POWERTEC
Powertec Generator System Inc.

PDC105A

Prime Power: 76KW/95KVA **Standby Power: 83KW/104KVA** **Voltage: 400V**

Powered by Cummins 4BTA3.9-G13 Engine

Genset Performance

- 230/400V，50Hz, 0.8PF, 3 Phases 4 wires
- Frequency drop ≤3%
- Voltage regulation ≤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
- Built-in vibration isolator with high performance on shock absorption.

Standard Configuration

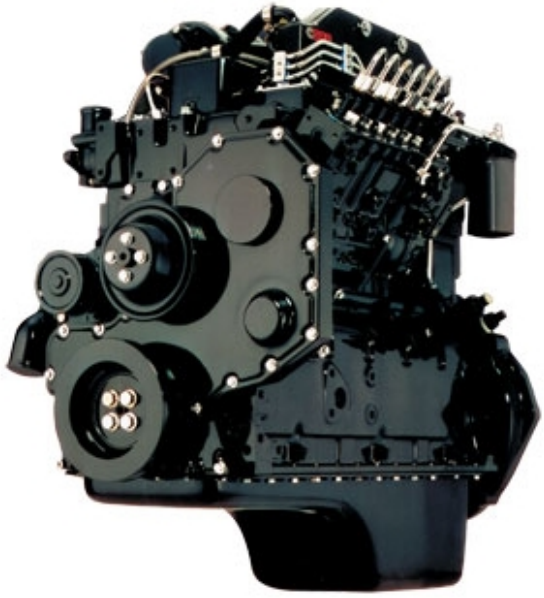
- Cummins Engine
- Brushless synchronous alternator
- POWERTEC intelligent controller
- 40℃ standard ambient temperature （50℃ Optional）
- Circuit breaker（3P）
- Float battery charger
- Battery connect wire
- Steel base frame
- Silencer, bellows, exhaust bend
- Manual book and files

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
- Design and construction of environmental protection engineering for the Genset room

Diesel Engine

- Model: **Cummins 4BTA3.9-G13**
- Structure: Using forged steel camshaft and crankshaft, high-strength cylinder design, many parts are cast on the cylinder, with high rigidity, strong high-pressure resistance and longer service life;
- Integrated design: the cylinder block, cylinder head and other parts are "multi-purpose in one piece", reducing the number of connecting parts; 40% fewer parts than other similar engines, greatly reducing the failure rate .
- Advanced design and sophisticated manufacturing: adaptable to harsh working conditions and strong in high-intensity and heavy-load operation capabilities;
- Fuel system: The rotor high-pressure fuel pump consumes less fuel and effectively reduces noise.
- Lubrication system: The cylinder liner with platform texture honing design has a perfect geometric structure to effectively prevent oil leak;



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 satify tough environment.
- Rotor dynamic balancing complys for BS5625, class 2.5
- Sealed with advanced lubricating grease to prolong life of bearing.

Standard

- 3 phases voltage: Ua, Ub, Uc
- Frequency F1
- Apparent power PR
- Power factor PF
- Coolant temperature WT
- Temperature ℃ display
- Oil pressure OP
- Engine speed
- 3 phases current: La, Lb, Lc
- Active power PA
- Power factor PF
- Temperature ℃ 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

