

RPM1500 50Hz

Rating Range

Standby:	kW	400
	kVA	500
Prime:	kW	360
	kVA	450



STANDARD FEATURES AND CHARACTERISTICS

QUALITY STANDARDS

- 👁️ All generators comply with international design and quality standards, such as ISO8528 (GB/T2820-97), ISO3046,BS.EN60034, BS5000, IEC34-1, GB755, VDE0530, CSA22-2, AS1359, as well as the requirements of ISO 9001 and ISO14001.
- 👁️ CE certificate for the alternator.
- 👁️ Diesel engine and alternator OEM authorization certificate and their quality assurance.
- 👁️ Other standards and certifications can be considered on request.

ASSEMBLY

- 👁️ The engine and alternator are close coupled by means of an SAE flange . A full torsional analysis has been carried Out to guarantee no harmful vibration will occur.
- 👁️ Anti-vibration pads are affixed between engine alternator feet and the base frame. Thus ensuring complete Vibration isolation of the rotating assemblies and enabling the machine to be placed on an uneven surface without any detrimental effects.
- 👁️ For durability and corrosion resistance, all iron and steel surfaces of canopy fabrications have been treated for coating by grit blast cleaning. Then covered by special three layers painting which provides an excellent corrosion resistant surface.

CONTROL SYSTEM AND PROTECTION

- 👁️ Controllers are available for all applications. It contains Deep Sea, Delf, Comap or other famous brands. According to their different functions, the control systems can be specified into key start controller model, automatic start control model and PCRC three remote control systems. See controller features inside.

WARRANTY

- 👁️ SUPERWATT Company provides one-source responsibility for the generator set and accessories. Each SUPERWATT generating set has been got through 1.5 hours Load test for running 0%,25%,50%,75%,100% and 110% load, all protective devices and control function are simulated and checked before despatch.
- 👁️ Engine and Alternator are guaranteed for a period of 12months from the date of commissioning or 18 months from shipping, whichever occurs first.
- 👁️ Convenience for operation and maintenance, backed by MTU global service network.

Prime power(P)

These ratings are applicable for supplying continuous electrical power(at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% over-load power for 1 hour in 12 hours.

Standby power(S)

Standby power is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500h of operation per year.

SUPERWATT POWER

● Engine Model 10V1600G10F

BASIC TECHNICAL DATA

Manufacturer	MTU
Number of cylinders	10
Cylinder configuration:	V angle 90°
Bore(mm)	122
Stroke(mm)	150
Displacement total(L)	17,5
Compression ratio	17,5
Engine weight dry(kg)	1694

CONSUMPTION

Specific fuel consumption (be)(g/kWh)	
100 %CP	210
75 %CP	214
50 %CP	220
25 %CP	234
FSP	N.A

COOLING SYSTEM

Coolant temperature(°C)	95
Coolant temperature after engine Alarm(°C)	105
Shut down(°C)	109
Coolant antifreeze content, max.(%)	50
Coolant pump: inlet pressure, min/max.(bar)	1,4 / 3,5
Cooling equipmentcoolant flow rate(m³/h)	23,3
height above engine, max(m)	15
operating pressure(bar)	N.A

TECHNICAL DATA

Engine speed(rpm)	1500
Mean piston speed(m/s)	7.5
Continuous power(kW)	407
Fuel stop power(kW)	448
Mean effective pressure (MEP)(bar)	18,6
High idling speed, max. (static)(rpm)	1560
Limit speed for overspeed alarm(rpm)	1800

STARTING

Starter, rated power(kW)	8
Starter, power requirement max.(A)	800
Starter(V)	24
Starter, power requirement at firing speed(A)	250
Start attempt duration, max.(s)	10

GENERAL CONDITIONS

Intake air depression(new filter)(mbar)	15
Intake air depression max.(mbar)	50
Exhaust back pressure(mbar)	30
Exhaust back pressure max. (mbar)	150
Fuel temperature at fuel feed connection(°C)	38

COMBUSTION AIR / EXHAUST GAS

Charge-air pressure before cylinder - CP(bar abs)	2,65
Charge-air pressure before cylinder - FSP(bar abs)	2,92
Combustion air volume flow - CP(m³/s)	0,46
Combustion air volume flow - FSP(m³/s)	0,50
Exhaust volume flow - CP(m³/s)	1,44
Exhaust volume flow - FSP(m³/s)	1,61
Exhaust temperature after turbocharger - CP(°C)	548
Exhaust temperature after turbocharger - FSP(°C)	540

NOTE:

All data is based on:

- Engine operating with fuel system, water pump, lubricating oil pump, air cleaner and exhaust silencer; not included are battery charging alternator, fan, and optional driven components.
- Engine operating with fuel corresponding to grade No. 2-D per ASTM D975.
- ISO 3046, Part 1, Standard Reference Conditions of:
 - Barometric Pressure : 100 kPa (29.53 in Hg)
 - Air Temperature : 25°C (77°F)
 - Altitude : 110 m (361 ft)
 - Relative Humidity : 30%
 - Air Intake Restriction : 254 mm H₂O (10 in H₂O)
 - Exhaust Restriction : 51 mm Hg (2 in Hg)

N/A: Not Available

TBD: To Be Determined

CP: Continuous power

FSP: Fuel stop power

FUEL SYSTEM

Fuel pressure at fuel feed connection-min, (bar)	- 0.5
Fuel pressure at fuel feed connection- max, (bar)	0.5
Fuel supply flow, max.(liter/min)	5,7
Fuel return flow, max.(liter/min)	5,5
Fuel pressure at return connection on-engine, max.(bar)	<0,4

Alternator manufacturer	Stamford/Meccalte/Leroy-somer
Frequency and Speed	50Hz/1500rpm
Voltage (V)	400
Prime capacity(kVA)	450
Prime power(kW)	360
Power efficiency(%)	94,4
Voltage regulation	± 0.5%
Rated power factor	0.8
winding type	P2/3
Overspeed(rpm)	2250
Sustained short circuit	300%(3IN):20S
Protection class	IP23

Alternators meet the requirement of BS EN 60034 and the relevant section of other international standards such as BS5000, VDE 0530, NEMA MG1-32, IEC34, CSAC22.2-100, As1359, and other standards and certifications can be considered on request.

