

Powertec Genset

Powered by Dongfeng Cummins 6L Series Engine

Genset Standby Power Range: 230kw

Basic Characteristics of Diesel Generator Set

Engine

◆ All series powered by the Cummins engine, modern technique, dependable performance, high combustion efficiency and low fuel consumption, long time continuous running, long working life. Conform to the standard of ISO3046.

Alternator

◆ All series adopt alternator of Marathon; Excellent excitation characteristics, Ensure that the genset can withstand high power load moment, small Voltage fluctuation, quickly recover. Conform to the standard of GB755, BS5000, IEC34-1, CSA22.2, AS2359.

Controller System

◆ All series use automatic Powertec GC6110 as controller, Integrating digital, intelligent, network technology, use for a single diesel generator set automation and monitoring system, implement a automatic starting/stopping, the data measured, Alarm protection function of the genset.

Radiator

◆ Standard 50°C ambient temperature online radiator, Closed water circulation cooling system, ensure the rated power output of under high temperature environment.



Steel welding base, inbuilt shock absorber

- ◆ Inbuilt shock absorber, perfect shock absorption performance, Easy installation and transport
- ◆ No need to install shock pad on the connection of base foundation and fixed.

The performance parameters of the diesel generator set

- ◆ 220/127VAC, 60HZ 0.8PF Three phase four wire output (Electronic speed)
- ◆ Frequency drop $\leq 3\%$ ◆ Voltage modulation $\leq 0.3\%$
- ◆ The steady state frequency $\leq 0.5\%$
- ◆ The steady state voltage deviation $\leq \pm 1\%$
- ◆ The transient frequency deviation $\leq +10\%$
 $\leq -7\%$
- ◆ The transient voltage deviation $\leq +20\%$
 $\leq -15\%$
- ◆ Frequency recovery time $\leq 3S$
- ◆ voltage recovery time $\leq 1S$ (voltage $\pm 3\%$)
- ◆ THF < 3
- ◆ TIF < 50 Conform to the standard of NEMA MG1-22.43

Engine Performance Parameters

Engine

- ◆ Model: **Cummins engine 6L series**
- ◆ Construction: Intensify cylinder block design, low noise, low Vibration, length stroke, expand more perfectly after fully Burning, increase effective power output, guarantee powerful ,Low oil consumption.
- ◆ Starting system: 24VDC starting motor
- ◆ Advanced 4 air valve construction, bigger horse power, low Oil consumption, at the meantime increase low speed torque, Good dynamic property, high work efficient.
- ◆ Fuel system: Centre arrangement injector and symmetry combustor, make the gas mixture well distributed, burning more fully.
- ◆ Filter system: Dry core air filter with intake resistance indicator. Rotate Paper-based full flow and bypass oil filter. Rotate anti-corrosion water filter.
- ◆ Advanced design: power per liter can reach 30.0kW/L, the machine structure is more reasonable, more convenient for maintenance.
- ◆ With forced cooling radial type, can bear higher mechanical loading, and heating load, good intensity.



Alternator Performance Parameters

Alternator

- ◆ Type: **Marathon**
- ◆ Brushless, 4 pole rotating magnetic field, single bearing, with protective cover.
- ◆ H class insulation
- ◆ Standard IP23 grade
- ◆ Cooling system
- ◆ AC exciter, rotate rectifying unit
- ◆ Stator winding after dip treating, Surface override epoxy insulation varnish
- ◆ Rotor and exciter get treatment of high temperature insulating resin, will be more applicable for severe environment.
- ◆ Rotor dynamic balancing accord with standard BS5625, class 2.5.
- ◆ Advanced lubricating grease seal long time bearing.



Supplied Accessories

- ◆ Silencer、 bellows、 exhaust bend
- ◆ Battery connect wire
- ◆ Files of original factory of engine and alternator
- ◆ Generator set manual book, certificate of conformity

Optional Items

- ◆ Silent/trailer type genset
- ◆ Oil water separator
- ◆ Heat exchanger—water tower cooling system
- ◆ Low water level, low fuel oil warning function
- ◆ Genset environmental protection
- ◆ Mains supply monitoring automatic control system
- ◆ Storage fuel tank
- ◆ BAC 06 battery charger

Standard Detection Function

- ◆ 3 phases voltage Ua,Ub,Uc
- ◆ Frequency F1
- ◆ Apparent power PR
- ◆ Coolant temperature WT
- ◆ Oil pressure OP
- ◆ Speed RPM
- ◆ HC timer records 99999 hours
- ◆ The maximum cumulative times of starting can reach 999999
- ◆ 3 phases current La,Lb,Lc
- ◆ Active power PA
- ◆ Power factor PF
- ◆ °F/°C display
- ◆ kPa/Psi/Bar display
- ◆ Battery voltage V



Standard Protection Function

Genset Protection

- ◆ Programmable alarm and status input
- ◆ Emergency stop

Engine Protection

- ◆ Stop for over speed
- ◆ Alarm/Stop for low oil pressure
- ◆ Alarm/Stop for high coolant temperature
- ◆ Indication for sensor fault
- ◆ Alarm for low/high battery voltage
- ◆ Alarm for shortage of battery
- ◆ Stop for failure to start/jigger

