

Widely applied in Telecom, Industry, Rental,
Outdoor Projects, Mining, Military, etc.

POWERink
Power Systems

EP Series PP20S

— Generator Set Specification



NO: DT1222034S- 02

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Super Quiet, Superior Life!





1-Phase, 50Hz@1500RPM

	Voltage	kW	kVA	Amps
Prime Power	220	16	20	90.9
	230	16	20	87.0
	240	16	20	83.3
Standby Power	220	18	22	102.3
	230	18	22	97.8
	240	18	22	93.8
Noise Level at 7 meters (dBA)				60

Notes:

- 1) Ambient reference conditions: 1,000 mbar, 27°C, 30% relative humidity;
- 2) Standby Power: the maximum power available under varying loads. Only for standby and emergency use. No overload is permissible. Prime Power: the maximum power available under varying loads for continuous operation. A 10% overload is permissible for 1 hour every 12 hours.

Features	Benefits
<ul style="list-style-type: none"> Excellent cooling system, reliable operation under harshest conditions. PLC-5220 control panel with AMF function. With sound attenuated enclosures available with high protection against water and dust. Designed with safety in mind earth leakage protection. Leroy Somer Alternator, IP 23 class 'H' insulation. 	<ul style="list-style-type: none"> Function stability credibility, service convenience. Low operating cost results in optimal economy. Gets the job done wherever you are. Ease of installation, operation, and maintenance.

Performance Specification and Craftwork

Performance Specification		Telephone Interference, Electromagnetism	
Efficiency of Rated Power	96.3%	TIF	≤50
Time needed from start-up to full load (inductive)	125 seconds	THF	≤2%
Time needed from start-up to 50% load (inductive) allowed	8 seconds	Radio interference in compliance with BS800 and VED LEVELS G and N.	
1.1 times overload operation time (hour)	1	Craftwork <ul style="list-style-type: none"> Steel base frame with AV mounting standard 8h fuel tank with flexible rubber fuel tube, fuel level indicator and drainage Overall sprayed powder coating Whole set documents, including Installation Manual, Operation Manual, Spare Parts Catalog, Circuit Diagram Criterion <ul style="list-style-type: none"> ISO3046, ISO8528, BS4999, BS5514, BS5000PT99、AS1359, IEC34 UTE5100, VDE0530 ISO9001:2000 	
2.0 time overload operation time (minute)	1		
Voltage Regulation, steady state	≤±1%		
Voltage Regulation, transient state	20%-15%		
Voltage Settle Time	≤5 seconds		
Voltage Fluctuation Ratio	0.5%		
Frequency Regulation, steady state	±0.5% adjustable		
Frequency Regulation, transient state	±5%		
Frequency Settle Time	5 seconds		
Frequency Fluctuation Ratio	0.5%		
Recovery Time	0.5 seconds		

Engine Specification			Alternator Specification	
Brand	Perkins (UK)		Brand	Leroy Somer
Model	404D-22G		Model	LSA42.2L9
No. of Cylinders and Cycle	4L, 4 Stroke		Rated Output (kVA)	24.8
Induction System	NA		Rated current (A)	90.9
Compression Ratio	23.3: 1		Exciter	Brushless
Displacement (L)	2.2		THF(BS EN60034- 1)	<2%
Bore x Stroke(mm)	84 x 100		Bearing number	Single
Ambient Temp (°C)	25		Windings	100% Copper
Continuous Rated Power (kW)	18.4		Connection Type	Star Connection
Speed (rev/min)	1500		Insulation Class	Class H
Cooling Air Flow (L/min)	40.3		Winding Pitch	2/3
Air Intake Flow (m³/min)	1.45		Amortisseur Winding	Full
Exhaust Gas Flow (m³/min)	3.64		A.V.R. Model	R438
Exhaust Gas Temperature outlet (°C)	445		Voltage Regulation (no load- full load)	± 1.0%
Starting System	E		Underspeed Protection	Standard
Battery Voltage/Capacity	12VDC/40A/100		Protection	IP23
Fuel Consumption (L/h)	110% load		Phase Sequence	A(U), B(V), C(W)
	100% load	5.4	TIF (NEMA MG 1-22)	<50
	75% load	4.0	Excitation System	Self-excited, PMG optional
	50% load	2.9	Ambient Temp (°C)	40
Governor Type	Mechanical		Stator Rated Temp (°C)	125

