

**Standby Power (ESP)**

Standby power is defined as the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 500 hours of operation per year under average of 70% load. Overloading is not permissible

**Prime Power (PRP)**

Prime power is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load. Average load should be 70%. The generator can be overloaded 10% for 1 hour per 12 hours.



Technical information and values are according to ISO8528, ISO3046, NEMA MG1.22, IEC 600341, BS 49995000, VDE 0530 standards. Producing with ISO9001, CE standards.

All information given in this leaflet is intended for general purposes only. Due to a policy continuous improvement REAL reserves the right to amend details and specifications without notice and all information given is subject to the REAL's current condition of sales.

**Power Output Ratings**

50 Hz. / 400 V

Standby Power (ESP)	kVA	400
	kW	320
Prime Power (PRP)	kVA	360
	kW	288

**Engine**

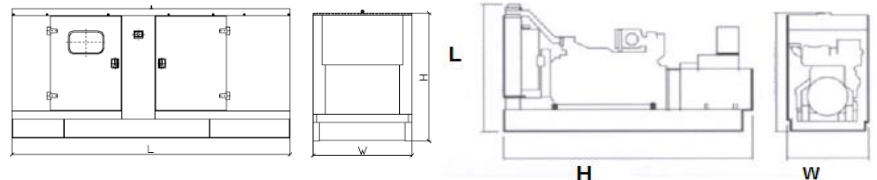
Manufacturer	SDEC	
Model	SC12H308e	
No of Cylinder / Configuration	6-in line	
Displacement lt	lt	14
Bore / Stroke	mm	135X165
Compression Ratio	15,5:1	
Aspiration	TURBO CHARGED	
Governor Type	ELECTRONIC	
Cooling System	WATER	
Coolant Capacity	lt	25,5
Lubrication Oil Capacity	lt	41
Electrical System	VDC	24
Speed / Frequency	rpm	1500 rpm / 50 Hz
Engine Gross Power	kWm	363
Fuel Consumption (lt/h)	100%	82
Exhaust Outlet Temperature	°C	600
Exhaust Gas Flow	m³/min	9,5
Air Intake-Engine	m³/min	3,2
Radiator Cooling Air	110	

**Alternator**

Manufacturer	FARADAY	
Model	FC4F	
Power Factor	0,8	
No of Bearing	SINGLE	
No of Poles	4	
No of Leads	12	
Voltage Regulation ( Steady State)	± %0,5	
Insulation	H	
Degree of Protection	IP23	
Excitation System	AVR, BRUSHLESS	
Connection Type	STAR	
Total Harmonic Content (No Load)	< %2	
Frequency	Hz	50
Voltage Output	VAC	231/400

**DIMENSION**

	L x W x H (mm)	Weight (kg)	Fuel Tank (lt)
Canopied	3700x1200x2000	4200	650
Open Skid	3000x1200x1800	3700	650



## DESIGN SPECIFICATIONS

High quality, reliable and complete power unit, Compact design, Easy start and maintenance possibility, Every generating set is subjected to a comprehensive test programme which includes full load testing and checking and providing of all control and safety shut down functions testing, Full engineered with a wide range of options and accessories: Canopy, soundproof and on road trailer

## STANDARD GENSET SPECIFICATIONS

### ENGINE

Heavy duty diesel engine. Four stroke, water cooled. Direct injection fuel system. 12 V DC starter and charge alternator. Replaceable fuel filter. Oil filter and dry element air filter. Cooling radiator and fan, starter battery (with lead acid) including rack and cables, flexible fuel connection hoses and manual oil sump drain valve, industrial capacity exhaust silencer and steel bellows, jacket water heater (at automatic models) operation manuals and circuit diagrams

### ALTERNATOR

Brushless, single bearing system, flexible disc, 4 poles, Insulation class H, Standard degree of protection IP21, Self-exciting and self-regulating, Impregnation with tropicalised epoxy varnish, Solid state Automatic Voltage Regulator

### BASE FRAME

The complete genset is mounted as whole on a heavy-duty fabricated, steel base frame. Antivibration pads are fixed between the engine/ alternator feet and the base frame. Base frame design incorporates an integral fuel tank. The generating set can be lifted or carefully pushed / pulled by the base frame, Dial type fuel gauge and drain plug on the fuel tank. Forklift pockets within base frame.

### CANOPY

All canopy parts are designed with modular principles. Doors on each side. Without welding assembly. All metal canopy parts are painted by electrostatic Easy maintenance and operation polyester powder paint Thermally insulated engine exhaust system Emergency stop push button is installed outside of canopy To enable for lifting easy maintenance and operation

### CONTROL SYSTEM

#### Panel Equipments;

Control, supervision and protection panel is mounted on the genset base frame. The control panel is equipped as follows:

#### 1-Auto. Mains Failure Control Panel

Control Panel Equipments:  
Control panel with TPH 309 module  
Static battery charger  
Emergency stop push button

#### 1.1 Generating Set control module TPH 300 features:

The module is used to monitor a mains supply and automatic start a stand-by generating set.  
Micro-processor based design  
Monitors engine performance and AC power output  
LED and LCD alarm indication  
Front panel configuration of timers and alarm trip points  
provides signal to change over switch panel  
event logging of shutdown alarms  
Remote communication via RS232 port or RS485 modbus output  
easy push button control  
STOP/RESET-MANUAL-AUTO-TEST-START  
Operation indicators accessed by the LCD display scroll push button.

#### Metering via LCD Display:

Generator Volts (L-L/L-N)  
Generator Amps (L1-L2-L3)  
Generator Frequency (Hz)  
Engine hours run  
Engine oil pressure (PSI&Bar)  
Engine speed RPM  
Engine temperature (C & F)  
Generator kVA  
Generator kW  
Generator power factor  
Mains Frequency (Hz)  
Mains Volts (F-F/F-N)  
Plant battery volts



#### Automatic shutdown on fault conditions

Under/Over Speed  
High Engine Temperature  
Low Oil Pressure  
Under/over generator volts  
Under/over generator frequency  
under/over mains frequency  
under/over mains voltage  
Low/High battery volts  
Fail to start  
Fail to stop  
Charge fail  
Over current  
Emergency stop  
CAN data fail  
CAN ECU fail

#### LED indications

Mains available  
Generator available  
Mains on load  
Generator on Load

#### 2. Power Outlet Terminal Board Mounted on the Genset Baseframe