

Model: MBL400(S)-2

Powered by Baudouin



Applicable Standards

- ISO 8528-5:2018
- GB/T2820.5-2009
- CE
- ISO 3046
- ISO 12944 (*SC only)

Environmental Conditions

- Ambient temperature: +5°C~+40°C (Rated Power)
- Maximal ambient temperature: 50°C
- Altitude: ≤1000m
- Anti-dust, anti-corrosion and ultra-silent

*Remark: If your conditions are different from the above, please contact our sales.

Factory Inspection

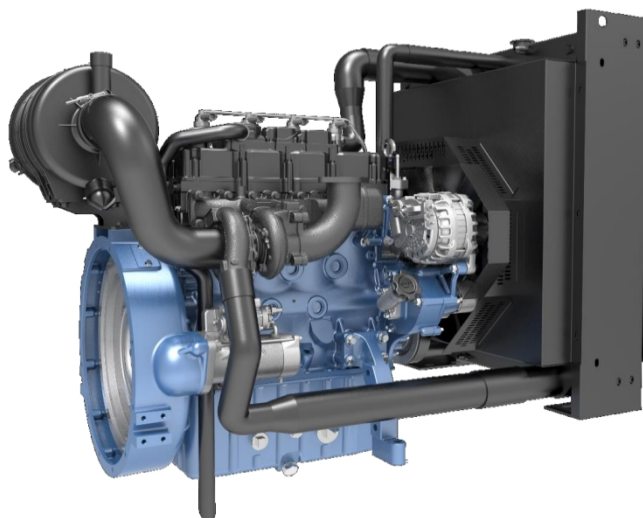
- Complete design and quality inspection
- 0%, 25%, 50%, 75%, 100%, 110% load test
- IP test
- Noise test
- Function test
- Protection test

General Information		Rated Power			
Frequency	Voltage	Prime Power		Standby Power	
Hz	V	kVA	kW	kVA	kW
50Hz	415V/240V	N/A	N/A	N/A	N/A
	400V/230V	N/A	N/A	N/A	N/A
	380V/220V	N/A	N/A	N/A	N/A
	220V/110V	N/A	N/A	N/A	N/A
60Hz Rated	480V/277V	455	364	500	400
	Rated 440V/254V	455	364	500	400
	400V/230V	N/A	N/A	N/A	N/A
	380V/220V	N/A	N/A	N/A	N/A
	220V/127V	N/A	N/A	N/A	N/A
	220V/110V	N/A	N/A	N/A	N/A
Power Factor		0.8 Lagging			
Engine		6M21G400-6			
Rated Speed		1800 RPM (Unchangeable)			
Fuel Type		Grade No. 2D per ASTM D975			
Lube-oil Type		API Service CF Class SAE 15W-40			
Alternator		LYG 314E			
Noise Level		50Hz		60Hz	
Average Value @1m,75%load	OE Series dB(A)	N/A		113.8	
	SR Series dB(A)	N/A		TBA	
Fuel Consumption		50Hz		60Hz	
Load Ration	L/h@110%	N/A		114.3	
	L/h@100%	N/A		100.3	
	L/h@75%	N/A		73.9	
	L/h@50%	N/A		50	
Dimension and Weight		OE Series Open-type		SR Series Silent-type	
Length (L) mm		3280		4000	
Width (W) mm		1150		1385	
Height (H) mm		1730		2010	
Net. Weight (kg)		2950		3700	

Note: Specifications and illustrations are subject to revision without notice.



Engine Specifications



Engine model		6M21G400-6	
Emission	N/A		
Number of cylinders	6		
Cylinder arrangement	Vertical inline		
Cycle	Four stroke		
Aspiration	Turbocharged and Aftercooled		
Bore x Stroke	127 x 165 mm		
Displacement	12.54 L		
Compression ratio	16 : 1		
Gross prime power /speed	N/A kWm/1500 rpm	418 kWm/1800 rpm	
Gross standby power /speed	N/A kWm/1500 rpm	460 kWm/1800 rpm	
Speed governor	ECU		
Cooling system	Liquid (water + 50% antifreeze)		
Steady State Stability Band at any Constant Load	≤ ±0.5%		
Total lubrication system capacity	40 L		
Coolant capacity (engine only)	25 L		
Starter motor	DC 24V		
Charge alternator	DC 24V 70Amps		
☒ Industrial silencer / ☐ Residential silencer / ☐ Critical silencer	☐ Spark arrestor		
☒ Heavy duty air filter / ☐ Single-core air filter	☒ -18°C start up battery / ☐ -45°C start up battery		
☒ Anti-vibration mount	☒ Flexible fuel connection hoses		
☐ Water-fuel separator / ☐ Multi-water-fuel separators	☐ Jacket water heater / ☐ Fuel jacket water heater		
☐ Coolant level sensor	☒ Coolant temperature sensor		
☒ Lube-oil pressure sensor	☐ Lube-oil temperature sensor		
☐ Lube-oil auto refilling meter	☐ Lube-oil auto refilling tank		
☐ Smoke temperature sensor	☐ Lube-oil manual pump		
☒ Replaceable fuel filter, oil filter	☐ Breath box		