The 2/3 pitch design avoids excessive neutral currents. With the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.

Brushless alternator with brushless pilot exciter for excellent load response.

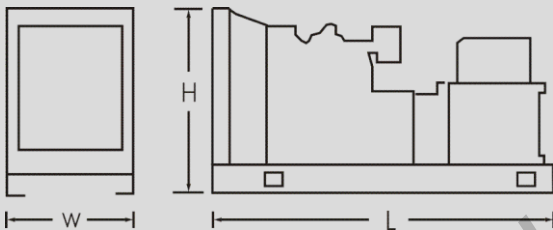
The insulation system is class H, easy paralleling with mains or other generators, standard 2/3 pitch stator windings avoid excessive neutral currents.

Backed by worldwide service network.

Dimensions and Weights

OPEN STYLE

Overall Size, L×W×H,mm 3315×1450×1750
 Weight(radiator model),net,kg 3711



EDEN STYLE

Overall Size, L×W×H,mm 4930×1600×2280
 Weight(radiator model),net,kg 5409



EVER-O STYLE

Overall Size, L×W×H,mm 4600×1600×2280
 Weight(radiator model),net,kg 5309



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

Control System:

The DSE6120 Auto Mains (Utility) Failure Control Module are suitable for a wide variety of single gen-set applications.

Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level, the modules give comprehensive engine and alternator protection. This is indicated on a large back-lit LCD text display via an array of warning, electrical trip and shutdown alarms in multiple languages.

Electronic J1939 (CAN) and non-electronic MPU and alternator sensing engine support for diesel, gas and petrol engines all in one variant. With a number of flexible inputs, outputs and protections, the modules can be easily adapted to suit a wide range of applications.

Through USB Communication both modules can be configured using the DSE Configuration Suite PC Software or through the module's front panel editor.

Using the DSE Configuration Suite PC Software the controller is easy to use and configure which allows alteration of operating parameters, sequences, timers and alarms.

Key Benefits:

Automatically transfers between mains (utility) and generator

Increased input and output expansion capability via DSENet®

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 a large back-lit text display via multiple languages

The module can be configured to suit a wide range of Applications

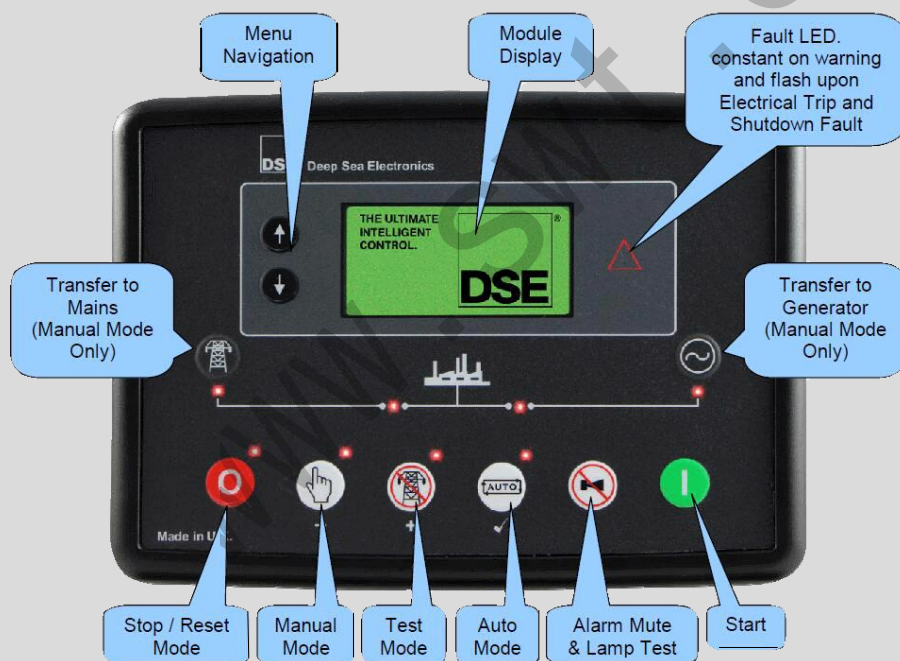
Compatible with a wide range of CAN engines including Tier 4

Uses DSE Configuration Suite PC Software for simplified configuration

Licence-free PC software

IP65 rating (with optional gasket) offers increased resistance to water ingress

Description For Module DSE6120:



Standard functions	Shutdown	Warning
Engine Control	Loss of Speed Signal	Alternator Under / Over Voltage
Generator Monitoring	Alternator Under / Over Voltage	Alternator Under/ Over Frequency
Generator Protection	Alternator Under/ Over Frequency	Mains Under / Over Voltage
Engine Monitoring	Mains Under / Over Voltage	Mains Under/ Over Frequency
Clear Text Display	Mains Under/ Over Frequency	Under / Over Speed
	Under / Over Speed	Low Oil Pressure Pre-Alarm
	Low Oil Pressure	High Engine Temperature Pre-Alarm
	High Engine Temperature	High/Low Battery Voltage
	Phase Sequence Electrical (Option)	Over-current
	Earth Fault (Option)	Periodic maintenance