保达 品质·服务·价值 发电机组 POWERTEC GenSet

DCEC Cummins

POWERTEC Generator Set

Powered by Dongfeng Cummins 4BTA3.9-G11 Engine

Model：PDC90A　Prime Power: 63KW/80KVA　Standby Power: 70KW/90KVA

Genset Fundamental Characteristics

- 230/400VAC，50HZ　0.8PF 3 Phases, 4 wires output
- Frequency drop　≤3%
- Voltage modulation　≤0.3%
- The steady state frequency　≤0.5%
- The steady state voltage deviation　≤±1%
- The transient frequency deviation　≤+10%　≤-15%
- The transient voltage deviation　≤+20%　≤-15%
- Frequency recovery time　≤3S
- Voltage recovery time　≤1S(Voltage±3%)
- THF (Telephone Harmonic Factor)　<3
- TIF (Telephone Influence Factor)　<50
  Comply to Standard NEMA MG1-22.43
- Standard equipped with ambient temperature 40℃
  Connecting radiator
- Inbuilt shock absorber has high performance on shock absorption.
  It's easy to be transported and installed without embedding and
  Fixing rubber shock pad between the genset and ground

Genset Standard Configuration

- Cummins Engine
- Brushless synchronous alternator
- POWERTEC intelligent controller
- 40℃ standard ambient temperature
  Water radiator
- Modularized case circuit breaker（3P）
- Float Battery Charger
- Battery connect wire
- Steel base frame(include shock absorbers)
- Silencer、bellows、exhaust bend
- Manual book and files

Genset Optional Configuration

- 24V Starter Batteries
- Daily Fuel Tank
- Oil-water separator
- Warning function of low water level, low fuel oil
- Automatically monitoring & controlling system of city power
- Coolant heater
- Oil heater
- Heat exchanger--Water cooling Tower System
- Soundproof Canopy/ Trailer
- ISO container
- Design and construction of environmental protection
  Engineering for the Genset room

Performance Description of Diesel Engine

- Model：**Dongfeng Cummins 4BTA3.9-G11**
- Construction：Adopt forged steel camshaft and crankshaft, High strength Cylinder block design, plenty parts cast on the Cylinders, stiffness strong, high pressure resistant capacity is high, longer service life.
- Starting system：24VDC starting motor
- Integrated design: Cylinders、cylinder head together, decreased connection,reduced 40% parts than other same kind engine, failure rate bring down a lot.
- 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.
- Lubrication system: The cylinder sleeve designed by honing on the platform can effectively prevent oil leakage with perfect geometry.
- Engine Operating Environment Description:

  The engine can work under the following conditions without modulating power:

  A. 1800r/min engine--altitude less than 1000m, ambient temperature less than 40 ℃

  B. 1500r/min engine--altitude less than1000m, ambient temperature less than 40 ℃

  If engine operating environment exceed above condition, when altitude is higher than 1500m ,engine power will drop 4% as altitude increase each 300m.When ambient temperature is higher than 40℃(104° F) ,engine power will drop 3% -5% as temperature increase each 11℃(1% droping ,when temperature increase each 10° F) The engine allows continuous operation with a maximum altitude of 4,500m.

Performance Description Alternator

- Optional Alternator: **Stamford / Marathon/ Faraday/Engga/Mecc Alt**
- Brushless, 4 pole rotating magnetic field, single bearing with protective cover.
- Insulation: H Class.
- Standard IP23 grade
- Cooling system
- AC exciter, rotate rectifying unit
- Surface of stator winding is covered with damp-proof epoxy Insulation varnish after impregnation proceeding
- Rotor and exciter is proceeded with high temperature insulating resin, will be more applicable for harsh environment.
- Rotor dynamic balancing comply to standard BS5625,class 2.5
- Sealed with advanced lubricating grease prolongs life of bearing.

Notes: Above data of alternator comes from Stamford. Proper specification is subject to the practice alternator if customers choose other alternator

Standard Detection Function

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

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

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

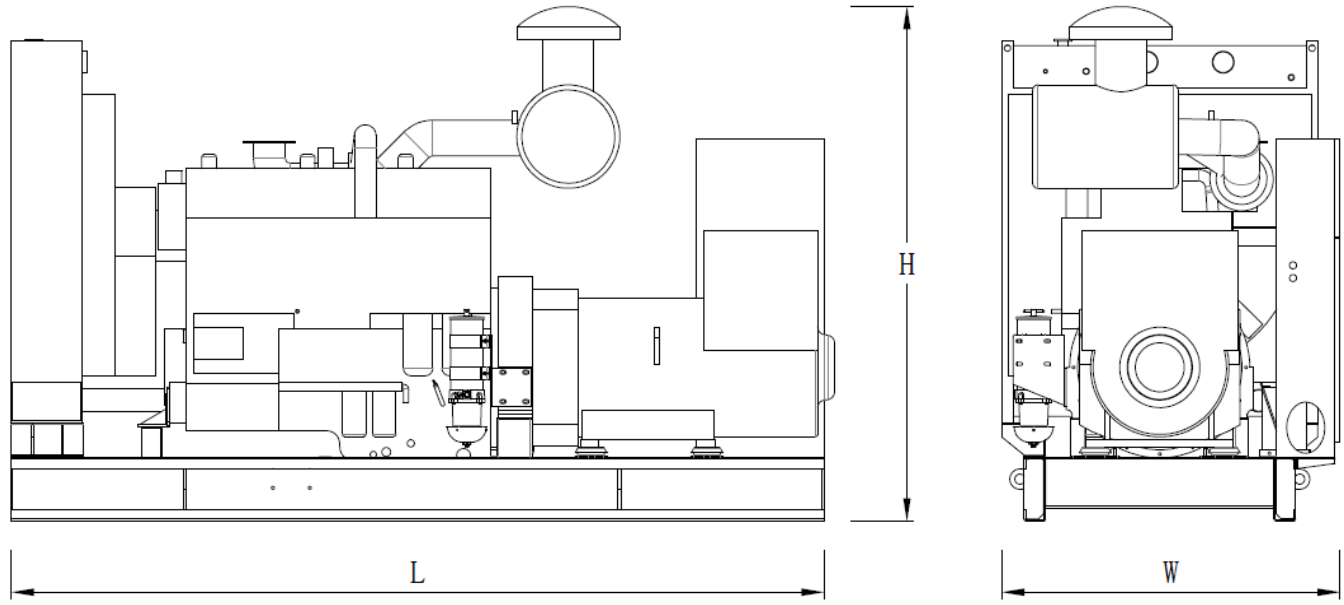
- Control switch—manual/auto/stop/start
- Screen menu selection button
- Setting button
- Fault status indicators
- Emergency stop button
- Digital display

