The Reliable Supplier for Power System Solution
Mutual Benefit & Mutual Trust

DIESEL GENERATOR SETS

SP Series Powered by Perkins Engines

SP-60 50Hz

Output Ratings

3-Phase , 50Hz , 1500RPM		
Output	Prime Power	Standby Power
	60 kva / 48 kw	66 kva / 53 kw

Voltage (V)	Frequency (Hz)	Current (A)	Power Factor
400/230V	50	86.7	0.8

Performance Data

Engine Brand & Model		Perkins & 1103A-33TG2
Alternator Brand & Model		Leroy Somer & TAL-042-H
Control System		Deepsea & DSE6020MKII
Circuit Breaker Type (Standard)		3 Pole MCCB
Base fuel tank (L)		160
Fuel Consumption (l/hr)	Standby	18.2
	Prime	16.6
	75% Load	12.5
	50% Load	8.8
Weight (KGS)		720
Dimension (Open)		1600 x 850 x 1050 (mm)

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Engine Brand / Model & Perkins / 1103A-33TG2

Model	PERKINS 1103A-33TG2
Frequency (Hz)	50
Rated Speed (RPM)	1500
Prime Power (KW)	55
Standby Power (KW)	60.5
Engine structure	4 Stroke/Turbocharged
Cylinder/Arrangement	3/Vertical in line
Bore * stroke (mm)	105 × 127
Displacement(L)	3.3
Compression ratio	17.25:1
Starting mode	Electric start
Fuel injection mode	Direct injection
Speed regulation	Mechanical
Fuel consumption(L/h)	16.6
Cooling mode	Water cooling
Fan power	1.2
Exhaust air volume (m3/min)	88.98
Gas quantity (m3/min)	3.8
Exhaust backpressure(kPa)	10
Exhaust temperature(°C)	557
Smoke emission (m3/min)	10.1
Oil system capacity(L)	8.3
Coolant capacity(L)	10.2
Weight (KGS)	420

The ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1, AS2789.

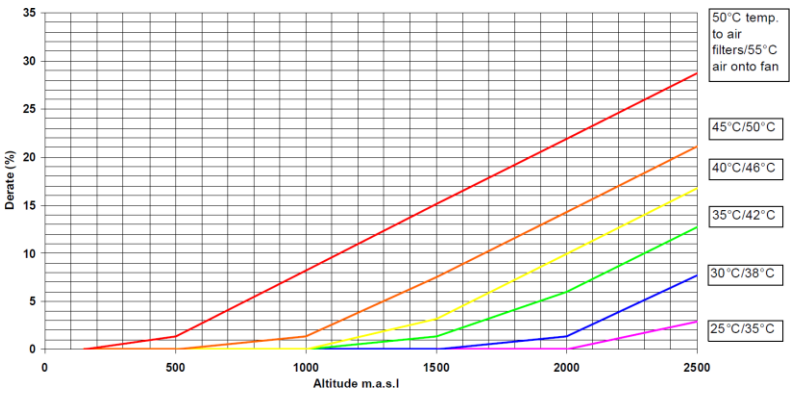
Ratings conditions: 25ºC air inlet temperature, barometer pressure 100 kPa, relative humidity 30%.

Continuous Power: Power available at a constant electrical load for unlimited hours.

Prime power: Power available for variable load with an average load factor not exceeding 80% of the prime power rating in any 24 hour period. Overload of 10% permitted for 1 hour in every 12 hours operation.

Standby (maximum): Power available at variable load in the event of a main power network failure up to a maximum of 500 hours per year. No overload is permitted.

Power deratings: Shown by following derating curve:



Alternator Brand / Model & Leroy Somer / TAL-042-H

Alternator	Leroy Somer TAL-042-H
Prime Power (KW)	50.4
Standby Power (KW)	56
Rated Voltage (V)	400/230
Frequency (Hz)	50
Rated Speed (RPM)	1500
Power factor	0.8
Phase and Connection Type	Three phase, Y type
Number of Wire	6
Efficiency (%)	88.6
Excitation mode	Brushless excitation
Voltage Regulation	AVR, R120
Insulation Grade	H
Temperature Rise Grade	H
Protection Grade	IP23
Weight (KGS)	187

Ratings conditions

- Continuous rating S1/40°C - IEC 60034-1 definition

Running at constant load limited to the insulation class; permissible overload 1 hour every 12 hours.

