13KVA Cummins Diesel Generator Set Datasheet

Model:KH-10GF
Engine: CUMMINS
Alternator:STAMFORD
Control Panel: UK DEEPSEA
Prime Power:13KVA/10KW
Standby Power:14.3KVA/11KW

Prime power is available for an unlimited number of annual hours in variable load applications, in accordance with GB/T2820-97. A 10% overload capability is available for a period of 1 hour within a 12-hour operation cycle.

The standby power rating is intended for supplying emergency power during utility power interruptions. No overload, utility parallel, or negotiated outage operation capabilities are available at this rating..

KAIHUA diesel generator sets are covered by an express written 1-year/1000hour (whichever occurs first) limited warranty.

Standard Specification

Genset model	Voltage	Frequency	Phase	Power Factory	Protection Class	Insulation Grade
KH-10GF	240/415V	50HZ	3	0.8(lagging)	IP23	H

Engine and genset output radting

Engine model	Engine Speed (RPM)	Prime (KW/HP)	Standby (KW/HP)	Genset Model	Prime (KVA/KW)	Standby (KVA/KW)
4B3.9-G11	1500	20/27	22/29	KH-10GF	13/10	14.3/11

Scope of standard supply

Engine:	CUMMINS
Alternator:	STAMFORD
Controller:	Automatic controller DSE7320MKII with AMF function.
Breaker:	Manual circuit breaker 3-pole, China CHNT.
Radiator:	Cummins 50°C
Vibration:	Vibration damper installed between the engine/alternator and the base frame.
Base:	Heavy duty steel channel base frame.
Silencer:	Heavy duty industrial type silencer with flexible bellow,elbow.
Battery:	High capacity sealed free maintenance battery C/W battery cables.
Manuals:	Standard tools, operator's manual of engine ,alternator , controller, breaker.

Optionals

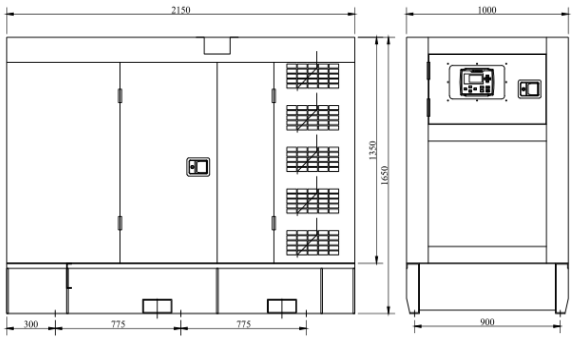
Sound Attenuated Enclosure	Oil/ Water/Fuel Heating system	Anti condensation heater
Heater Preservation Cabinet	Automatic Transfer Switch (ATS)	Daily Fuel Tank
Rainproof Cabinet	Remote Control System	Output Cable
Sound Attenuated Container (20GP/20HC/40HC)	Synchronization System	Maintainance Spare Parts

Trailer (10-500KVA)	Breaker brand (ABB,Simens,Schneider)	Plywood Case Packing

DIMENSIONS(L*W*H) And Weight

PROCESS FLOW:Drawing→Cutting→Bending→Welding→Spraying→Assembling→Testing

Open Type	790		Silent Type	1140KG
	1350*750*1150mm			2100*1000*1650mm



Sound Attenuated Enclosure

IP rated sound attenuated weatherproof enclosure designed for rugged conditions.

Excellent security: The totally-enclosure is manufactured from 2 mm high quality galvanised cold-rolled steel plates.

Ventilation: combined combustion and ventilation cooling.

Excellent sound attenuation, with anti-drumming treatment which effectively lowers the sectional noise during normal running of the gen-sets.

The enclosure uses high frequency, medium frequency and low frequency type of PUR anti-flaming and sound-absorbing cotton, which could reduce the noise produced by the genset.

The door uses an EPDM type sealing system.

High efficiency absorbative mufflers which helps reduce exhaust noise.

Convenient transport using four point lifting arrangement.

Warranty

Warranty is according to our standard conditions:12 months or 1,000 running hours, subject to the earlier one (artificial damage to be an exception).

Certification

European Safety Standard: CE Certificate.

ISO9001:2015 Quality Control System.

CUMMINS OEM CERTIFICATE.

STAMFORD OEM CERTIFICATE.

CUMMINS Diesel Engine

Engine Brand	**Cummins**
Engine Manufacturer	**Cummins(China) Power Technology Co.,Ltd**
Engine Model	**4B3.9-G11**
Engine Rated Power	**20KW @1500RPM**
Cylinder Arrangement	4 in line
Cycle	Four stroke
Aspiration	Naturally Aspirated

