

Model:10EPTL

190V-440V3P4W

RPM1500 50Hz

Rating Range

| | | |
|-------------------|-----|----|
| Emergency: | kW | 12 |
| | Kva | 14 |
| prime: | kW | 10 |
| | Kva | 12 |



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 diesel engine and 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 PROTECTIO

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

Hangzhou Perfect Total Machinery Co.,Ltd.provides one-source responsibility for the generator set and accessories. Eachgenerator has been got through 1 hour 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 LAIDONG 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.

Emergency power(E)

There ratings are applicable for supplying continuous electrical power in the event of a utility power failure, up to a maximum of 200 hours per year. No overload is permitted on these ratings. Exceeding 200 hours operation per year may result in a reduced product life.



DIESEL ENGINE

Engine Model LL480BD

BASIC TECHNICAL DATA

| | |
|---------------------------------|------------------------|
| Manufacturer | LAIDONG |
| of cylinders Cylinder | 4 |
| arrangement | Vertical in-line three |
| Cycle | stroke Naturally |
| Induction system | aspirated |
| Compressionratio | 22.5:1 |
| Bore(mm) | 85 |
| Stroke(mm) | 90 |
| Cubic capacity(L) | 1.496 |
| Estimated total weight(dry)(kg) | 197 |

GENERAL INSTALLATION

| | |
|---|------|
| Engine rated speed(rpm) | 1500 |
| Gross engine power-prime(kW) | 12.5 |
| Gross engine power-Standby(kW) | 13.5 |
| Brake mean effective pressure(kPa) | 65 |
| Mean piston speed(m/s) | 4.5 |
| Engine coolant flow(L/min) | 37.7 |
| Combustion air flow(m ³ /min) | 1.1 |
| Exhaust gas flow (max)(m ³ /min) | 2.7 |
| Exhaust gas temperature outlet (max)(°C) | 445 |

LUBRICATION SYSTEM

| | |
|--|------|
| Lubricating oil capacity | |
| Maximum sump capacity(L) | 6 |
| Total system(L) | 4.9 |
| Minimum(L) | 4.5 |
| Maximum engine operating angles | |
| -front up/front down/right side or left side | 35° |
| Lubricating oil pressure | |
| Minimum oil pressure(kPa) | 120 |
| Normal oil temperature(°C) | 125 |
| oil flow at rated speed(L/min) | 10.9 |

FUEL SYSTEM

| | |
|------------------------------|--------------------|
| Type of injection | Indirect injection |
| Fuel injection pump | Cassette type |
| Nozzle opening pressure(MPa) | 14.7 |
| Maximum particle size | 25 microns |

FUEL LIFT PUMP

| | |
|---------------------------------|------------|
| Type | Mechanical |
| Flow/hour(L/h) | 45 |
| Pressure(kPa) | 10 |
| Maximum suction head(m) | 0.8 |
| Maximum static pressure head(m) | 3 |
| Governor type | Mechanical |

FUEL CONSUMPTION

| | |
|-----------------------|-----|
| Power rating | |
| Standby power(L/h) | 4.5 |
| 100% prime power(L/h) | 4.1 |
| 75% prime power(L/h) | 2.9 |
| 50% prime power(L/h) | 2.2 |

EXHAUST SYSTEM

| | |
|---|------|
| Maximum back pressure(kPa) | 10.2 |
| Exhaust outlet size-horizontal/vertical(mm) | 42 |

COOLING SYSTEM

| | |
|-------------------------------------|-------------------|
| Radiator | |
| Face area | 0.167 |
| Rows and materials(m ²) | 2 rows, Aluminium |
| Matrix density and material | 4.5 FPI Aluminium |
| Pressure cap setting(kPa) | 90 |
| Fan | |
| Diameter(mm) | 320 |
| Drive ratio | 115:01:00 |
| Number of blades | 7 |
| Material | Plastic |
| Type | Pusher |

Coolant

| | |
|---|-------|
| Total system capacity(with radiator)(L) | 6 |
| Maximum top tank temperature(°C) | 112 |
| Max static pressure head on pump(kPa) | 30.4 |
| Thermostat operation range(°C) | 82-95 |

ELECTRICAL SYSTEM

| | |
|---------------|---------------|
| Alternator | 65 amps -12 V |
| Starter motor | 2 kW -12 V |

NOTE:

All data is based on:

1.Engineoperatingwithfuelsystem,waterpump,lubricatingoilpump,aircleanerandexhaustsilencer;notincludedarebatterychargingalternator,fan,andoptionaldrivencomponents.