- Stand-by rating 40°C

Running at constant load **without** overload, for a limited duration of maximum 500h/year, with a permissible increase of the temperature rise above class H.

- Stand-by rating 27°C

Same conditions as stand-by rating 40°C but with a lower acceptable ambient temperature (27°C) that allows to increase the rating and the temperature rise for the same level of temperature in the alternator.

ex: **S1/40°C = 100 kW - std by/40°C = 105 kW - std by/27°C = 110 Kw**

Power deratings: Shown by following chart:

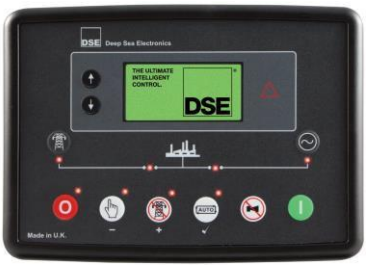
Altitude (m)	1000	1500	2000	2500	3000	3500	4000
Derating factor	1	0.975	0.949	0.922	0.894	0.866	0.837

Ambient T °C	25	40	45	50	55	60 (*)
Class H	1.076	1	0.973	0.946	0.918	0.889
Class F	1.095	1	0.966	0.931	0.894	0.856
Class B	1.140	1	0.949	0.894	0.837	0.775

(*) External AVR if ≥ 56 °C

Lagging PF	0.6	0.7	0.8	0.9	1
Derating factor	0.86	0.93	1	1	1

Control System Brand / Model & DeepSea / DSE6020MKII

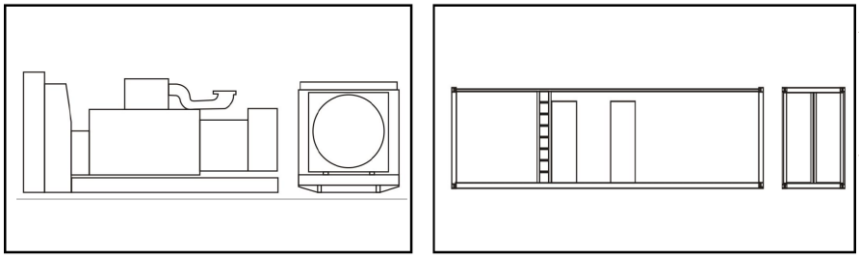


Frequency range	3.5Hz to 75Hz
Voltage range	+/- 0.5 V to 70 V
Heated display variant	-40 °C to +70 °C
Storage temperature range	-40°C to +85°C
Operating temperature range	-30°C to +70°C
Maximum panel thickness	8mm
Dimension	216mm*158mm*43mm

• Automatically transfers between mains (utility) and generator (DSE6020 MKII only)
• 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 icon display
• The module can be configured to suit a wide range of applications
• Compatible with a wide range of CAN engines, including tier 4 engine support
• Uses DSE Configuration Suite PC Software for simplified configuration
• Licence-free PC software
• IP65 rating (with optional gasket) offers increased resistance to water ingress
• Large back-lit icon display
• Heated display option available
• Fully configurable via the fascia or PC using USB communication
• Efficient power save mode
• 3 phase generator sensing
• 3 phase mains (utility) sensing (DSE6020 MKII only)
• Generator/load power monitoring (kW, kV A, kV Ar, pf)
• Accumulated power monitoring (kW h, kVA h, kVAr h)
• Generator overload protection (kW)
• Generator/load current monitoring and protection
• Breaker control via fascia buttons
• Fuel and start outputs, configurable when using CAN
• 4 configurable DC outputs
• 4 configurable analogue/digital inputs
• 6 configurable digital inputs
• Support for 0-10 V & 4-20 mA oil pressure sensors
• Configurable staged loading outputs
• CAN, MPU and alternator speed sensing in one variant
• 3 engine maintenance alarms
• Engine speed protection
• Engine hours counter
• Engine pre-heat
• Engine run-time scheduler
• Engine idle control for starting & stopping
• Fuel pump control
• Real time clock
• 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 and LED alarm indication
• Configurable event log (50)RS485 communication ports
• True dual mutual standby using RS232 or RS485 for accurate engine hours balancing.
• MODBUS RTU support with configurable MODBUS pages.
• Advanced SMS messaging (additional external modem required)
• Start & stop capability via SMS messaging
• 3 configurable maintenance alarms
• Compatible with a wide range of CAN engines, including tier 4 engine support
• Uses DSE Configuration Suite PC Software for simplified configuration
• License-free PC software
• IP65 rating (with supplied gasket) offers increased resistance to water ingress
• Modules can be integrated into building management systems (BMS) using MODBUS RTU.

