



MULTIPHASE
POWER

Diesel Generator Set

MPL 1650P

Powered By Perkins

50 Hz / 1500 RPM



MULTIPHASE CORPORATION CO., LTD.

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MPL1650P



MODEL	FREQUENCY / RPM	STANDBY POWER	PRIME POWER
MPL1650P Powered by Perkins	50 Hz/1500 RPM	1650 kVA	1500 kVA
		1320 kW	1200 kW

- Model : MPLxxCS – S Suffix for silent type

General Technical Data	
Model	MPL1650P
Engine	Perkins 4012-46TAG2A
Standard Voltage	400/230V
Phase	3 Phase
Stamford Alternator	S7L1D-C4
Leroy Somer Alternator	LSA50.2 L8
Other Alternator	n/a
Speed Control Type	Electronic
Controller Model	DSE7320
Generator Set Fuel Consumption (L/hr)	
Load-Standby Power (110%)	341
Load-Prime Power (100%)	310
Load-Prime Power (75%)	234
Load-Prime Power (50%)	157

Multiphase Power Generators are in conformity with certification ISO 9001/ ISO14001/ISO18001 and our gensets are compliant with CE Standard. Best quality of electricity, high starting and loading capacity according to ISO8528-5. Ambient conditions of reference according to ISO 8528-1:2018 normative: 1000 mbar, 25°C, 30% relative humidity.

Prime Power (PRP):

According to ISO 8528-1:2018, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (PPP) over 24 h of operation shall not exceed 70 % of the PRP.

Emergency Standby Power (ESP):

According to ISO 8528-1:2018, Emergency standby power is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP

Continuous Power (COP):

According to Standard ISO 8528-1:2018, this is the maximum power available for continuous loads for unlimited running hours a year between the maintenance times recommended by the manufacturer under the environmental conditions established by the same.

Generator Set Ratings						
Voltage	Phase	Standby Rating			Prime Rating	
		KVA	KW	AMPS	KVA	KW
415/240v	3	1650	1320	2295.6	1500	1200
400/230v	3	1650	1320	2381.6	1500	1200
380/220v	3	1650	1320	2507.0	1500	1200

Operating Environmental Requirement

- Ambient Temperature : -25°C - 50°C (Heater must be included when in low temperature)
- Humidity: Less than 80%
- Altitude: Up to 1000meters (For higher altitude application, please consult with Our Team)

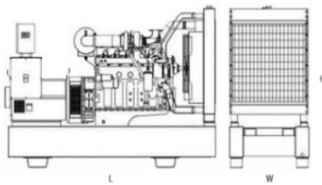
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DIMENSIONS

Weight And Dimensions	Open Type	Silent Type
Length (mm)	5000	12032
Width (mm)	2200	2352
Height (mm)	2600	2690
Net Weight (kg)	9000	17500
Fuel Tank Capacity (L)	n/a	n/a
Running Hours - 100% Load	n/a	n/a



DIESEL ENGINE SPECIFICATION

Manufacturer	Perkins	Engine Design	Standby Power	Prime Power
Engine Model	4012-46TAG2A	Gross Engine Output (KW)	1459	1331
Cylinders No./Arrangement	12 / V-Line	Net Engine Output (KW)	1417	1289
Compression Ratio	13:1	Mean piston speed (m/s)		9.5
Cycle	Four Stroke	Engine Water Flow (L/s)		17
Aspiration Type	Turbocharged	Intake Air Flow (m³/min)	120	100
Bore x Stroke	160x190 mm	Exhaust Gas Flow (m³/min)		320
Displacement	45.842 L	Exhaust Gas Temp (°C)		455

