



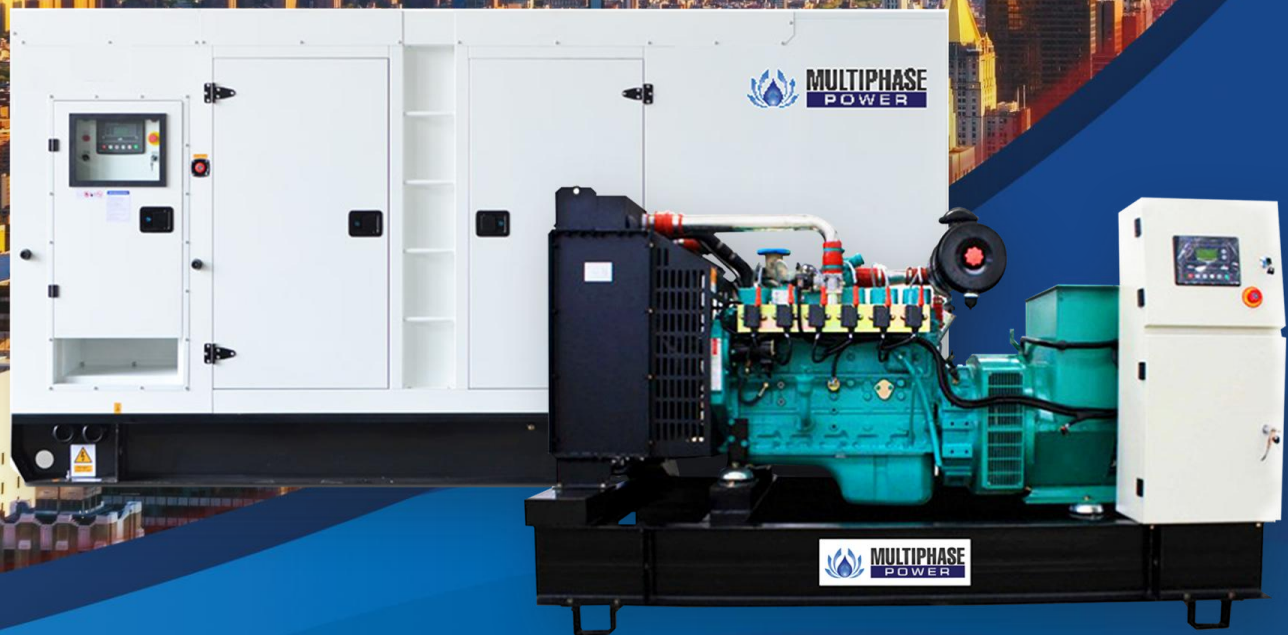
**MULTIPHASE
POWER**

Diesel Generator Set

MPL22C

Powered By Cummins

50 Hz / 1500 RPM



MULTIPHASE CORPORATION CO., LTD.

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MPL22C



MODEL	FREQUENCY / RPM	STANDBY POWER	PRIME POWER
MPL22C Powered by Cummins	50 Hz/1500 RPM	22 kVA	20 kVA
		17.6 kW	16 kW

- Model : MPLxxCS – S Suffix for silent type

General Technical Data	
Model	MPL22C
Engine	Cummins 4B3.9-G11
Standard Voltage	400/230V
Phase	3 Phase
Stamford Alternator	PI144D or SOL2-G1
Leroy Somer Alternator	LSA40M5 or TAL-A40-F
Other Alternator	n/a
Speed Control Type	Electronic
Controller Model	DSE7320
Generator Set Fuel Consumption (L/hr)	
Load-Standby Power (110%)	8.0
Load-Prime Power (100%)	7.4
Load-Prime Power (75%)	6.1
Load-Prime Power (50%)	4.5

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 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	22	17.6	30.6	20	16
400/230v	3	22	17.6	31.8	20	16
380/220v	3	22	17.6	33.4	20	16

Operating Environmental Requirement

- Abmient Temperature: -25°C - 50°C (Heater must be included when in low temperature)
- Himidity: 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)	1700	2250
Width (mm)	930	1080
Height (mm)	1470	1255
Net Weight (kg)	730	1150
Fuel Tank Capacity (L)	130	70
Running Hours - 100% Load	17.6	9.5



DIESEL ENGINE SPECIFICATION

Manufacturer	Cummins	Engine Design	Standby Power	Prime Power
Engine Model	4B3.9-G12	Engine Idle Speed (rpm)	900-1100	900-1100
Cylinders No./Arrangement	4 / In-Line	Gross Engine Output (KW)	30	27
Compression Ratio	18.0:1	Piston Speed (m/s)	6	6
Injection Type	Direct	Engine Water Flow (L/s)	2.2	2.2
Aspiration Type	Naturally Aspirated	Intake Air Flow (L/s)	34.5	34.8
Bore x Stroke	102x120 mm	Exhaust Gas Flow (L/s)	76.5	72.5
Displacement	3.9 L	Exhaust Gas Temp (°C)	420	390

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Diesel Engine Specifications		
Air Intake System	Max. Intake Air Restriction with Heavy Duty Air Cleaner	
	Dirty Element (kPa)	6.2
	Clean Element (kPa)	3.7
Lubrication System	Engine Oil Pressure for Engine Protection Devices	
	Idle Speed (Minimum) (kPa)	207
	Governed Speed (Maximum) (kPa)	345
	Max. Oil Temperature (°C)	121
	Min. Required Lube System Capacity - Sump plus Filters (L)	10.9
Fuel System	Type Injection System	WF A Direct Injection
	Max. Restriction at Lift Pump (kPa)	13.6
	Max. Fuel Inlet Temperature (°C)	70
	Total Drain Flow (constant for all loads) (L/hr)	30
Cooling System	Coolant Capacity - Engine Only (L)	7.2
	Max. Coolant Friction Head External to Engine - 1500 rpm (kPa)	28
	Max. Static Head of Coolant Above Engine Crank Centerline (m)	14
	Standard Thermostat (Modulating) Range (°C)	83-95
	Minimum Pressure Cap	69
	Maximum Top Tank Temperature for Standby / Prime Power (°C)	110/104
Electrical System	Cranking Motor (V)	24
	Battery Charging System (A)	40
	Min. Recommended Battery Capacity – Cold Soak @-18 to 0-C (0° F CCA)	312
Exhaust System	Max. Back Pressure (kPa)	10

ALTERNATOR SPECIFICATION

Poles	4
Insulation	Class H
Protection Rating	IP23
Exciter System	Self-Excited, Brushless
AVR Regulation 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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