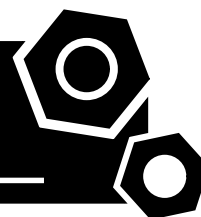


Generator set
Sound-proof type
GMS60CS-AU

SPECIFICATIONS



1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformance European (CE)
- China Compulsory Certification (CCC)
- ISO8528-5:2005
- GB/T2820.5-2009
- AS 3000-1997
- AS 3010.1-1988

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 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.

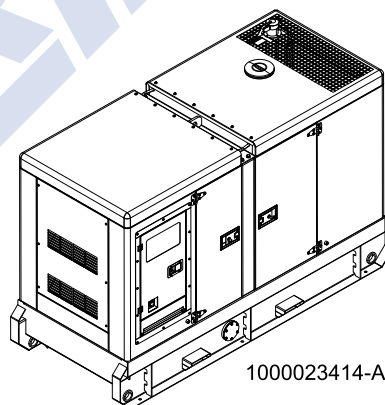
2 General Features

- Cummins engine 4BTA3.9-G2
- Close coupled to a Stamford alternator UCI224E
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 100A
- Rotate speed governor: Mechanical governor
- Excitation System: Self Excited SHUNT
- A.V.R. Model: AS440
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle

- Remote run connector
- 2x12V/70AH 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 27 hours running
- Drain points for fuel tank
- Breather valve for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data

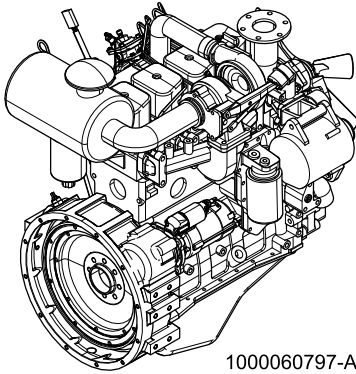


1000023414-AP1-B2

| | |
|-----------------------|------------------|
| Model..... | GMS60CS-AU |
| Structure type | R |
| Tank capacity..... | 360L |
| Dry weight..... | 1551kg |
| Noise level @7m | N/A |
| Dimensions L×W×H..... | 2688x1081x1759mm |
| Standby Power | 61kVA/48.8kW |
| Prime Power | 60kVA/48kW |
| Voltage/Ampere | 415V/83A |

| Genset Fuel Consumption | | | | | |
|-------------------------|-----|-----|-----|------|------|
| Frequency/Load | 25% | 50% | 75% | 100% | 110% |
| 50Hz (L/h) | 3.8 | 6.7 | 9.8 | 13.1 | 14.7 |

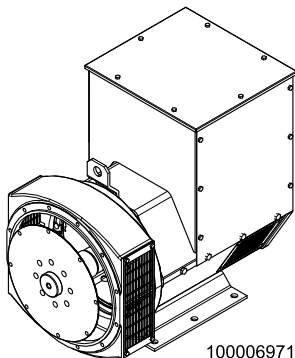
Diesel Engine



1000060797-AP1-B4

| | |
|----------------------------------|---|
| Engine Manufacturer/Brand | Cummins |
| Engine Model | 4BTA3.9G2 |
| Dimensions L×W×H..... | 884.9*748.4*985.6 |
| Dry Weigh (approx.) | 350kg |
| Number of Cylinders | 4 |
| Bore | 102mm |
| Stroke | 120mm |
| Displacement | 3.9L |
| Compression Ratio | 16.5 |
| Type of injection..... | Direct injection |
| Intake System..... | Turbocharged,water-to-air charge cooled |
| Intake Resistance | ≤ 6.28kPa |
| Cooling System | Water cooled |
| Fan | Pusher |
| Battery Voltage | 12/24V |
| Type of Fuel | Diesel |
| Type of Oil | 15W40-CF4 |
| Oil Capacity | 9.5L |
| Type of Coolant | Glycol mixture |
| Coolant Capacity | 20.8L |
| Back Pressure | ≤10.1kPa |
| Standby Power | 55kW |
| Prime Power | 50kW |
| Fuel Consumption(100%load) | 216g/kW.h |

