



## 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, 60 Hz, PF 0.8

Voltage	STANDBY RATING (ESP)		PRIME RATING (PRP)		Standby Amper
	kW	kVA	kW	kVA	
380/220	1364,00	1705,00	1240,00	1550,00	2590,56
480/277	1530,40	1913,00	1275,20	1594,00	0,00

**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	AC 1913-6
Frequency (Hz)	60
Fuel Type	Diesel
Engine Made and Model	CUMMINS KTA50-G9 60Hz
Alternator Made and Model	ECO 46-1S/4 A - 60Hz
Control Panel Model	DSE 7320
Canopy	AKS 101

## ENGINE SPECIFICATIONS

Engine	CUMMINS
Engine Model	KTA50-G9 60Hz
Number of Cylinder (L)	16 cylinders - V type
Bore (mm.)	159
Stroke (mm.)	159
Displacement (lt.)	50.3
Aspiration	Turbocharged and Low Temperature Aftercooled
Compression Ratio	13.9:1
RPM (d/dk)	1800
Oil Capacity (Total With Filter) (lt)	204
Standby Power (kW/HP)	1655/2220
Prime Power	1383/1855
Block Heater QTY	2
Block Heater Power (Watt)	3000
Fuel Type	Diesel
Injection Type and System	Direct
Type of Fuel Pump	Cummins PT



Governor System Electronic

Operating Voltage (Vdc) 24 Vdc

Battery and Capacity (Qty/Ah) 4X143

Cooling Method Water Cooled

Cooling Fan Air Flow (m<sup>3</sup>/min) 2229

Coolant Capacity (engine only / with radiator) (lt) 140/415

Air Filter Dry Type

Fuel Cons. Prime With %100 Load (lt/hr) 330

Fuel Cons. Prime With %75 Load (lt/hr) 257

Fuel Cons. Prime With %50 Load (lt/hr) 180

### ALTERNATOR CHARACTERISTICS

Manufacturer Mecc Alte

Alternator Made and Model ECO 46-1S/4 A - 60Hz

Frequency (Hz) 60

Power (kVA) 1240

Voltage (V) 380

Phase 3

A.V.R. DER1

Voltage Regulation (+/-)0.5%

Insulation System H

Protection IP23

Rated Power Factor 0.8

WEIGHT COMP. GENERATOR (Kg) 3010

COOLING AIR (m<sup>3</sup>/min) 162

### Open Gen.Set Dimensions (mm)

LENGTH 5650

WIDTH 2150

HEIGHT 2550

DRY WEIGHT (kg.) 10700

TANK CAPACITY (lt.) 2000

### Gen.Set Canopy Dimensions (mm)

LENGTH 9130

WIDTH 2440

HEIGHT 2591

DRY WEIGHT (kg.) 16700

TANK CAPACITY (lt.) 1200

### INTRODUCTION

No Data



## Control Panel

Control Module	DSE
Control Module Model	DSE 7320
Communication Ports	MODBUS
	<ol style="list-style-type: none"><li>1. Menu navigation buttons</li><li>2. Close mains button</li><li>3. Main Status and instrumentation display</li><li>4. Alarm LED's</li><li>5. Close generator button</li><li>6. Status LED's</li><li>7. Operation selecting buttons</li></ol>

## 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

kVAr

kWh, kVAh, kVArh

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)  
Expansion 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

- Heavy duty, water cooled diesel engine
- 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 water heater
- Steel base frame and anti-vibration isolators
- Spare 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

### TRANSFER SWITCH

- Motor Switch

### OTHER ACCESSORIES

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

### CONTROL SYSTEM

- Remote communication with modem
- Alarm output relays
- Charge Ammeter
- Earth fault, single set
- Remote relay output
- Paralel system with mains.
- Automatic synchronising and power control system ( multi gen-set

### Parallel )

- Remote annunciator panel



- Transition synchronization with mains

**ENGINE**

- Oil heater

- Fuel-Water Separator Filter

- Remote Radiator Cooling

**ALTERNATOR**

- Main line circuit breaker

- Over sized alternator

- Anti-Condensation Heater

**AKSA CERTIFICATES**

- TS ISO 8528

- CE

- SZUTEST

- 2000/14/EC