



## INTRODUCTION

Aksa 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 (ESP)		PRIME RATING (PRP)		Standby Amper
	kW	kVA	kW	kVA	
400/231	332,00	415,00	300,00	375,00	599,02

**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 8528-1. Overload is not allowed.

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

## General Characteristics

Model Name	ADG 415
Frequency (Hz)	50
Fuel Type	Natural Gas
Engine Made and Model	HYUNDAI GV222TI
Alternator Made and Model	ECO 40-1S/4 B
Control Panel Model	DSE 7320
Canopy	MS 86 GZ

## ENGINE SPECIFICATIONS

Engine	HYUNDAI
Engine Model	GV222TI
Number of Cylinder (L)	12 cylinders - V type
Bore (mm.)	128
Stroke (mm.)	142
Displacement (lt.)	21.927
Aspiration	Turbo Charged and Intercooled(Water to Air)
Compression Ratio	10.5:1
RPM (d/dk)	1500
Oil Capacity (Total With Filter) (lt)	40
Standby Power (kW/HP)	385/523
Prime Power	350/476
Block Heater QTY	1
Block Heater Power (Watt)	3000
Fuel Type	Natural Gas
Operating Voltage (Vdc)	24 Vdc
Battery and Capacity (Qty/Ah)	2x143
Charge Alternator (A)	45
Cooling Method	Water Cooled



Cooling Fan Air Flow (m <sup>3</sup> /min)	670
Coolant Capacity (engine only / with radiator) (lt)	44/285.3
Air Filter	Dry Type
Fuel Cons. Prime With %100 Load (m <sup>3</sup> /hr)	95.2
Fuel Cons. Prime With %75 Load (m <sup>3</sup> /hr)	88.2
Fuel Cons. Prime With %50 Load (m <sup>3</sup> /hr)	73.4

### ALTERNATOR CHARACTERISTICS

Manufacturer	Mecc Alte
Alternator Made and Model	ECO 40-1S/4 B
Frequency (Hz)	50
Power (kVA)	400
Voltage (V)	400
Phase	3
A.V.R.	DER1
Voltage Regulation	(+/-)0.5%
Insulation System	H
Protection	IP23
Rated Power Factor	0.8
WEIGHT COMP. GENERATOR (Kg)	1049
COOLING AIR (m <sup>3</sup> /min)	54

### Open Gen.Set Dimensions (mm)

LENGTH	3580
WIDTH	1800
HEIGHT	2040
DRY WEIGHT (kg.)	4730

### Gen.Set Canopy Dimensions (mm)

LENGTH	5410
WIDTH	1860
HEIGHT	2650
DRY WEIGHT (kg.)	5670

### INTRODUCTION

No Data

### Control Panel

Control Module	DSE
Control Module Model	DSE 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

Comonents 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 hinged panel door provides for easy component access

## INSTALLATION

Control panel is mounted generating set baseframe on robust steel stand or power module. Located at side of generating set with properly panel visibility.

## GENERATING SET CONTROL UNIT

The DSE 7320 control module is a standard addition to our generator sets from 220 kVA upwards and it has been designed to start and stop diesel and gas generating sets that include electronic and non electronic engines.

The DSE 7320 includes the additional capability of being able to monitor a mains (utility) supply and is therefore suitable for controlling a standby generating set in conjunction with an automatic transfer switch.

The DSE7320 also indicates operational status and fault conditions, automatically shutting down the generating set and indicating faults by means of its LCD display on the front panel.

## 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.
- 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.

## Instruments

### ENGINE

Engine speed

Oil pressure

Coolant temperature

Run time Battery volts

Engine maintenance due

### GENERATOR



Voltage (L-L, L-N)  
Current (L1-L2-L3)  
Frequency  
Earth current  
kW  
Pf  
kVAh  
kWh, kVAh, kVAh  
Phase sequence  
MAINS  
Voltage (L-L, L-N)  
Frequency  
WARNING  
Charge failure  
Battery under voltage  
Fail to stop  
Low fuel level (opt.)  
kW over load  
Negative phase sequence  
Loss of speed signal  
PRE-ALARMS  
Low oil pressure  
High engine temperature  
Low engine temperature  
Over /Under speed  
Under/over generator frequency  
Under/over generator voltage  
ECU warning  
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

ELECTRICAL TRIP

Earth fault

kW over load

Generator over current

Negative phase sequence

### 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)

Expension relay module (2157)

Expansion input module (2130)

### Standards

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.

## STANDARD SPECIFICATIONS

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## OPTIONAL EQUIPMENTS

### ENGINE

Low Coolant level alarm

Oil heater

### ALTERNATOR



Anti-Condensation heater

Over sized alternator

Single Phase ( 4 lead)

Main line circuit breaker

#### CONTROL SYSTEM

Automatic synchronising and power control system ( multi gen-set Parallel )

Paralel system with mains.

Remote annunciator panel

Uzağa alarm paneli

Alarm output relays

Remote communication with modem

Earth fault, single set

Charging ammeter

#### TRANSFER SWITCH

Four Pole Contactor

#### WISE ACCESSORIES

Manual oil drain pump

Electrical oil drain pump

Enclosure: weater protective or sound attenuated

Duct adapter ( on radiator)

Inlet and outlet motorised louvers

Tool kit for maintenance

1500/3000 hours maintenance kit

Supplied with oil and coolant - 30 °C

Automatic transfer switch

#### AKSA CERTIFICATES

- TS ISO 8528

- CE

- SZUTEST

- 2000/14/EC