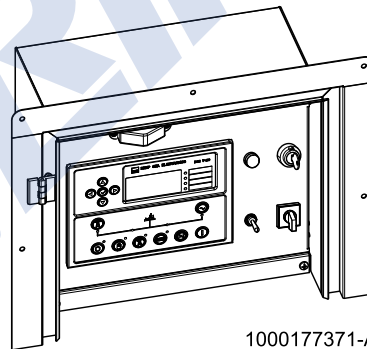
Alternator



1000069716-AP1-A4

| | |
|---|---------------------------------|
| Alternator Manufacturer/Brand | Stamford |
| Alternator Model | UCI224E |
| 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 | 2250 rpm |
| Air Flow..... | 0.216m³/s(50HZ),0.281m³/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



1000177371-AP1-C2

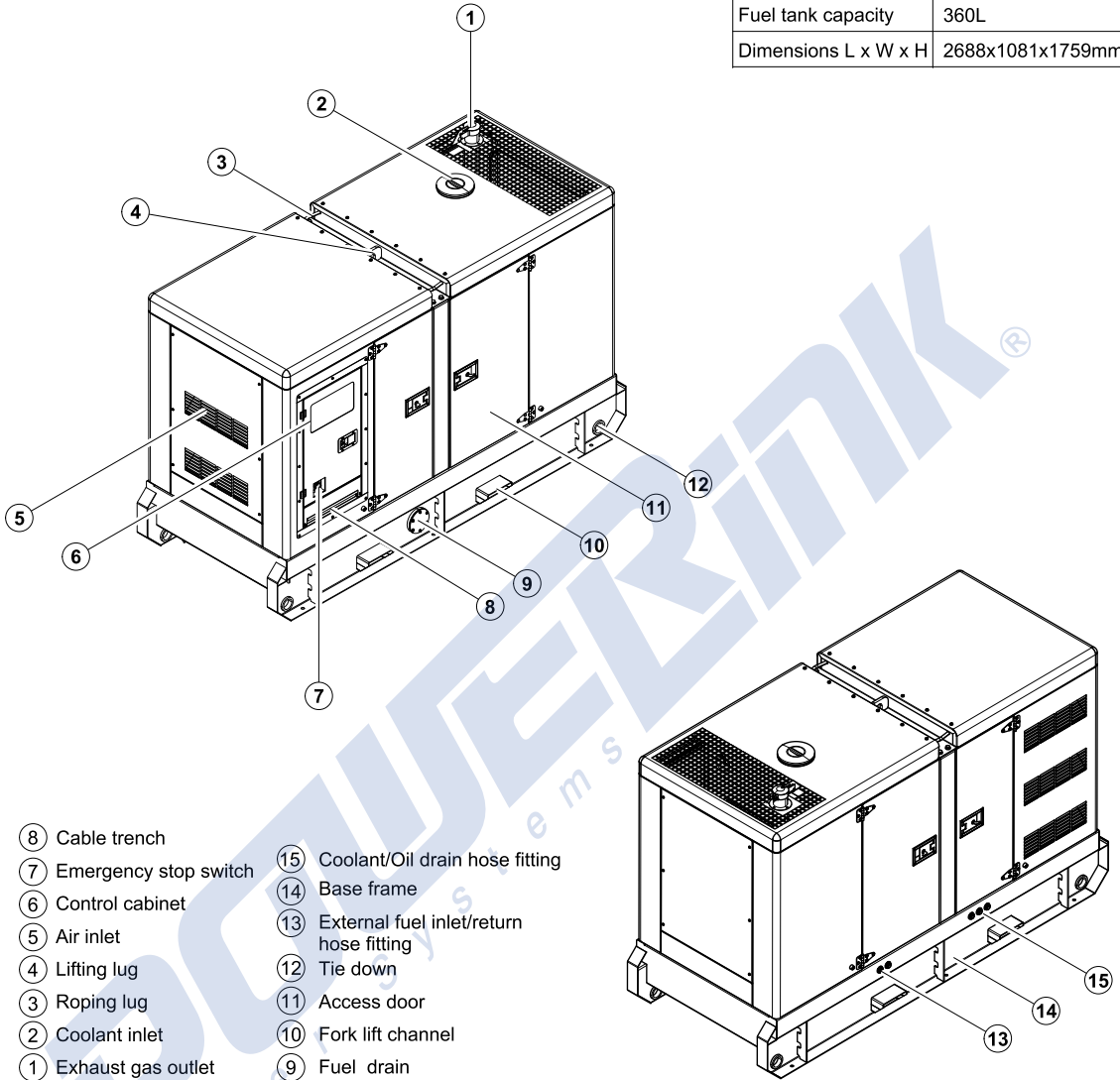
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

