

# PDC30A

Prime Power: 22KW/28KVA

Standby Power: 24KW/30KVA

Voltage: 400V

Powered by Cummins 4B3.9-G1 Engine

## Genset Performance

- 230/400V, 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)
- 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 4B3.9-G1**
- 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 satisfy 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:  $U_a, U_b, U_c$
- Frequency F1
- Apparent power PR
- Power factor PF
- Coolant temperature WT
- Temperature °C display
- Oil pressure OP
- Engine speed
- 3 phases current:  $I_a, I_b, I_c$
- 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;.

## Genset

Model	PDC30A
Prime Rating (kw)	22
Standby Rating (kw)	24
Rate voltage(V)	400
Rate current(A)	40
Power factor	0.8
Frequency(Hz)	50

## Engine

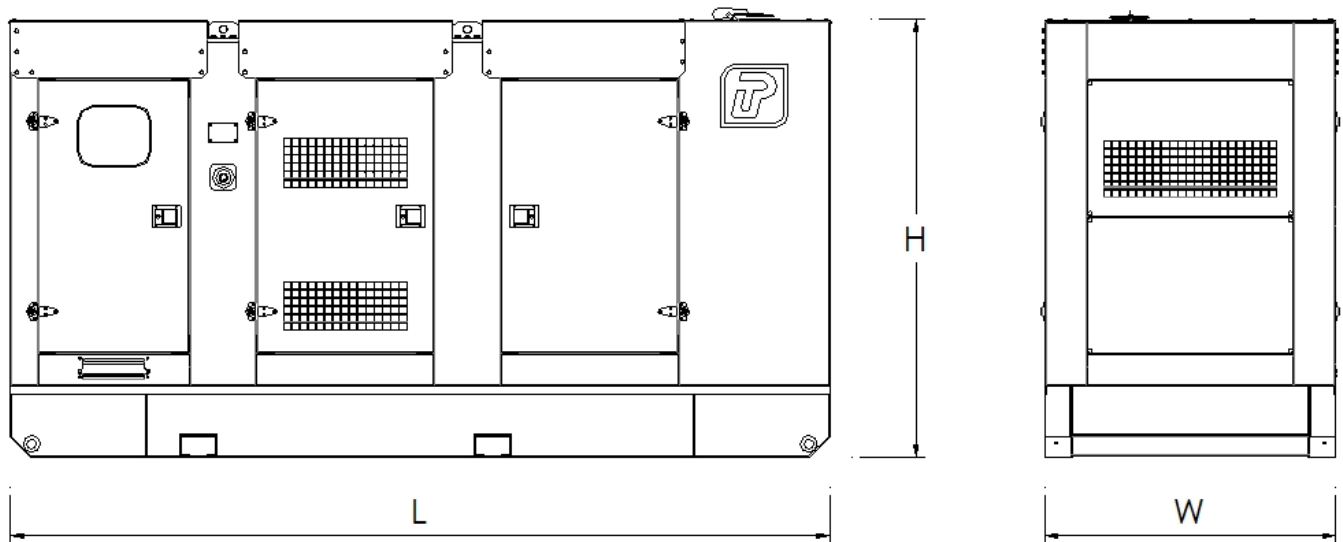
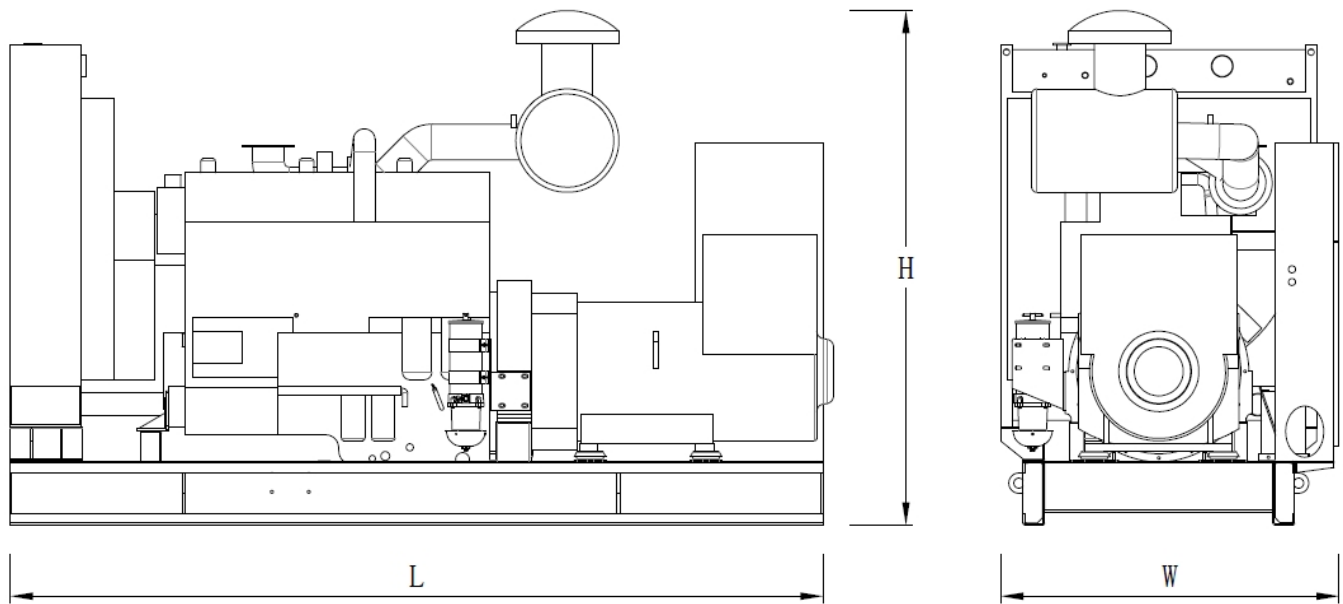
Engine Model	4B3.9-G1
Gross Engine output-Prime (kw)	24
Gross Engine output-Standby (kw)	27
Bore * stroke (mm)	102*120
Cylinders and structure	4 In line
Displacement(Liter)	3.9
Compression Ratio	16.5:1
Intake way	Naturally Aspirated
Max intake resistance (KPa)	5
Air intake (m3/h)	120
Max exhaust back pressure (KPa)	10
Exhaust gas flow (m3/h)	245
Exhaust temp (°C)	410
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	136
Coolant capacity (L)	19
Highest water temperature(°C)	104
Minimum air opening to room (m2)	0.8/0.7
Thermostat range (°C)	82-95
Max oil temperature (°C)	121
Lubrication system oil capacity (L)	11
Rate load fuel consumption(L/H)	7
Standard Governor/Class	Mechanical

## 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)
<b>Open Type</b>	2100*835*1385	744	110
<b>Silent Type</b>	2300*900*1550	1294	160

## 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)