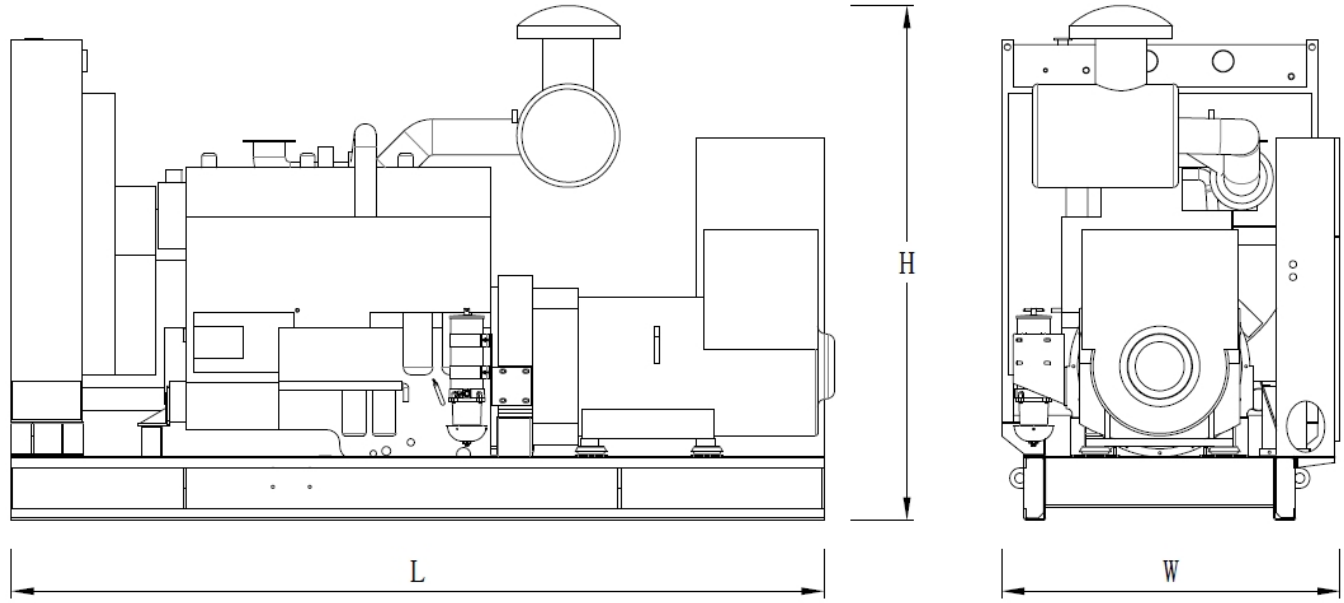
Control System Components

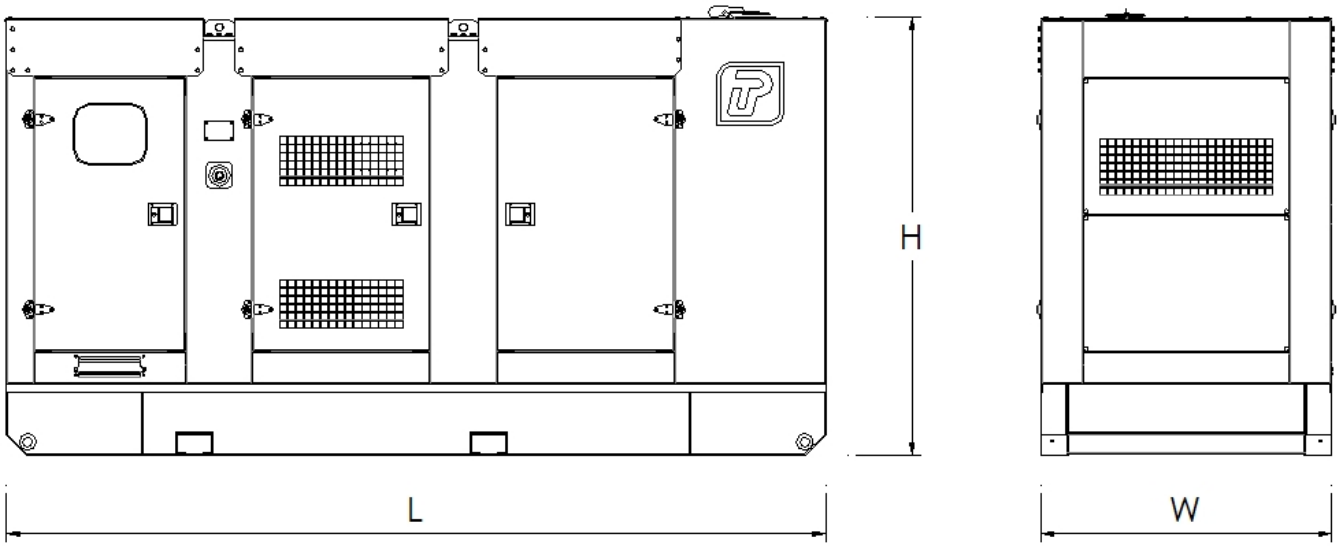
- Manual/auto/stop/start
- Setting button
- Fault status indicators
- Screen menu selection button
- Emergency stop button
- Digital displayer

Communication Interface （Option）

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

Genset	
Model	PDC105A
Prime Rating (kw)	76
Standby Rating (kw)	83
Rate voltage(V)	400
Rate current(A)	137
Power factor	0.8
Frequency(Hz)	50
Engine	
Engine Model	4BTA3.9-G13
Gross Engine output-Prime (kw)	87
Gross Engine output-Standby (kw)	97
Bore * stroke (mm)	102*120
Cylinders and structure	4 In line
Displacement(Liter)	3.9
Compression Ratio	18.0:1
Intake way	Turbocharged/water-Air intercooler
Max intake resistance (KPa)	6.2
Air intake (m3/h)	284
Max exhaust back pressure (KPa)	10
Exhaust gas flow (m3/h)	511
Exhaust temp (℃)	404
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	240
Coolant capacity (L)	22
Highest water temperature(℃)	104
Minimum air opening to room (m2)	1.1/0.9
Thermostat range (℃)	83-95
Max oil temperature (℃)	121
Lubrication system oil capacity (L)	11
Rate load fuel consumption(L/H)	18.8
Standard Governor/Class	Electronic
Alternator	
Rated Voltage(V)	230/400
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





Type	Dimension (mm) （L*W*H）	Weight (kg)	Fuel Tank Capacity (L)
Open Type	2300*835*1385	1080	110
Silent Type	2920*1100*1750	1830	300

Contact Us

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