2.EngineoperatingwithfuelcorrespondingtogradeNo.2-DperASTMD975.

3.ISO3046,Part1,StandardReferenceConditionsof:

BarometricPressure:100kPa(29.53inHg)

AirTemperature:25(77°F)

Altitude:110m(361ft)

RelativeHumidity:30%AirIntakeRestriction:254mmHO(10inH₂O)

ExhaustRestriction:51mmHg(2inHg)

N/A: Not Available

TBD: To Be Determined CP: Continuous power FSP: Fuel stop power

Altitude: Derate 2.0% per 300m(984 ft.) elevation above 1000m(3279 ft.) up to a maximum elevation of 2450m(8000 ft.).

More than 2450m(8000ft), please contacts with us or our dealer seek the help.

Temperature: Derate 6.0% per 11 °C(20°F) temperature above 40°C(104°F).



ALTERNATOR

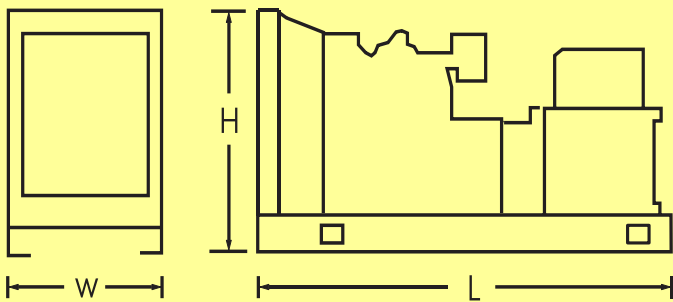
| | LEROY SOMER | STAMFORD |
|---------------------------------|-----------------------|-----------------------|
| Alternator Model | LSA40VS2 | PI044F |
| FrequencyandSpeed | 50Hz/1500rpm | 50Hz/1500rpm |
| Voltage(V) | 400/230 | 400/230 |
| Primecapacity(kVA) | 12.4 | 12.5 |
| Primepower(kW) | 10 | 10 |
| Powerefficiency(%) | 82.0 | 82.1 |
| Inputpower(kW) | 12.1 | 12.2 |
| Voltageregulation | 0.5% | 0.5% |
| Ratedpowerfactor | 0.8 | 0.8 |
| Statorwinding | 2/3 | 2/3 |
| Maximumoverspeed | 2250min ⁻¹ | 2250min ⁻¹ |
| Sustainedshortcircuit | 71Amps | 72Amps |
| CoolingAir(m ³ /sec) | 0.09 | 0.09 |

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 parallelling with mains or other generators, standard 2/3 pitch stator windings avoid excessive neutral currents. Backed by worldwide service network.

Dimensions and Weights

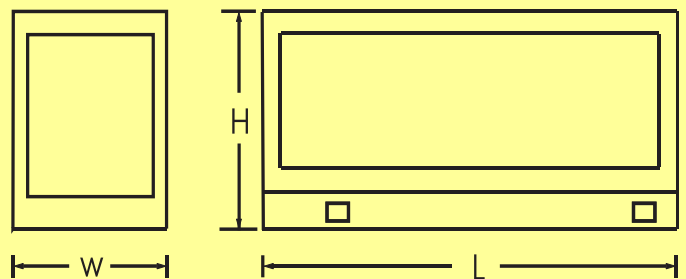
Open Style

| | | | |
|-------------------------------|-------|-----|-----|
| OverallSize , L W H mm | 1200 | 730 | 850 |
| Weight(radiator model),net,kg | 352kg | | |



Soundproof Style

| | | | |
|-------------------------------|-------|-----|-----|
| OverallSize , L W H mm | 1550 | 780 | 950 |
| Weight(radiator model),net,kg | 560kg | | |



