

# TSO410ZS

60Hz POWERED BY SDEC SERIES



## TECHNICAL SPECIFICATIONS

### DIESEL GENERATING SET 220/127V-60Hz-3Phase

Model	TSO410ZS	
Power(ESP)	kVA/kw	407/325
Power(PRP)	kVA/kw	367/293
Starter Voltage	V	24
Rated Current	A	1068
Rated rotation speed	r/min	1800
Power Factor		0.8
Fuel Consumption	Litre/hour	79.5L/h
Fuel Tank Capacity	Litre	Open Type : 468 / Silent Type: 632
Noise level	dB(A)@7m	

## WEIGHT AND DIMENSIONS

GEN-Set	Dimension ( L*W*H )	Weight
Open Type	3150mm*1100mm*1825mm	3390 Kg
Silent Type		

## STANDARDS:

**Genset:** GB/T2820—2009,ISO8528

**Alternator:** SINOCOX , SMF315DS

**Diesel Engine:** SDEC , 6ETA11.8-G31

**Standby Power:** Continues running at variable load for duration of an emergency. No overload is permitted on these ratings.

**Prime Power:** Continues running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period.

## CONFIGURATION:

**Standard:** Engine, alternator, cooling system, Base frame (excluding fuel tank), shock absorber, air inlet system, control box (including mains floating charge), plastic fan blades (when the engine and water tank do not bring).

**Optional:** Base frame (including fuel tank), water jacket heater, fuel water separator, fuel heater, fuel level sensor (only supporting underframe tank), switch box (with switch), power switch, the water level sensor, motor anti condensation heater, automatic fueling system (only supporting base frame including fuel tank), battery frame.

**Accessories:** Silencer, bellow, exhaust silencing system accessories (with the matching engine), regular battery, starting cord assembly, data of gen-set, random tool (with the matching engine).



# ENGINE Specification

## Manufacturer: SDEC

Model	6ETAA11.8-G31
Engine speed Rated	1800 RPM
Cylinder /Arrangement	6 / L
Displacement	11.8 L
Bore and Stroke	128 mm×153 mm
Compression ratio	17 : 1
Max. stand by power at rated RPM	380KW
Frequency regulation , steady state	
Governor : type	Electronic
Aspiration and Cooling	Turbo charged with aftercooler

## Exhaust System

Exhaust gas flow	61.8m <sup>3</sup> /min
Exhaust temperature	600 ℃
Max back pressure	10kPa

## Fuel System

Fuel consumption100% (of the Prime Power)	79.5L/h
Fuel consumption75% (of the Prime Power)	59.3 L/h
Fuel consumption50% (of the Prime Power)	39.9 L/h
Fuel consumption110% (of the Prime Power)	90.2 L/h

## Oil system

Total oil capacity w/filters	41 L
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## Air intake

Engine air flow	29.2m <sup>3</sup> /min
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## Coolant System

Radiator & engine capacity	23.2 L
Max water temperature	104 ℃
Thermostat	85-95 ℃



- Powered by SDEC
- Engine with Modular Design .Standardized design of accessories ,patent design ,machine body with strengthened high-intensity and rigidity
- Four-Valve Mechanism high-accuracy speed regulator
- Strong environmental adaptability capability ,powerful cold boot capability

Note: All data sheets are for reference only and subject to change without prior notice.



# ALTERNATOR Specification

**Manufacturer: SINOCOX**

Type	SMF315DS
Number of phase power	3
Factor (Cos Phi)	0.8
Pole	4
Bearing	1
Coupling	Direct
Exciter type	Brushless SHUNT
Insulation : class , temperature rise	H / H
Degree of protection	IP23
Altitude	≤1000m
Winding Pitch	2/3
Winding Leads	12

## FEATURES

- Class H insulation system
- selectable winding, To meet the demand of the bad environment
- 12 Lead Reconnect, able for different voltage, meet the demand of different countries and regions
- 2/3 pitch windings restrain the content of harmonious
- Different Excitation Systems for different load demand
- Ip23 standard protection, IP44 for option
- Provide single bearing or double bearing

## STANDARDS

-IEC60034, NEMA MG1-32, ISO8528, CSA  
C22.2-100, VDE 0530, GB755

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# Control Panel

**Model:** SGC 420

**SINGLE GENSET CONTROLLERS.**

## DIMENSIONS

### OVERALL

**233mm x 173mm x 38.5mm**

### PANEL CUTOUT

**219mm x 158mm**



### KEY FEATURES

- Auto, manual and remote start/stop modes with night restriction option
- 17 inputs, configurable
- 5 resistive
- 2 analogue I/V
- 1 differential
- 9 digital
- 7 digital outputs, configurable
- Modbus over RS-485
- Manually configurable from the controller front buttons or from a PC using DEIF Smart Connect utility software
- Backlit full graphics LCD with power saving feature for extended battery lifetime
- Supports the battery charging alternator I/O interface
- Supports Auto mode (site battery monitoring, AMF, remote start/stop, auto exercise and cyclic) and manual running modes
- Magnetic Pickup Unit (MPU) interface for engine speed measurement
- Auto exercise mode (2 events) to start and stop the genset for a preconfigured time
- Monitors 1-phase/3-phase voltage, frequency, load current and power factor for generator
- Monitors engine safety parameters like lube oil pressure, engine temperature, fuel level and more
- Monitors telecom site battery backup level and shelter temperature to reduce engine running and fuel consumption at telecom tower sites
- Controls start relay, fuel relay, alarm horn and more as digital outputs
- Event log for 100 events with real time clock (RTC) stamps and engine running hours information
- Counters for engine starts, engine trips, engine running hours, genset and Mains kWh, kVAh, kvarh
- Measures mains kW, kVA
- CANbus for engine communication with support for Stage 5/ Tier 4 Final

### KEY FUNCTIONS

- LCD display
- True RMS voltage and current monitoring
- RS-485 base communication
- Monitoring of engine and alternator parameters
- Fully configurable inputs and outputs for a wide range of functions