

PDC500B

Prime Power: 360KW/450KVA Standby Power: 400KW/500KVA Voltage: 400VAC

Powered by Cummins QSZ13-G5 Engine

Genset Performance

- 230/400VAC, 50Hz, 0.8PF, 3 Phases 4 wires
- Frequency drop $\leq 3\%$
- Voltage regulation $\leq 0.3\%$
- The steady state frequency $\leq 0.5\%$
- The steady state voltage deviation $\leq \pm 1\%$
- The transient frequency deviation $\leq +10\% \leq -15\%$
- The transient voltage deviation $\leq +20\% \leq -15\%$
- Frequency recovery time $\leq 3S$
- Voltage recovery time $\leq 1S(\text{Voltage} \pm 3\%)$
- THF (Telephone Harmonic Factor) < 3
- TIF (Telephone Influence Factor) < 50
Comply to Standard NEMA MG1-22.43
- Built-in vibration isolator with high performance on shock absorption.

Standard Configuration

- Cummins Engine
- Brushless synchronous alternator
- POWERTEC intelligent controller
- 40°C standard ambient temperature (50°C Optional)
- Molded case circuit breaker (3P)
- Float battery charger
- Battery connect wire
- Steel base frame
- Silencer, bellows, exhaust bend
- Manual book and files

Optional Items

- Starting batteries
- Fuel tank
- Oil-water separator
- Sensor for low coolant level, low fuel/oil level
- Automatically monitoring & controlling system of city power
- Coolant heater
- Oil heater
- Heat exchanger--Water cooled tower system
- Soundproof canopy
- Trailer
- S470 Soundproof type canopy
- Design and construction of environmental protection
- Engineering for the Genset room



Diesel Engine

- Model: QSZ13-G5
- Construction: Cummins high pressure common rail fuel system (HPCR) realizes multi-point injection, and the throttle responds quickly at different speeds. More efficient power output, better fuel economy and less noise
- The integrated oil-water pipeline replaces the traditional hose to eliminate the hidden trouble of leakage.
- Enhanced cooling and lubrication functions effectively extend the service life of the engine
- The two-stage dual fuel filter ensures balanced particulate dispersion and maximizes the life of the fuel filter life, protect the main components of the fuel system
- Emission standards: Comply to China Tier III emission standards
- Environment: The engine can work normally under the following conditions without de-rating:

A. 1800r/min engine--altitude less than 1500m (5000ft), ambient temperature less than 40 °C(104° F).

B. 1500r/min engine--altitude less than 1310m (4300ft), ambient temperature less than 40 °C(104° F)

But engine working environment conditions exceed above,

the engine output power will de-rate 4% as altitude increase each 300m(1000ft) at the altitude is higher than 1500m (5000ft),

Also it will de-rate 2% as temperature increase every 11 °C(1% de-rating ,when temperature increase each 10° F). in the ambient temperature is higher than 40°C(104° F)



Alternator

- Optional brands: **Stamford / Marathon / Faraday / Engga / Mecc Alt**
- Brushless, 4 pole rotating magnetic field, single bearing with protective cover.
- Insulation: H Class.
- IP Class: IP23
- Cooling system
- AC exciter, rotate rectifying
- Rotor and exciter made with high temperature insulating resin, to satisfy tough environment.
- Rotor dynamic balancing complys for BS5625, class 2.
- Sealed with advanced lubricating grease to prolong life of bearing.



Notes: Above data of alternator comes from Stamford. Specification may alternated without advance notice.

Standard

- 3 phases voltage: Ua, Ub, Uc
- Frequency F1
- Apparent power PR
- Power factor PF
- Coolant temperature WT
- Temperature °C display
- Oil pressure OP
- Engine speed
- 3 phases current: La, Lb, Lc
- Active power PA
- Power factor PF
- Temperature °C display
- KPa/Psi/Bar display
- Battery voltage V
- Running Hour
- Starting timer:(999999)



Standard Protection

Genset Protection

- Programmable I/O signal
- Emergency stop

Engine Protection

- Stop for over speed
- Low oil pressure
- High Coolant temperature
- Sensor fail
- Alarm for low/high battery voltage
- Low battery voltage
- Fail to start/Cranking fail

Alternator Protection

- Over Voltage
- Over current
- Voltage signal lost
- Over Voltage
- Over frequency
- Under frequency

Control System Components

- Manual/auto/stop/start
- Setting button
- Fault status indicators
- Screen menu selection button
- Emergency stop button
- Digital displayer



Communication Interface (Option)

- International standard MODBUS communication protocol RS232/ RS485 is suitable for remote control and monitor; It is easy integrated with SCADA;.

Notes: Above data of controller comes from POWERTEC GC6110. Customized solutions is available as required

Genset

Model	PDC500B
Prime Rating (kw)	360
Standby Rating (kw)	400
Rate voltage(V)	400
Rate current(A)	650
Power factor	0.8
Frequency(Hz)	50

Engine

Engine Model	QSZ13-G5
Gross Engine output-Prime (kw)	411
Gross Engine output-Standby (kw)	470
Bore * stroke (mm)	130*163
Cylinders and structure	6 In line
Displacement(Liter)	13
Compression Ratio	17:1
Intake way	Turbo Charge, Air-Air Intercool
Max intake resistance (KPa)	6.2
Air intake (m3/h)	1668
Max exhaust back pressure (KPa)	10
Exhaust gas flow (m3/h)	2046
Exhaust temp. (°C)	523
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	690
Coolant capacity (L)	73
Highest water temperature(°C)	107
Minimum air opening to room (m2)	2.8/2.5
Thermostat range (°C)	82-94
Max oil temperature (°C)	121
Lubrication system oil capacity (L)	75.33
Rate load fuel consumption(L/H)	93.2
Standard Governor/Class	Electronically Controlled High Voltage Common Rail

Alternator

Rated Voltage(V)	400/230
Output Way	3 Phases, 4 wires
Rated power factor	0.8
Exciter	Brushless, Self-exciter
Max voltage regulation	±1%
Phase	3
Protection class	IP21-23
Insulation class	H

Controller

Brand	POWERTEC or DEEPSEA
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Type	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	3094*1443*1911	3385	-
Silent Type	4300*1594*2250	5185	900

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