DEESEA CONTROL SYSTEM

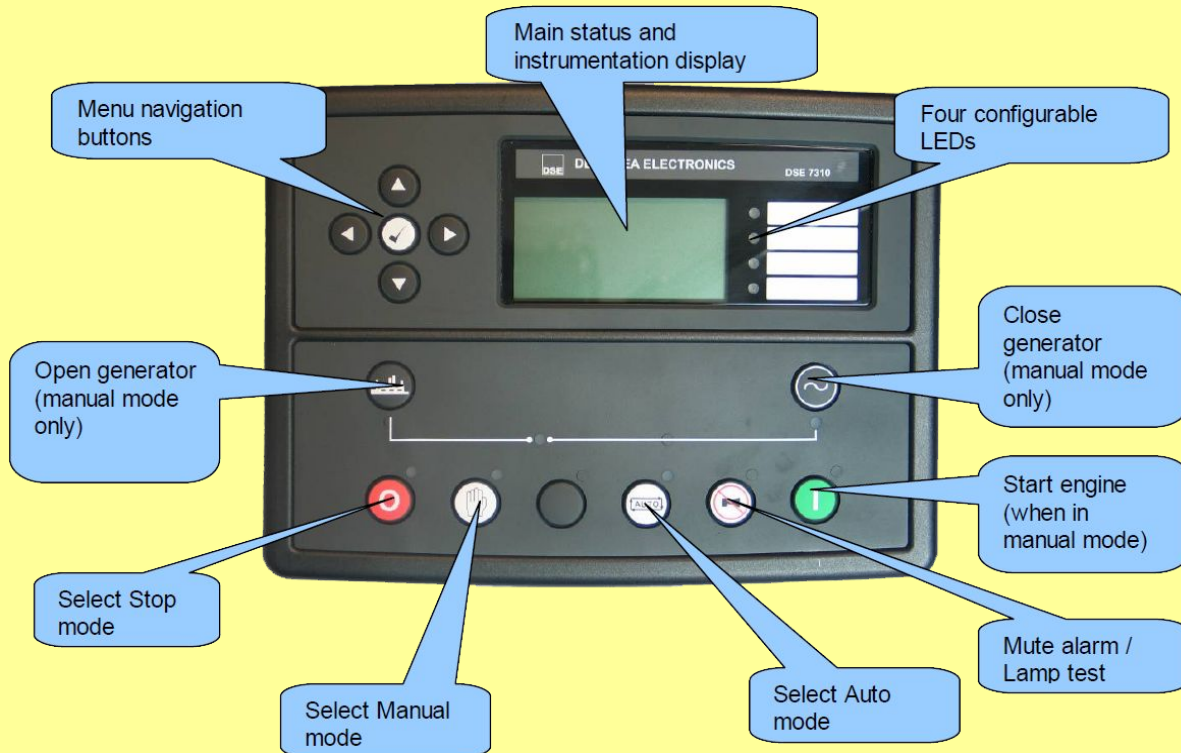
Controlled by Model DSE7220



The Gen-set Controller DSE7220 is a microprocessor based control unit containing all necessary functions for protection and control of a diesel engine. Further more, it contains a three-phase AC voltage measuring circuit. The unit is equipped with an LCD display presenting all values and alarms. DSE7220 is a compact all-in-one unit designed for the following applications:

1. Automatic engine start/stop
2. Engine protection
3. Breaker control
4. Generator protection

Description For Module DSE7220



| Standardfunctions | Shutdown | Warning |
|---------------------|-----------------------------------|--------------------------------|
| EngineControl | LossOfSpeedSignal | AlternatorUnder/OverVoltage |
| GeneratorMonitoring | AlternatorUnder/OverVoltage | AlternatorUnder/OverFrequency |
| GeneratorProtection | AlternatorUnder/OverFrequency | MainsUnder/OverVoltage |
| EngineMonitoring | MainsUnder/OverVoltage | MainsUnder/OverFrequency |
| ClearTextDisplay | MainsUnder/OverFrequency | Under/OverSpeed |
| | Under/OverSpeed | LowOilPressurePre-Alarm |
| | LowOilPressure | HighEngineTemperaturePre-Alarm |
| | High Engine Temperature | High/LowBatteryVoltage |
| | PhaseSequenceElectrical(Optional) | Over-current |
| | EarthFault(Optional) | Periodicmaintenance |