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Diesel Engine Specifications		
Lubrication System	Lubricating oil capacity (L)	177
	Oil pressure at Rated Speed (kPa)	400
	Normal Oil Temperature (°C)	105
Fuel System	Type Injection System	Direct Injection
	Fuel injection pump	n/a
	Maximum fuel flow (L/hr)	1020
	Fuel delivery pump pressure (kPa)	300
	Maximum suction head (m)	2.5
	Governor Type	Electronic
Cooling System	Coolant Capacity - Engine Only (L)	73
	Max. Top Tank Temperature (°C)	98
	Thermostat operation range (°C)	71-85
Electrical System	Alternator	55 amps, 28 volts
	Starter Motor	8.2 kW, 24 volts
	Cold start recommendations to 0 °C (CCA)	810
Exhaust System	Max. Back Pressure (kPa)	5
Industion System	Clean Filter (kPa)	2
	Dirty Filter (kPa)	4
	Air Filter Type	Medium duty axial flow

ALTERNATOR SPECIFICATION

Poles	4
Insulation	Class H
Protection Rating	IP23
Exciter System	Self-Excited, Brushless
AVR Regulatorion Range	±1%
Number Of Bearing	Single Bearing
Coupling System	Flexible Disc
Winding Pitch	2/3
Overspeed Protection	2250 R.P.M.

ALTERNATOR STANDARD FEATURES

- All models are brushless, rotating-field alternators
- Alternator meet the main international standard of IEC 60034, NEMA MG 1.32-33, BS 5000 Part 99, VDE 0530, ISO 8528/3
- The AVR voltage regulator provides superior short circuit capability
- Self-ventilated and dip proof construction
- Superior voltage waveform

Note: See Alternator Data Sheets for application data and ratings, efficiency curves, voltage dip with motor starting curves, and short circuit decrement curves

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CONTROL SYSTEM DATA (DSE7320)



Main Feature

The DSE7320 will also monitor the mains (utility) supply. The modules include USB, RS232 and RS485 ports as well as dedicated DSENet® terminals for system expansion.

Key Function

- 4-Line back-lit LCD text display
- Five key menu navigation
- Front panel editing with PIN protection
- Customisable status screens
- Power save mode
- Support for up to three remote display units
- 9 configurable inputs
- 8 configurable outputs
- Flexible sender inputs
- Configurable timers and alarms
- 3 configurable maintenance alarms
- Multiple date and time scheduler
- Configurable event log (250)
- Integral PLC editor
- Easy access diagnostic page
- CAN and Magnetic Pick-up/Alt. sensing
- Fuel usage monitor and low fuel alarms
- Charge alternator failure alarm
- Manual speed control (on compatible CAN engines)
- Manual fuel pump control
- Power monitoring (kWh, kVAR, kVAh, kVArh)
- Load switching (load shedding and dummy load outputs)
- Automatic load transfer (DSE7320)
- Backed up real time clock
- Start & stop capability via SMS messaging
- USB connectivity
- Tier 4 CAN engine support
- DSENet ® expansion compatible etc.

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OPTIONAL

Genset Optional Specifications

Engine	Water Jacket Pre-Heater
	Oil Pre-Heater
	Fuel-Water Separator
Alternator	Winding and Bearing Temperature Detector (RTD)
	Anti-Condensation Heater (Space Heater)
	PMG / AREP
	Anti-Damp and Anti-Corrosion Treatment
Electrical System	ATS
	Remote Control and Monitoring
	Synchronizing System
	3/5 Pin sockets with RCBO protection
Fuel System	Bunded Double Wall Base Fuel Tank
	Extended To Larger Capacity Base Tank
	Free-stand Daily Fuel Tank
	Automatic Fuel Feeding System
	Fuel T-valves
Canopy	Trailer
	Rental Type Design

Optional Controller Model

ComAp Controller for Single Genset Application	ComAp Nano MRS3
	ComAp AMF20
	ComAp AMF25
ComAp Controller for Multi Genset Application	ComAp IG200
	ComAp IG-NT
Deepsea Controller for Single Genset Application	DSE4520 MKII
	DSE6020 MKII
	DSE7320 MKII / DSE7420MKII
Deepsea Controller for Multi Genset Application	DSE8610 MKII
	DSE8810 MKII

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