

# We bring Power to your Life



## UP1400

U Power Generation System



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## INTRODUCTION

U Power Generation system, providing optimum performance, and reliability, for stationary standby, prime power, and continuous duty applications. All generator sets are factory build, and production tested.

## Power (kVA)

3 Phase, 50 Hz, PF 0.8

VOLTAGE	STANDBY RATING		PRIME RATING (PRP)		STANDBY AMPER
	kW	kVA	kW	kVA	
400/231	1120,00	1400	1012	1265	2020.79

**STANDBY RATING (ESP)** Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. ESP is in accordance with ISO 8528. Overload is not allowed

**PRIME RATING (PRP)** Applicable for supplying power to varying electrical load for unlimited hours. PRP is in accordance with ISO 8528. 10 % overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046

## General Characteristics

Model Name	UP 1400
Frequency (Hz)	50
Fuel Type	Diesel
Engine Made and Model	Perkins 4012-46 TWG 2A
Alternator Made and Model	ECO 43-2L/4 A
Control Panel Model	7320
Canopy	UP 96

## Engine Specifications

Engine	Perkins
Engine Model	4012-46 TWG 2A
Number of Cylinder (L)	12 cylinders - V type
Bore (mm.)	160
Stroke (mm.)	190
Displacement (lt.)	45.842
Aspiration	Turbo Charged and Change Air Cooled
Compression Ratio	13.6:1
RPM (d/dk)	1500

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Oil Capacity (Total With Filter) (lt)	177
Standby Power	1224/1641
Prime Power	1113/1492
Block Heater QTY	2
Block Heater Power (Watt)	3000
Fuel Type	Diesel
Injection Type and System	Direct
Type of Fuel Pump	MEUI
Governor System	ECM
Operating Voltage (Vdc)	24 Vdc
Battery and Capacity (Qty/Ah)	4x143
Charge Alternator (A)	55
Cooling Method	Water Cooled
Cooling Fan Air Flow (m <sup>3</sup> /min)	2098
Coolant Capacity (engine only / with radiator) (lt)	245,8
Air Filter	Dry Type
Fuel Cons. Prime With %100 Load (lt/hr)	259
Fuel Cons. Prime With %75 Load (lt/hr)	196
Fuel Cons. Prime With %50 Load (lt/hr)	143

### Alternator Characteristics

Manufacturer	Mecc Alte
Alternator Brand and Model	ECO 43-2L/4 A
Frequency (Hz)	50
Power (kVA)	1300
Voltage (V)	400
Phase	3
A.V.R.	DER1
Voltage Regulation	(+/-)1%
Insulation System	H
Protection	IP21
Rated Power Factor	0.8
Weight Wound Rotor (Kg)	759
Cooling Air (m <sup>3</sup> /min)	90

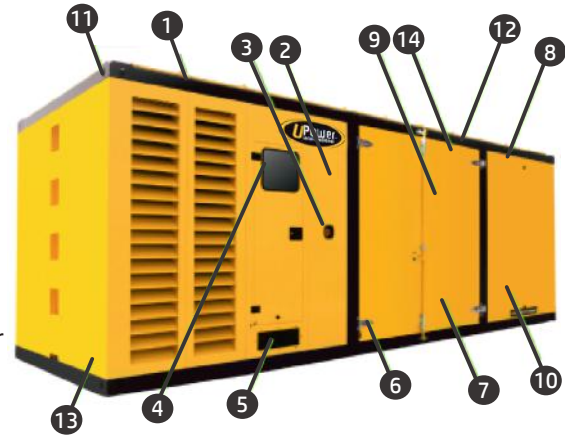
### Open Gen.Set Dimensions (mm)

Length	4905
Width	1880
Height	2359
Dry Weight (kg)	8865
Tank Capacity (lt)	-

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Lenght (mm) 7500 | Width (mm) 2300 | Height (mm) 2500 | DRY Weight (kg) 11200 | Tank Capacity (lt) -

1. Steel structure made from steel sheet and steel profiles
2. Canopy and panels made from powder coated sheet steel
3. Emergency stop push button
4. Control panel is mounted on the baseframe. Located at the right side of the generator set
5. Cables out locations are under or back of the canopy
6. Corrosion resistant locks and hinges
7. Oil could be drained via valve and a hose
8. Exhaust system in the canopy
9. Special large access doors (marine type) for easy maintenance
10. Fuel tank is at front of the canopy ,easy access to the fuel tank via lockable door
11. Lifting points similar to ISO container, located on each top corner of the canopy
12. The cap on the canopy provides easy access to radiator cap
13. Sound proofing materials
14. Integrated ladder built in to side of the canopy allows access to the top of the canopy

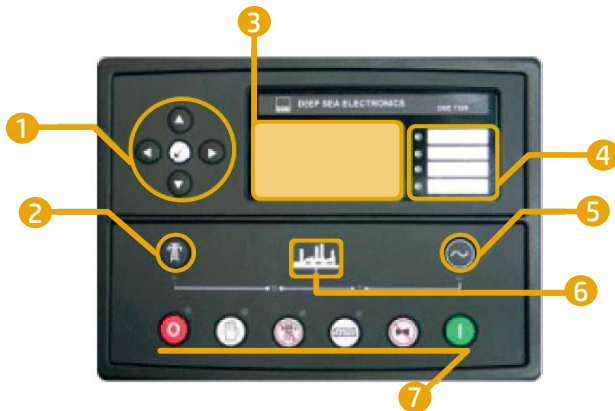


## INTRODUCTION

Sound-attenuated and Weather-protective Enclosures Sound-attenuated and weather protective enclosures for generating sets from U Power, meet event the sound requirements and provide optimum protection from inclement weather and development by our specialist acoustic engineers. Our modular designed sound insulated canopies provide ease of access for servicing and general maintenance and interchangeable components permitting on-site repair. Enclosures are designed to optimize genset cooling performance, providing you with confidence that genset ratings and ambient capability.