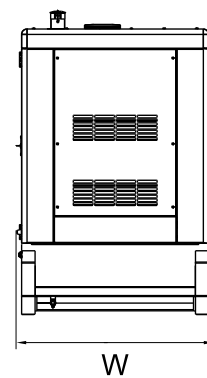
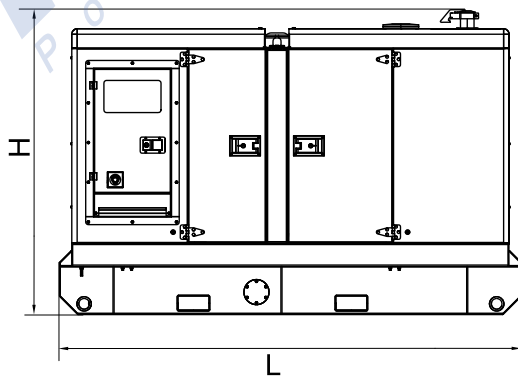
4 Overall Dimensions

1000023414-DR1-B2

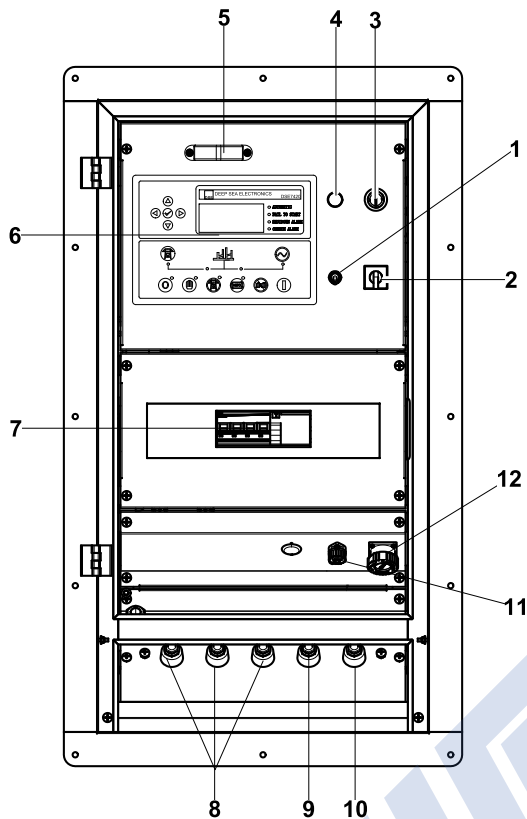
| | |
|----------------------|------------------|
| Dry weight | 1551kg |
| Fuel tank capacity | 360L |
| Dimensions L x W x H | 2688x1081x1759mm |



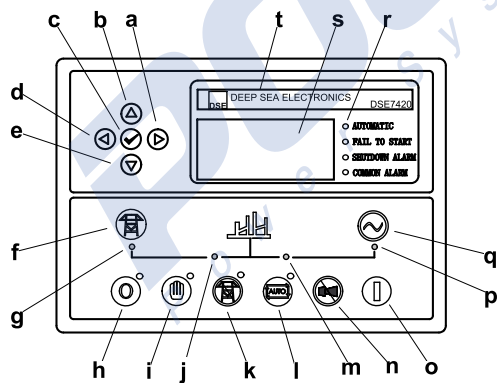
- ⑧ Cable trench
- ⑦ Emergency stop switch
- ⑥ Control cabinet
- ⑤ Air inlet
- ④ Lifting lug
- ③ Roping lug
- ② Coolant inlet
- ① Exhaust gas outlet
- ⑮ Coolant/Oil drain hose fitting
- ⑭ Base frame
- ⑬ External fuel inlet/return hose fitting
- ⑫ Tie down
- ⑪ Access door
- ⑩ Fork lift channel
- ⑨ Fuel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



5 Control System



Control & Field wiring cabinet



Control module

| Ref. | Description |
|------|--------------------------------|
| 1 | Control cabinet lamp switch |
| 2 | Mains input changeover switch |
| 3 | Charge indicator |
| 4 | Key switch |
| 5 | Control cabinet lamp |
| 6 | Control module |
| 7 | Main circuit breaker |
| 8 | Live wire terminals |
| 9 | Neutral wire terminal |
| 10 | Ground wire terminal |
| 11 | Remote communication interface |
| 12 | ATS communication interface |

| | |
|---|--|
| 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 |

| |
|----------------|
| 100023414-B2-E |
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| 01.2013 |
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