 is an advanced control module based on microprocessor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

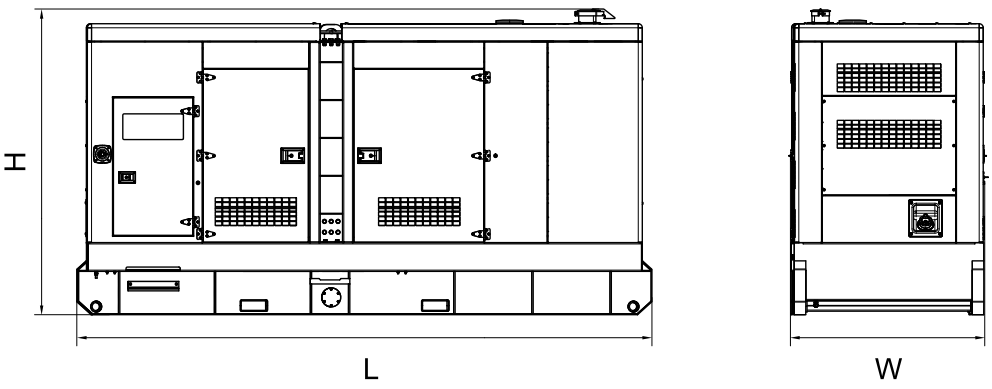
- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the mains supply and genset
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections; multiple parameters display, like pressure, temp. etc.
- Manual, 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

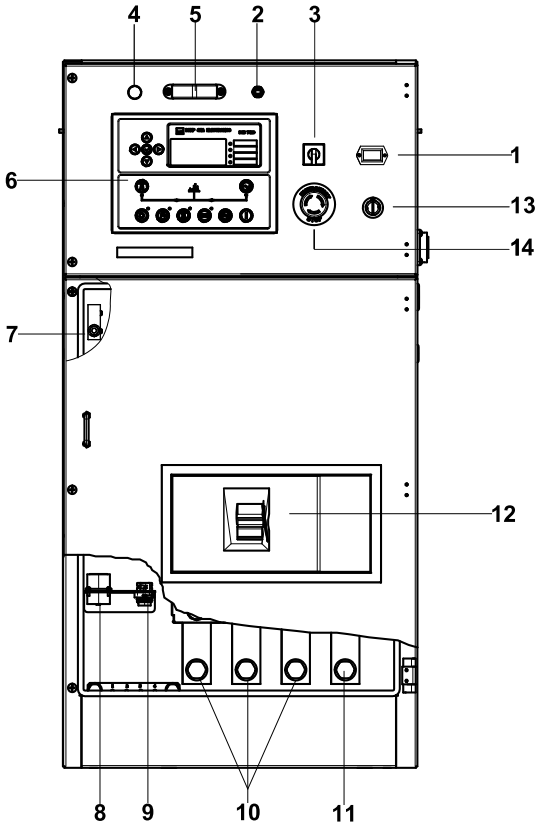




8	Cable trench	16	External fuel inlet/return hose fitting
7	Emergency stop switch	15	Coolant/Oil drain hose fitting
6	Fuel inlet	14	Fork lift channel
5	Air inlet	13	Base frame
4	Lifting lug	12	Tie down
3	Roping lug	11	Access door
2	Coolant inlet	10	Fuel drain
1	Exhaust gas outlet	9	Control cabinet

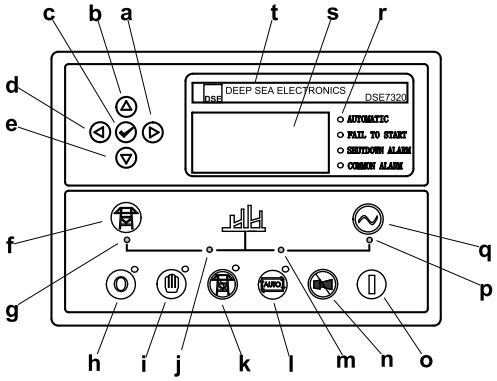


4 Control System



Control & Field wiring cabinet

Ref.	Description
1	Time counter
2	Control cabinet lamp switch
3	Mains input changeover 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	Key switch
14	Emergency stop switch



Control module

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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Specification may change without prior notice. For more info., contact Power Link or your local distributors please.

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