Cooling System			Fuel System	
Radiator			Type of Injection	Indirect injection
Face Area (m²)	0.167		Fuel injection pump	Cassette type
Rows and Materials	2 row, Aluminium		Fuel inject	Pintle nozzle
Width of Matrix (mm)	334.2		Nozzle opening pressure (MPa)	14.7
Height of Matrix (mm)	500		Fuel Lift Pump	
Pressure Cap Setting (kPa)	90		Flow/hour (L/h)	63
			Pressure (kPa)	10
Fan			Governor Type	Mechanical
Diameter (mm)	320			
Drive Ratio	1.15 : 1		Lubricating System	
Number of Blades	7		Lubricating Oil Capacity	
Material	Plastic		Total System (L)	10.6
Type	Pusher		Minimum (L)	8.9
Coolant			Lubricating Oil Pressure	
Total System Capacity	With Radiator (L)	7.0	Relief Valve Open(kPa)	352-448
	Without Radiator (L)	3.6	Normal Oil Temp (°C)	125

Exhaust System		Electrical System	
Max. Back Pressure (kPa)	10.2	Alternator (A/V)	65/12
Exhaust Outlet Size (mm)	42	Starting Motor (kW/V)	2/12

Control System

PLC-702

DSE-702 key manual start module is a manual engine control module designed to control the engine via a key switch and push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine failure.

Standard Control Function

- Manual Engine Control Module
- Low Oil Pressure
- High Engine Temperature
- Auxiliary Shutdown
- Overspeed Protection
- Protection hold-off timer
- Charge Failure warning



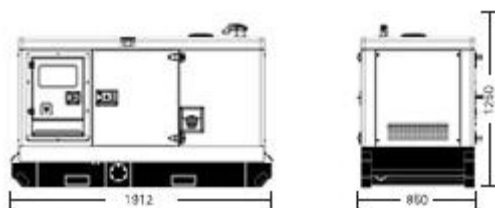
PLC-5220

DSE-5220 control pannel is applied

- I Microprocessor control, with high stability and credibility
- I Mains supply and generator operation monitoring
- I Indicating operation status and fault conditions
- I Multiple protections; multiple parameters display, like pressure, temp.
- I Manual and automatic work mode selectable
- I Real time clock for time and date display, overall runtime display, 99 log entries
- I Overall power output display
- I Integral speed/frequency detecting, telling status of start, rated operation, overspeed
- I Communication with PC via RS485 OR RS232 interface, using MODBUS protocol.



Dimension and Weight



PP20S

Length × Width × Height, (mm)	Weight (kg)
2062×900×1301	985

Optional

Engine	Alternator	Generator Set	Fuel System	Canopy
<ul style="list-style-type: none"> • Coolant heater 	<ul style="list-style-type: none"> • Space heater • AVR PMG with regulator • Anti-damp and anti-corrosion treatment • Anti-condensation heater 	<ul style="list-style-type: none"> • Tools with the machine 	<ul style="list-style-type: none"> • Low fuel level alarm • Automatic fuel feeding system 	<ul style="list-style-type: none"> • Trailer
Lubricating System	Exhaust System	Cooling System	Control Panel	Voltages
<ul style="list-style-type: none"> • Oil with the machine 	<ul style="list-style-type: none"> • Protection board from hotness • Low frequency silencer 	<ul style="list-style-type: none"> • Front heat protection • 50°C radiator • Coolant (-30°C) 	<ul style="list-style-type: none"> • Remote control panel • Automatic paralleling control panel • Automatic Transfer Switch (ATS) 	<ul style="list-style-type: none"> • 415/240V • 400/230V • 380/220V • 220/127V • 200-115V



Air Switch



BGC Paralleling Control System



ATS



Mobile Trailer

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Local Distributor

PP20S



*Specification may change without prior notice.
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