Engine Derating Curves

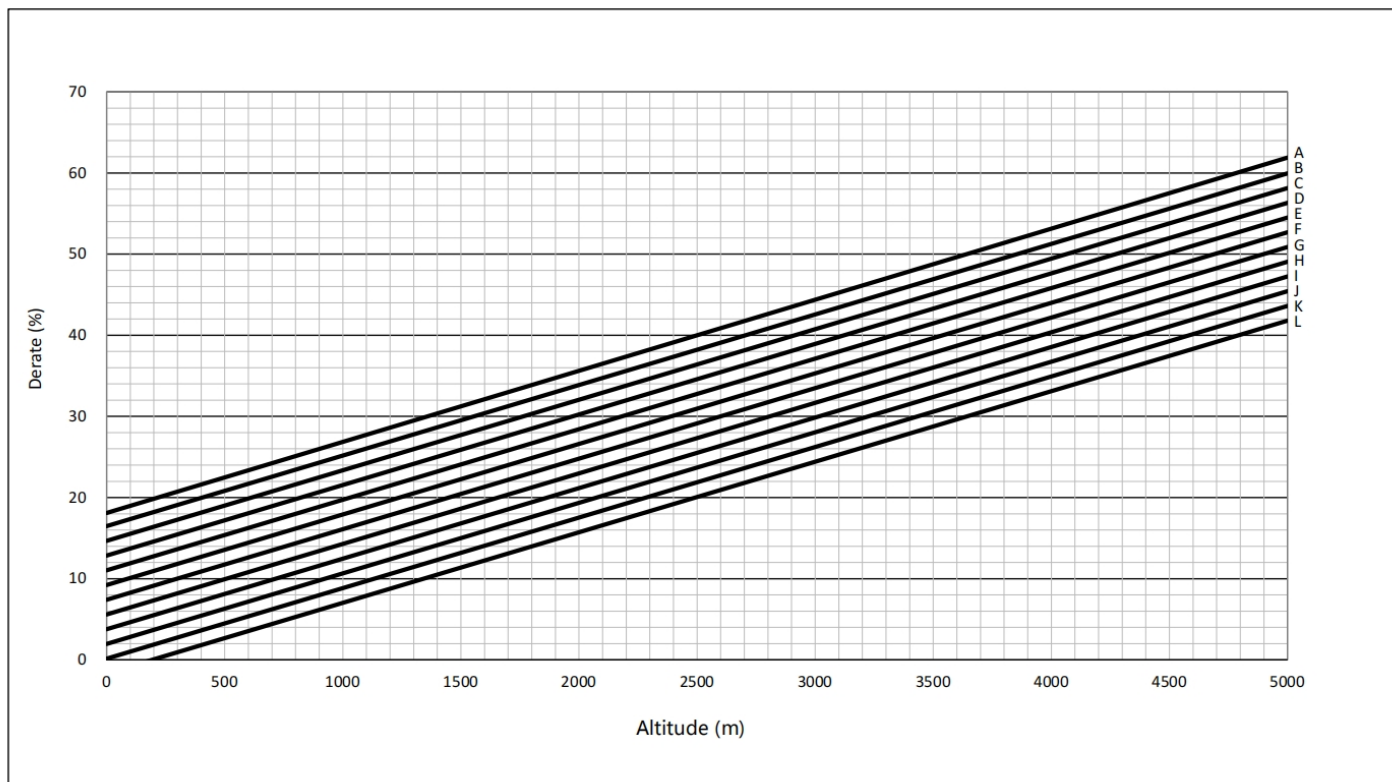
50Hz/1500RPM

N/A

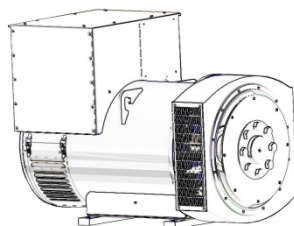
60Hz/1800RPM

Ambient Temperature (°C / °F)

A	B	C	D	E	F	G	H	I	J	K	L
55 / 131	50 / 122	45 / 113	40 / 104	35 / 95	30 / 86	25 / 77	20 / 68	15 / 59	10 / 50	5 / 41	0 / 32



Alternator Specifications



Alternator model	LYG314E-V02
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding leads	6
Insulation level	H class
Temperature rise	H class
Excitation	Brushless
AVR model	KRS440B
Winding Pitch	5/6
IP rating	IP22
Bearing	Single bearing
Voltage regulator	$\pm 1.0\%$

☐Space heater

☐Air filter (5% derating)

☐Anti-harsh environment

☐RTD ☐STD

Alternator Ratings Table

Class-Temp Rise		Cont.H-125/40°C				Standby-163/27°C			
50Hz	Series Star(V)	380	400	415	440	380	400	415	440
	Output(kVA)	400.0	400.0	400.0	400.0	425.0	450.0	440.0	440.0
	Efficiency(%)	93.2	93.4	93.6	93.8	92.8	92.8	93.1	93.4
60Hz	Series Star(V)	416	440	460	480	416	440	460	480
	Output(kVA)	455.0	480.0	500.0	500.0	500.0	530.0	550.0	550.0
	Efficiency(%)	93.4	93.4	93.5	93.7	92.9	92.9	93.0	93.2

De-Rates

All values tabulated above are subject to the following reductions:

- 3% for every 500 meters by which the operating altitude exceeds 1000 meters above mean sea level
- 3% for every 5°C by which the operational ambient temperature exceeds 40°C
- For any other operating conditions impacting the cooling circuit please refer to applications

Note: Requirement for operating in an ambient exceeding 60°C and altitude exceeding 4000 meters must be referred to applications.

