



## 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	80,00	100,00	72,00	90,00	144,34

**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	APG 100
Frequency (Hz)	50
Fuel Type	Natural Gas
Engine Made and Model	GM NG PSI 8.8L
Alternator Made and Model	ECP 34-2S/4 A
Control Panel Model	DSE 7320
Canopy	AK40-APG80

### ENGINE SPECIFICATIONS

Engine	GM NG
Engine Model	PSI 8.8L
Number of Cylinder (L)	8 cylinders - V type
Bore (mm.)	110.49
Stroke (mm.)	114.30
Displacement (lt.)	8.800
Aspiration	Naturally Aspirated
Compression Ratio	10.0:1
RPM (d/dk)	1500
Oil Capacity (Total With Filter) (lt)	8,5
Fuel Type	Natural Gas
Governor System	Electronic
Operating Voltage (Vdc)	12 Vdc
Battery and Capacity (Qty/Ah)	1x85
Cooling Method	Water Cooled
Cooling Fan Air Flow (m3/min)	120
Coolant Capacity (engine only / with radiator) (lt)	/25,5
Air Filter	Dry Type



### ALTERNATOR CHARACTERISTICS

Manufacturer	Mecc Alte
Alternator Made and Model	ECP 34-2S/4 A
Frequency (Hz)	50
Power (kVA)	105
Voltage (V)	400
Phase	3
A.V.R.	DSR
Voltage Regulation	(+/-)1%
Insulation System	H
Protection	IP23
Rated Power Factor	0.8
WEIGHT COMP. GENERATOR (Kg)	409
COOLING AIR (m <sup>3</sup> /min)	19.3

### Open Gen.Set Dimensions (mm)

LENGTH	2150
WIDTH	1050
HEIGHT	1543
DRY WEIGHT (kg.)	1180

### Gen.Set Canopy Dimensions (mm)

LENGTH	3100
WIDTH	1050
HEIGHT	1641
DRY WEIGHT (kg.)	1410

### 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

kVA<sub>r</sub>

kWh, kVAh, kVA<sub>r</sub>h



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 shot 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

- Heavy duty, water cooled naturalgas engine
- 46/50 °C ambient rated radiator with mechanical fan
- Protective grille for fan and rotating parts
- Electric starter and charge alternator
- Starting battery (with lead acid) including rack and cables
- Engine jacket cooling heater
- Base frame design incorporates an integral fuel tank and anti-vibration isolators
- Flexible fuel connection hoses
- Single bearing, class H alternator
- Industrial exhaust silencer and steel belows supplied separately
- Static battery charger
- Manual for use and installation

#### OPTIONAL EQUIPMENTS

##### ENGINE



Remote Radiator Cooling

Low Coolant level alarm

#### ALTERNATOR

Anti-Condensation heater

Over sized alternator

Main line circuit breaker

#### CONTROL SYSTEM

Remote annunciator panel

Uzağa alarm paneli

Alarm output relays

Earth fault, single set

Charging ammeter

#### TRANSFER ANAHTARI

Üç kutuplu kontaktör

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

Supplied with oil and coolant - 30 °C

#### AKSA CERTIFICATES

- TS ISO 8528
- CE
- SZUTEST
- 2000/14/EC