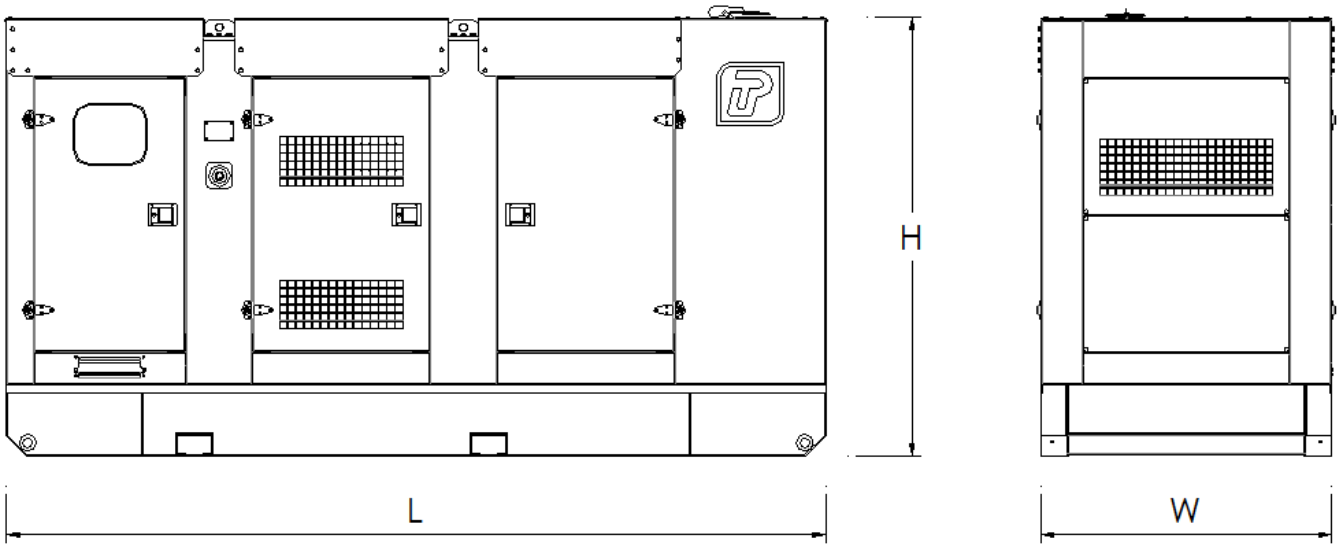
Communication Interface （optional function）

- International standard MODBUS communication protocol with error detection as well as RS232/ RS485 (RS485 is opto-isolated type) has functions of remote control, telemetry and telesignalling, which are facilitate to monitor genset.

Notes: Above data of controller comes from POWERTEC GC6110. Proper specification is subject to customers' practice controller if other controller is selected.

	Model	PDC90A
Genset	Prime Rating (kw)	63
	Standby Rating (kw)	70
	Prime current(A)	114
	Frequency(hz)	50
Engine & Alternator	Engine Model	4BTA3.9-G11
	Gross Engine output-Prime (kw)	70
	Gross Engine output-Standby (kw)	80
	Bore * stroke (mm)	102*120
	Cylinders and structure	4 in line
	Displacement(Liter)	3.9
	Compression Ratio	17.3:1
	Intake way	Turbocharged/ Water-Air intercooler
	Max intake resistance (KPa)	6.2
	Air intake (m3/h)	230
	Max exhaust back pressure (KPa)	10.2
	Exhaust gas flow (m3/h)	450
	Exhaust temp (℃)	526
	Cooling way	Radiator & Fan
	Fan exhaust flow (m3/min)	102
	Coolant capacity (L)	17.9
	Highest water temperature(℃)	100
	Minimum air opening to room (m2)	0.9/0.5
	Thermostat range (℃)	82-95
	Max oil temperature (℃)	121
	Lubrication system oil capacity (L)	11
	Fuel consumption(L/H)	20
	Standard Governor/Class	Electronic
	Optional Alternator Model	Marathon--- MP-64-4 Engga------- EG225-80N Stamford----UCI 224G Faraday----- FD2D1-4
	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 and Model	POWERTEC GC6110





Type	Dimension mm （L*W*H）	Weight KG	Fuel Tank Capacity L
Open Type	2300*835*1385	920	110
Silent Type	2920*1100*1750	1670	400

Notes:： Above data are for reference only. Specific size is subjected to actual measurement.

Contact Way

Powertec Generator System Co., Ltd

Add: Danshui Yanna Industry Zone, Huiyang, Huizhou, Guangdong, China

Tel：0752-3911119 / 0752-3911118

FAX：0752-3911110

Web：www.powertec.com.cn Email：sales@powertecgs.com