



**MULTIPHASE
POWER**

Diesel Generator Set

MPL22XC

Powered By FAWDE

50 Hz / 1500 RPM



MULTIPHASE CORPORATION CO., LTD.

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MPL22XC



MODEL	FREQUENCY / RPM	STANDBY POWER	PRIME POWER
MPL22XC Powered by FAWDE	50 Hz/1500 RPM	22 kVA	20 kVA
		17.6 kW	16 kW

- Model : MPLxxCS – S Suffix for silent type

General Technical Data	
Model	MPL22XC
Engine	FAWDE 4DW91-29D
Standard Voltage	400/230V
Phase	3 Phase
Stamford Alternator	n/a
Leroy Somer Alternator	Leroy Somer TAL-A40-F
Leega Alternator	Leega LA184G16
Speed Control Type	Mechanical
Controller Model	DSE6020
Generator Set Fuel Consumption (L/hr)	
Load-Standby Power (110%)	6.4
Load-Prime Power (100%)	5.9
Load-Prime Power (75%)	4.4
Load-Prime Power (50%)	2.9

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
240v	3	22	17.6	30.6	20	16
230v	3	22	17.6	31.8	20	16
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)

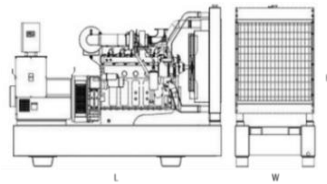
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DIMENSIONS

Weight And Dimensions	Open Type	Silent Type
Length (mm)	1600	2100
Width (mm)	730	860
Height (mm)	1250	1140
Net Weight (kg)	565	780
Fuel Tank Capacity (L)	140	68
Running Hours - 100% Load	23.7	11.5



DIESEL ENGINE SPECIFICATION

Manufacturer	FAWDE	Engine Design	Standby Power	Prime Power
Engine Model	4DW91-29D	Gross Engine Output (KW)	23	21
Cylinders No./Arrangement	4 / In-Line	Fan Power (KW)	1	
Compression Ratio	18:1	Mean Piston Speed (m/s)	-	
Injection Type	Direct	Engine Water Flow (L/min)	42.9	
Aspiration Type	Naturally Aspirated	Intake Air Flow (m³/min)	1.9	
Bore x Stroke	90x100 mm	Exhaust Gas Flow (m³/min)	5.5	
Displacement	2.545 L	Exhaust Gas Temp (°C)	500	

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Diesel Engine Specifications		
Lubrication System	Lubricating oil capacity (with filter) (L)	8
	Lubricating oil consumption (L/h)	0.05
	Oil pressure sensor parameter (MPa)	0.08
	Oil flow at rated speed (L/min)	109
Fuel System	Fuel System	Mechanical Electronic
	Speed regulation rate in steady state	5%/3%
	Average effective pressure (MPa)	0.66
Cooling System	Water pump flow rate-lift (L/s-mH ₂ o)	2257 rpm 60-4.5 m
	Water temperature sensor parameter	97°C ±2°C
Electrical System	Alternator	750W, 14 volts
	Start Motor	3.5KW, 12 volts
	Recommended battery capacity (Ah)	100x2
Exhaust System	Maximum Back Pressure (kPa)	6.7

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 (DSE6020)



Main Feature

The DSE6020 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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