Fuel System	Indirect injection	
Bore×Stroke (mm×mm)	102x120	
Displacement(L)	3.9	
Compression Ratio	18.0:1	
Speed Governor	Mechanical	
Cooling System	Forced Water Cooling Cycle	
Starter Motor	DC24V electrical starting	
Exhaust System		
Exhaust Gas Flow (L/min)	70	
Exhaust Temperature(℃)		
Standby Power	410	
Prime Power	380	
Max Back Pressure(kPa)	10	
Air Intake System		
Max Intake Restriction(kPa）		
Dirty Element	6.2	
Clean Element	3.7	
Air Flow(L/min)	32.9	
Fuel System		
Type Injection System	Indirect injection	
110%(Standby Power) Load(L/H)	6.1	
100%(Prime Power) Load(L/H)	5.7	
75%(Prime Power) Load(L/H)	4.6	
50%(Prime Power) Load(L/H)	3.7	
Oil System		
Maximum Oil Temperature(℃)	121	
Oil Pressure at Rated RPM	345	
Minimum Required Lube System Capacity - Sump plus Filters	10.9L	
Cooling System		
Coolant Capacity - Engine Only(L)	7.2	
Thermostat range(℃)	83-95	
Max Water Temperature Standby/Prime(℃)	110/104	
Specification of STAMFORD alternator		
Alternator Brand	**Stamford**	
Engine Manufacturer	**Cummins GeneratorTechnologies (China) Co., Ltd**	
Alternator Model	**S0L1-L1**	STAMFORD®
Alternator Rated Power	**12.5KVA/10KW**	
Rated Voltage	415V	
Rated frequency	50HZ	
Connecting Type	3 Phase and 4 Wires	
Number of Bearing	1	
Protection Grade	IP23	
Altitude	≤1000m	

Exciter Type	Brushless ,Self-exciting, AVR automatic voltage regulating,100% Copper winding wire
Insulation Class	H
Telephone Influence Factor (TIF)	≤50
THF	≤2%
Voltage Regulation, Steady State	≤±1%
Transient State Voltage	≤-15%～+20%

Specification of control System (Deepsea DSE7320MKII Module)

The DSE7320 controller is an advanced control module based on a microprocessor. It functions as an Auto Mains (Utility) Failure Control Module (AMF) designed to start and stop generating sets that include both electronic and non-electronic engines. It also has the capability to monitor the mains (utility) supply. When the mains supply is unavailable, it can automatically start the engine and close the generator's breaker. It accurately measures various operational parameters and displays all values and alarm information on the LCD. Additionally, it can automatically open the breaker and shut down the engine once the mains supply is restored.

Main Features

- AMF and ATS and communication and expansion function.
- Designed to work with electronic or non-electronic or gas engine simultaneously. (support many kinds of engines ECU).
- Manual, Automatic, Test and remote control mode selectable.
- Monitoring and measuring operational parameters of the mains supply and genset.
- Indicating operation status, fault conditions, all parameters and alarms.
- Multiple protections and multiple parameters display.
- Includes 12 inputs and eight outputs. 8 inputs are configurable and 4 outputs are configurable.
- 4 analog inputs for kinds of optional sensors that can be used for measuring oil pressure, coolant temperature, fuel level and so on; parameters can be configured by user.
- Can be programmed using the front panel or by using the PC software.
- Support twelve languages. The language was edited by customer.
- Graded protection: pre-alarm, shutdown and electrical trip, flexible setting.
- The module can be pre-set for four operating modes and protecting parameters.
- The firmware can be updated automatically, so customer can have the latest version.

Key Features

- 4-Line back-lit LCD text display.
- Multiple Display Languages.
- Five key menu navigation.
- LCD alarm indication.
- Heated display option available.
- Customisable power-up text and images.
- DSENet expansion compatibility.
- Data logging facility Internal PLC editor.
- Protections disable feature Fully configurable via PC using USB, RS232 & RS485 communication.
- Front panel configuration with PIN protection.
- Power save mode.
- 3 phase generator sensing and protection.
- 3 phase mains (utility) sensing and protection (DSE7320 MKII only).
- Automatic load transfer control (DSE7320 MKII only).
- Generator current and power monitoring (kW, kvar, kVA, pf).
- Mains current and power monitoring (kW, kvar, kVA, pf) (DSE7320 MKII only).
- kW and kvar overload and reverse power alarms.
- Over current protection.
- Unbalanced load protection.
- Independent earth fault protection Breaker control via fascia buttons.
- Fuel and start outputs configurable when using CAN.
- 6 configurable DC outputs.
- 2 configurable volt-free relay outputs.
- 6 configurable analogue/digital inputs

Support for 0 V to 10 V & 4 mA to 20 mA sensors.
8 configurable digital inputs.
Configurable 5 stage dummy load and load shedding outputs.
CAN, MPU and alternator frequency speed sensing in one variant.
CAN, MPU and alternator frequency speed sensing in one variant
Manual and automatic fuel pump control
Engine pre-heat and post-heat functions
Engine run-time scheduler
Engine idle control for starting & stopping
Fuel usage monitor and low fuel level alarms
Simultaneous use of RS232 and RS485 communication ports
True dual mutual standby using RS232 or RS485 for accurate engine hours balancing.
MODBUS RTU support with configurable MODBUS pages.
Advanced SMS messaging (additional external modem required)
Start & stop capability via SMS messaging
3 configurable maintenance alarms
Compatible with a wide range of CAN engines, including tier 4 engine support
Uses DSE Configuration Suite PC Software for simplified configuration
Licence-free PC software
IP65 rating (with supplied gasket) offers increased resistance to water ingress
Modules can be integrated into building management systems (BMS) using MODBUS RTU
Key Benefits
Automatically transfers between mains (utility) and generator (DSE7320 MKII only) for convenience.
Hours counter provides accurate information for monitoring and maintenance periods.
User-friendly set-up and button layout for ease of use.
Multiple parameters are monitored & displayed simultaneously for full visibility.
The module can be configured to suit a wide range of applications for user flexibility.
PLC editor allows user configurable functions to meet user specific application requirements.