

## PDC165A

Prime Power: 120KW/150KVA Standby Power: 132KW/165KVA Voltage: 400VAC

Powered by Cummins QSB6.7-G3 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
- S292 soundproof canopy
- Design and construction of environmental protection
- Engineering for the Genset room



## Diesel Engine

- Model: QSB6.7-G3
- Construction: Adopt forged steel camshaft and crankshaft, High strength cylinder block design, plenty parts cast on the Cylinders, stiffness strong, high pressure resistant capacity, longer service life.
- Advanced design and superior manufacture: Adapt to harsh severe work condition, high strength and has heavy loading work capacity.
- Fuel system: Rotator high pressure fuel pump, lower fuel consumption, and reduce noise effectively.
- 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:  $U_a, U_b, U_c$
- Frequency  $F_1$
- Apparent power  $PR$
- Power factor  $PF$
- Coolant temperature  $WT$
- Temperature  $^{\circ}C$  display
- Oil pressure  $OP$
- Engine speed
- 3 phases current:  $I_a, I_b, I_c$
- Active power  $PA$
- Power factor  $PF$
- Temperature  $^{\circ}C$  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	PDC165A
Prime Rating (kw)	120
Standby Rating (kw)	132
Rate voltage(V)	400
Rate current(A)	217
Power factor	0.8
Frequency(Hz)	50

## Engine

Engine Model	QSB6.7-G3
Gross Engine output-Prime (kw)	151
Gross Engine output-Standby (kw)	166
Bore * stroke (mm)	107*124
Cylinders and structure	6 In line
Displacement(Liter)	6.7
Compression Ratio	17.3:1
Intake way	Turbo Charge, Air-Air Intercool
Max intake resistance (KPa)	6.2
Air intake (m3/h)	608
Max exhaust back pressure (KPa)	10
Exhaust gas flow (m3/h)	1307
Exhaust temp. (°C)	500
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	240
Coolant capacity (L)	30
Highest water temperature(°C)	110
Minimum air opening to room (m2)	1.3/1.1
Thermostat range (°C)	82-95
Max oil temperature (°C)	124
Lubrication system oil capacity (L)	19.5
Rate load fuel consumption(L/H)	38
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
-------	---------------------



Type	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	2579*1038*1657	1734	315
Silent Type	3500*1245*2052	2994	550

**Contact Us**

## Powertec Generator System Inc.

**Add:** Danshui Yanna Industry Zone, Huiyang, Huizhou, Guangdong, China  
**Tel:** +86 752-3911119 / 3911118  
**Fax:** +86 752-3911110  
**Web:** [www.powertec.com.cn](http://www.powertec.com.cn)  
**Email:** [powertec@powertec.com.cn](mailto:powertec@powertec.com.cn)