## Control Panel

Control Module DSE | Control Module Model 7320 | Communication Ports Modbus



1. Menu navigation buttons
2. Close mains button
3. Main Status and instrumentation display
4. Alarm LED's
5. Close generator button
6. Status LED's
7. Operation selecting buttons

## Devices

DSE, model 7320 Auto Mains Failure control module Static battery charger  
Emergency stop push button and fuses for control circuits

## Construction and Finish

Components installed in sheet steel enclosure  
Phosphate chemical, pre-coating of steel provides corrosion resistant surface  
Polyester composite powder topcoat forms high gloss and extremely durable finish  
Lockable and hinged panel door provides easy access to components

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## Installation

Control panel is mounted on baseframe with steel stand. Located at the right side of the generator set (When you look at the Gen. Set. from Alternator)

## Generating Set Control Unit

- » The DSE 7320 is a standard control module for our generator sets up to 200kVA and it has been designed to start and stop diesel and gas generator sets.
- » The DSE 7320 module has been designed to monitor generator frequency, volt, current, engine oil pressure, coolant temperature running hours and battery volts.
- » Module monitors the mains supply and switch over to the generator when the mains power fails.
- » The DSE 7320 also indicates operational status and fault conditions, Automatically shutting down the Gen.
- » Set and giving true first up fault condition of Gen. Set failure. The LCD display indicates the fault.

## Standard Specifications

Microprocessor controlled

- 132 x 64 pixel LCD display makes information easy to read
- Front panel programming and also via PC software
- Soft touch membrane keypad and five key menu navigation
- Remote communications via RS232, RS485 and ethernet and SMS messaging
- Event logging (50) showing date and time
- Multiple date and time engine exercise mode and maintenance scheduler
- Engine block heater control
- Controls; stop, manuel, auto, test, start, mute lamb test/transfer to generator, transfer to mains, menu navigation

### ENGINE

Engine speed  
Oil pressure  
Coolant temperature  
Run time Battery volts  
Battery volts  
Engine maintenance due

### GENERATOR

Voltage (L-L, L-N)  
Current (L1-L2-L3)  
Frequency  
Earth current  
kW  
Pf  
kVA  
kWh, kVAh, kVAh  
Phase sequence

### ELECTRICAL TRIP

Earth fault  
kW over load  
Generator over current  
Negative phase sequence

### PRE-ALARMS

Low oil pressure  
High engine temperature  
Low engine temperature  
Over /Under speed  
Under/over generator frequency  
Under/over generator voltage  
ECU warning

### WARNING

Charge failure  
Battery under voltage  
Fail to stop  
Low fuel level (opt.)  
kW over load  
Negative phase sequence  
Loss of speed signal

### MAINS

Voltage (L-L, L-N)  
Frequency

### Instruments

#### SHUT DOWNS

Fail to start  
Emergency stop  
Low oil pressure  
High engine temperature  
Low coolant level  
Over /Under speed  
Under/over generator frequency  
Under/over generator voltage  
Oil pressure sensor open  
Phase rotation

## Options

High oil temperature shut down  
Low fuel level shut down  
Low fuel level alarm  
High fuel level alarm

## Expansion Modules

Editional LED module (2548)  
Expansion relay module (2157)  
Expansion input module (2130)

## Standarts

Electrical Safety / EMC compatibility  
-BS EN 60950 Electrical business equipment.  
-BS EN 61000-6-2 EMC immunity standard.  
-BS EN 61000-6-4 EMC emission standard

## Static Battery Charger

Battery charger is manufactured with switching-mode and SMD technology and it has high efficiency

Battery charger models' output V-I characteristic is very close to square

2405 has fully output short circuit protection and it can be used as a current source

2405 charger has high efficiency, long life, low failure rate, light weight and low heat radiated in accordance with linear alternatives

The charger is fitted with a protection diode across the output

Charge fail output is available

Connect charge fail relay coil between positive output and CF output

Input: 196-264V

Output: 27,6V 5A or 13,8V 5A

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## Standard Specifications

- Water cooled diesel engine
- Radiator with mechanical fan
- Protective grille for rotating and hot parts
- Electric starter and charge alternator
- Starting battery (with lead acid) including rack and cables
- Engine coolant heater
- Steel base frame and anti-vibration isolators
- Spare external fuel tank (open set)
- Flexible fuel connection hoses
- Single bearing, class H alternator
- Industrial exhaust silencer and steel bellows supplied separately
- Static battery charger
- Manual for application and installation

## Optional Equipments

### ENGINE

- Remote Radiator Cooling
- Fuel-Water Separator Filter
- Oil heater

### ALTERNATOR

- Anti-Condensation Heater
- Over sized alternator
- Main line circuit breaker

### CONTROL SYSTEM

- Automatic synchronising and power control system (multi gen-set Parallel)
- Transition synchronization with mains
- Remote annunciator panel
- Remote relay output
- Alarm output relays
- Remote communication with modem
- Earth fault, single set
- Charge Ammeter

### OTHER ACCESSORIES

- Main Fuel Tank
- Automatic or manual fuel filling system
- Manual oil drain pump
- Electrical oil drain pump
- Low and high fuel level alarm
- Residential silencer
- Enclosure: weater protective or sound attenuated
- Duct adapter (on radiator)
- Inlet and outlet motorised louvers
- Inlet and outlet acoustic baffles
- Tool kit for maintenance
- 1500/3000 hours maintenance kit
- Supplied with oil and coolant - 30 °C

### TRANSFER SWITCH

- Three Pole Contactor
- Three or four pole motor operated circuit breaker

## CERTIFICATES



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