Alternator Protection

- ◆ Stop for over high/low voltage
- ◆ Alarm/stop for over current
- ◆ Stop for loss of voltage detection signal
- ◆ Stop for over frequency
- ◆ Stop for low frequency

Control System Components

- ◆ Control switch—manual/auto/stop/start
- ◆ Setting button
- ◆ Fault status indicators
- ◆ Screen menu selection button
- ◆ Emergency stop button
- ◆ Digital display



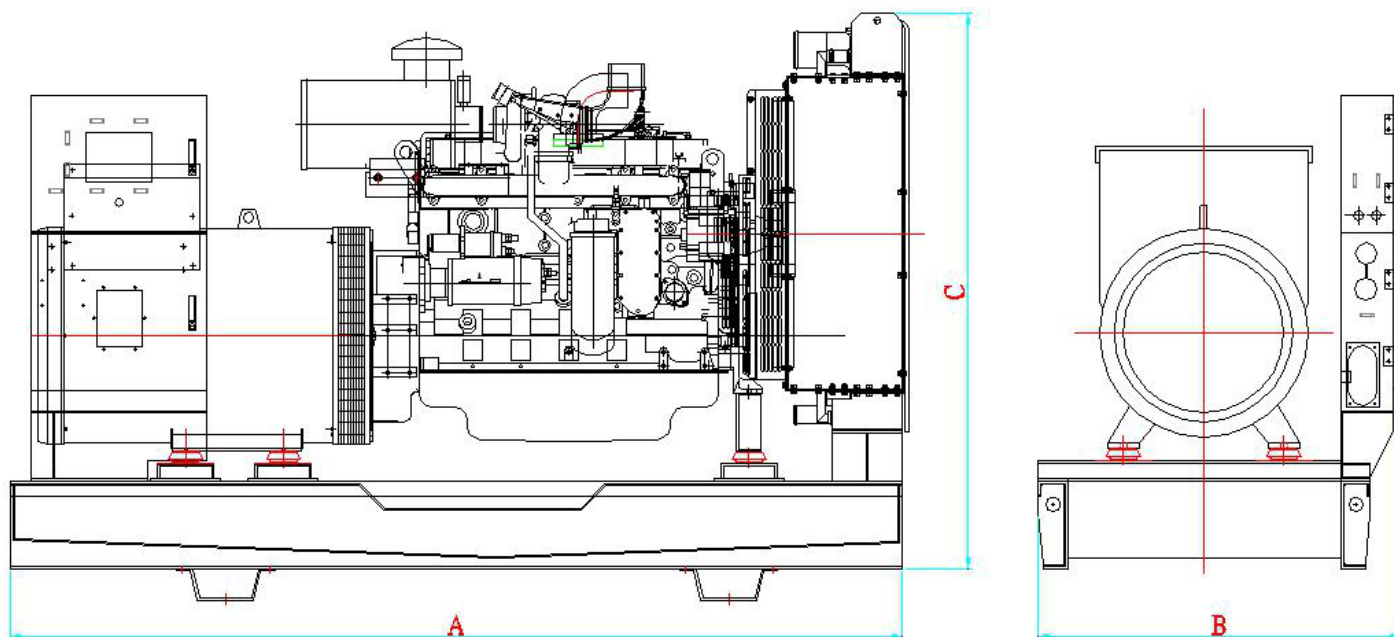
Communication Interface (optional function)

- ◆ Adopt international standard MODBUS communication protocol with error detection as well as RS232/ RS485 (RS485 is opto-isolated type)
- ◆ Realize functions including remote control, telemetry and telesignalling, which are facilitate to monitor gensets.

Data sheet of Genset

Genset	Model	PDC230S-60
	Prime Rating (kw)	210
	Standby Rating (kw)	230
	Prime current(A)	379
	Frequency(hz)	60
Engine	Engine Model	6LTAA8. 9-G2
	Gross Engine output-Prime (kw)	235
	Gross Engine output-Standby (kw)	/
	Bore * stroke (mm)	114*145
	Cylinders and build	6 -Inline
	Cubic capacity(L)	8. 9
	Compression Ratio	16. 6:1
	Intake way	Turbo charging , air to air after cooled
	Max intake resistance (kPa)	6. 2
	Air intake (m ³ /h)	1032
	Max exhaust back pressure (kPa)	10
	Exhaust gas flow(m ³ /h)	2742
	Exhaust temp(°C)	520
	Cooling way	Radiator and fan
	Fan exhaust flow (m ³ /min)	326
	Coolant capacity (L)	41. 1
	Highest water temperature(°C)	100
	Minimum air opening to room (m ²)	2. 0/1. 8
	Thermostat range (°C)	82-95
	Max oil temperature (°C)	121
Lubrication system oil capacity (L)	27. 6	
Fuel consumption(L/H)	53	
Standard Governor/Class	Electrical	
Alternator	Prime voltage(V)	220/127
	Prime power factor	0. 8
	Exciter	Brushless, Self-exciter
	Max voltage regulation	±1%
	phase	3 phase
	Protection class	IP21
	Insulation class	H
Battery	Rated capacity (AH)	2 X 100AH 12V (Optional)

Dimension and Weight



Model	Fuel tank capacity (L)	Gross weight (kg)	Net Weight (kg)	Dimension A (mm)	Dimension B (mm)	Dimension C (mm)
PDC230S-60	430	1902	1755	2700	1085	1600