Alternator Operating Charts

400V@50Hz

TBA

480V@60Hz

TBA

One-step Load Acceptance

ISO 8528-5	50Hz		60Hz	
	50% sudden power increase	100% sudden power decrease	50% sudden power increase	100% sudden power decrease
Transient frequency difference (%)	TBA	TBA	TBA	TBA
Frequency recovery time (s)	TBA	TBA	TBA	TBA
Transient voltage deviation (%)	TBA	TBA	TBA	TBA
Voltage recovery time (s)	TBA	TBA	TBA	TBA

*All data comes from actual testing and is for reference only.

Control Panel

DSE 4520 MKII

Auto start and auto mains failure control module
(Alternator frequency & can speed sensing)



Key benefits

- Ultimate size to feature ratio.
- Automatically transfers between mains (utility) and generator.
- Hours counter provides accurate information for monitoring and maintenance periods.
- User-friendly set-up and button layout for ease of use.
- Multiple parameters are monitored simultaneously which are clearly displayed on the largest back-lit icon display in its class.
- The module can be configured to suit a wide range of applications.
- Compatible with a wide range of CAN engines including Tier 4.
- IP65 rating (with optional gasket) offers increased resistance to water ingress.

Key features

- Auto Start and AMF mode in one module.
- J1939-75 support and CAN alarm ignore function.
- Alternator frequency & CAN speed sensing in one variant.
- Largest back-lit icon display in its class.
- Heated display option.
- Real time clock provides accurate event logging.
- Fully configurable via the fascia or PC using USB communication.
- Extremely efficient power save mode.
- 3 phase generator sensing.
- 3 phase mains (utility) sensing
- Compatible with 600 V ph to ph nominal systems.
- Generator/load power monitoring (kW, kVA, kVar, PF).
- Accumulated power monitoring (kWh, kVAh, kVarh).
- Generator overload protection.
- Generator/load current monitoring and protection.
- Fuel and start outputs (configurable when using CAN).
- 4 configurable DC outputs.
- 3 configurable analogue/digital inputs
- 4 configurable digital inputs.
- Configurable staged loading outputs.
- 3 engine maintenance alarms.
- Engine speed protection.
- Engine hours counter.
- Engine pre-heat.
- Engine run-time scheduler.
- Engine idle control for starting & stopping.
- Tier 4 engine instrumentation screens.
- Battery voltage monitoring.
- Start on low battery voltage.
- Configurable remote start input.
- 1 alternative configuration.
- Comprehensive warning, electrical trip or shutdown protection upon fault condition.
- LCD alarm indication.
- Event log (50)

Expansion devices

□ N/A

General Arrangement

Main Components



Generator Options

Basement :

- ☐ 6 hours fuel tank
- ☒ 8 hours fuel tank
- ☐ 12 hours fuel tank
- ☐ 24 hours fuel tank
- ☐ Bonded fuel tank
- ☐ Fuel leakage sensor
- ☒ Lifting points
- ☒ Forklift holes

Electrical system :

- ☒ CHINT Breaker / ☐ ABB Breaker / ☐ Schneider Breaker / ☐ Others:
- ☒ Manual breaker / ☐ Motorized breaker
- ☒ 3P Breaker / ☐ 4P Breaker
- ☐ RCD

Silent Generator Only :

- ☒ Galvanized canopy
- ☐ Stainless steel canopy & hardware
- ☒ Sponge materials / ☐ Rock wool with mesh plate
- ☒ IP 21 / ☐ IP 22 / ☐ IP 23

- ☐ Drag holes
- ☒ Expansion joint
- ☐ Quick connector of external fuel pipe & tank
- ☐ Three-way valve
- ☒ Mechanical fuel level gauge
- ☐ Electronic fuel level sensor
- ☒ C-3 painting / ☐ C-4 painting / ☐ C-5 painting
- ☐ Others:

- ☐ MEN
- ☒ External AC charger
- ☐ Socket:
- ☐ Plug:

- ☒ Zinc alloy door lock
- ☒ Zinc alloy hinge
- ☐ Access door for radiator
- ☐ Aluminum canopy



MPMC POWERTECH CORP.

sales@mpmc-china.com | www.mpmc-china.com



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*All information in this document is substantially correct at time of printing and may be altered subsequently. Final weight and dimensions will depend on completed specification.