

## Model: MC20(S)-1

Powered by Cummins



### Applicable Standards

- ISO 8528-5:2018
- GB/T2820.5-2009
- CE

### Environmental Conditions

- Ambient temperature: +5°C~+40°C
  - Altitude: ≤1000m
- Remark: If your conditions are different from the above, please contact our sales.

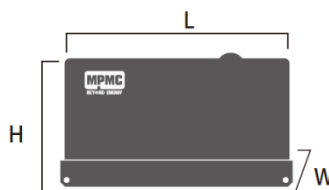
### Factory Inspection

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

### Painting Process

- MPMC has the most advanced automatic spraying / powder coating production line, and is equipped with various sandblasting equipment to ensure higher quality.
- Canopy painting: Henkel pretreatment process and world famous brand AkzoNobel powder.
- Base Frame painting: Sandblasting process and AkzoNobel powder (Hempel paint is optional).

General Information		Prime power	Standby power
Rated Power (kVA)		20	22
Power Rating (kW)		16	18
Frequency (Hz)		50	
Engine Model		4B3.9-G11	
Engine Speed (RPM)		1500	
Phase		3	
PF		0.8	
Control System		Digital	
Rated voltage (V)		400/230 (According to customer requirements)	
Fuel tank capacity operating time		≥ 8h @ 75% load	
Fuel Consumption (L/h)	110% load	6.1	
	100% load	5.7	
	75% load	4.6	
	50% load	3.7	



### Dimension and Weight

Model	MC20-1 Open type	MC20S-1 Silent type
Length (L) mm	1910	2600
Width (W) mm	775	1130
Height (H) mm	1400	1537
Dry weight (kg)	754	1350
Tank capacity (L)	156	180
The loading capacity (40'HC)	18 units	9 units

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



## Engine Specifications

Engine model & manufacturer		4B3.9-G11 (Cummins)
Emission Certification		—
Number of cylinders		4
Cylinder arrangement		In-line
Cycle		Four stroke
Aspiration		Naturally aspirated
Bore x Stroke		102 x 120 mm
Displacement		3.9 L
Compression ratio		18.0: 1
Prime power /speed		20 kW/1500 rpm
Standby power /speed		22 kW/1500 rpm
Speed governor		Mechanical
Cooling system		Forced Water Cooling Cycle
Frequency droop		≤ 5%
Total lubrication system capacity		10.9 L
Coolant capacity (engine only)		7.2 L
Fuel consumption	100% load	236 g/kWh @1500 rpm
Starter motor		DC 24V
Charge alternator		DC 24V

- Heavy duty diesel engine
- Anti-vibration mount
- Replaceable fuel filter, oil filter & air filter
- Cooling radiator and fan
- Starter battery (with lead acid) including rack and cables
- Flexible fuel connection hoses
- Exhaust silencer and bellows
- Operation manuals and circuit diagram documents

## Alternator Specifications

Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Bearing	Single bearing
Voltage regulator	A.V.R
Coupling	Flexible disc

## 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)

## Options

Engine	Alternator	Fuel System	Generating Set
<input type="checkbox"/> Water Jacket Preheater <input type="checkbox"/> Oil Preheater <input type="checkbox"/> Oil manual pump	<input type="checkbox"/> PMG excitation <input type="checkbox"/> Space heater <input type="checkbox"/> Winding temperature measuring	<input type="checkbox"/> 12 / 24 hour base tank <input type="checkbox"/> Bunded fuel tank <input type="checkbox"/> External fuel tank <input type="checkbox"/> Automatic fuel feeding <input type="checkbox"/> Switch between external tank and base tank (three-way valve)	<input type="checkbox"/> Deepsea, ComAp, Smartgen etc. controller <input type="checkbox"/> Trailer <input type="checkbox"/> Tools with the machine



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