BLUE FLAG

Soundproof Canopy



＊ Drawings above are only for reference. The actual size and weight are subject to the final design drawings. Lengths may vary with voltages. Do not use for installation design.

Dimension (Silent)	2250 x 1100 x 1200 mm
Net Weight (Silent)	1250 KGS
Gross Weight (Silent)	1280 KGS

＊Weights and dimensions are based on the container power units and are estimates only. Please consult your supplier for the accurate weights and dimensions of your specific engine-generator set.

Robust Canopy Design Security and Safety

▲ 4mm-6mm steel base

▲ Control panel viewing window in a lockable access door

▲ Transportation support legs

▲ Emergency stop button mounted on canopy exterior durable paint system

▲ Fuel fill and battery can only be reached via window access

▲ Full bunded steel floor and steel louvres lockable access doors

▲ Rugged surface - excellent corrosion & rust protection

▲ Electrostatic powder painting

▲ Long service life

▲ Exhaust silencing system enclosed for operator safety (residential silencer included)

Excellent Access for Maintenance

▲ Excellent cooling system to avoid high water temp.

▲ Separate & Standing control cabinet at one side

▲ Walk around interior with access doors

▲ Fully bunded steel floor

▲ Anti-explosive light bulb

Optional:

△Sockets

△ Floor Standing MCCB/ACB (＞1250Amp)

△ Interior Separate fuel tank volume (100–2000L/depends)

△ Automatic fuel fill-in & cut off system

△ Exterior Separate fuel tank volume

△ 20ft or 40ft ISO & CSC certified container

△ Other features can be added upon request.

Noise Level: ≤ 65-67dBA at 7m.

Design Standard

Equipment and accessories according with following criteria, but not limited to:

1. IEC34-1, GB755, GB1105, GB1859, GB2820. GB2423.4, GB2423.16, GB3907, GN5320, GB12699, ZBJ91005.
2. CE, SGS, CNAS, TLC certification is standard
3. UL, CSA certification available upon request

Equipment operational environment standard and performance:

1. Altitude ≤ 1000m
2. Ambient temperature: 40℃
3. Relative humidity: ≤ 60%
4. Prime Power-Continuous duty operation, under variable load 24/24h- 10% overload permissible 1 hour/12hours

Documents

• Engine parts manual and original data • Alternator original data • Controller system original data • Generator set factory test report	• Generator set maintenance record manual • Generator set instruction manual • Generator combination certificate

Optional

Engine	Control System
• Water heater • Electrothermic water heater • Fuel heater • Oil heater • Secondary silencer • Fuel-Water separator • Heavy duty air filter • Synchronized ports • Software	• Compartment operation remote control system with three remote control screens • Auto Transfer Switch • Synchronized control system • Centralized monitoring • CoMap controller • Woodward controller • 4 poles MCCB or ACB • MCCB with electric operation
Alternator	**Others**
• Anti condensation heater • Permanent magnet generator (PMG) • Drop CT(Paralleling) • Other alternator temperature rise level • Stator winding temperature sensor RTD • Bearing temperature sensor RTD • Air filter • Space heater • DVR • Two bearings • 12 Windings	• Separate fuel Tank • Buried storage tank • Fully automatic oil supply system • Remote water tank • Waterproof Type genset • Trailer Type genset • Soundproof Type genset • Open Type genset • Super-silent Type genset • Anti-corrosive Zinc canopy

Service Commitment

- The products provided are all new products. Each genset undergoes strict factory inspection.
- Products come with standard manufacturer's warranties, the period is 36 months after delivery or 3000 hours accumulated running time, whichever comes first.
- The services and accessories of products can be obtained from the after-sales service department (+964 7811088999, https://blue-flag-co.iq).