



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.

Certificate

TS ISO 8528

CE

SZUTEST

2000/14/EC

General Characteristics

Model Name	APD 13 A
Frequency (Hz)	50
Fuel Type	Diesel
Engine Made and Model	AKSA - A4CRX19
Alternator Made and Model	Aksa - AK 109
Control Panel Model	DSE 6120
Canopy	ACP 1A

3 Phase, 50 Hz, PF 0.8

VOLTAGE	STANDBY RATING (ESP)		PRIME RATING (PRP)		Standby Amper
	kVA	kW	kVA	kW	
400/231	12	9.60	11	8.80	17.32

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.

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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.

ENGINE SPECIFICATIONS

Engine		AKSA
Engine Model		A4CRX19
NO. OF CYLINDERS AND BUILD		4 cylinders - in line
BORE AND STROKE	mm	80 X 90
TOTAL DISPLACEMENT	L	1,809
Aspiration		Naturally Aspirated
COMPRESSION RATIO		18:1
RATED SPEED (RPM)	d/dk	1500
OIL CAPACITY	L	6
Standby Power (kW/HP)		13.7/18.4
Prime Power		12.5/16.7
Block Heater QTY		1
Block Heater Power (Watt)		500
Fuel Type		Diesel
Injection Type and System		Direct
Type of Fuel Pump		Direct
Governor System		

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	Mechanic	
Operating Voltage (Vdc)		12 Vdc
Battery and Capacity (Qty/Ah)		1x36
Cooling Method		Water Cooled
Cooling Fan Air Flow (m3/min)		112.64
Coolant Capacity (engine only / with radiator) (lt)		5/16.3
Air Filter		Dry Type
Fuel Cons. Prime With %100 Load (lt/hr)		4.19
Fuel Cons. Prime With %75 Load (lt/hr)		3.51
Fuel Cons. Prime With %50 Load (lt/hr)		2.42

ALTERNATOR SPECIFICATIONS

Manufacturer	Aksa	
Alternator Made and Model	AK 109	
Frequency (Hz)	Hz	50

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Power (kVA)	kVA	11,3
DESIGN		Brushless
VOLTAGE	V	400
Phase		3
A.V.R.		SX460
Voltage Regulation	(+/-)	1,5%
Insulation System		H
Protection		IP22
Rated Power Factor		0.8
WEIGHT COMP. GENERATOR (Kg)		95
COOLING AIR (m³/min)	m³	4,26

SIZE and WEIGHT

Open Type	DRY WEIGHT (kg.) (kg.)	LENGTH (mm.)	WIDTH (mm.)	HEIGHT (mm.)	TANK CAPACITY (lt.) (Lt.)
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	760	1400	760	912	
CANOPY	DRY WEIGHT (kg.) (kg.)	LENGTH (mm.)	WIDTH (mm.)	HEIGHT (mm.)	TANK CAPACITY (lt.) (Lt.)
ACP 1A	515	1672	823	873	32

STANDARD SPECIFICATIONS

- Protective grille for rotating and hot parts;
- Radiator with mechanical fan;
- Water cooled, Diesel engine
- Electric starter and charge alternator;
- Starting battery (with lead acid) including rack and cables;
- Engine coolant 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 bellows supplied separately(for open sets);
- Static battery charger
- Manual for application and installation

OPTIONAL EQUIPMENTS

ENGINE

- Remote Radiator Cooling
- Fuel-Water Separator Filter

ALTERNATOR

- Anti-Condensation Heater

CONTROL SYSTEM

- Charge Ammeter

TRANSFER SWITCH

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

OTHER ACCESSORIES

- Main Fuel Tank
- Automatic or manual fuel filling system
- Manual oil drain pump
- Residential silencer
- Enclosure: weater protective or sound attenuated
- Trailer
- Tool kit for maintenance

Devices

- ? DSE, model 6120 Auto Mains Failure control module.
- ? Battery charger input 198-264 volt, output 27,6 V 5 A (24 V) or 13,8 Volt 5A (12V)
- ? 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.

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 6120 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 DSE6120 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.

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- ? Microprocessor controlled.
- ? LCD display makes information easy to read.
- ? Automatically transfers between mains (utility) and generator power.
- ? Manual programming on front panel.
- ? User-friendly set-up and button layout.

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- ? Remote start.
- ? Event logging (50) showing date and time.
- ? Controls: Stop/Reset, Manual, Auto, Test, Start, buttons. An additional push button next to the LCD display is used to scroll through the modules' metering displays.

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ENGINE

- ? Engine speed.
- ? Oil pressure.
- ? Coolant temperature.
- ? Run time.
- ? Battery volts.
- ? Configurable timing.

GENERATOR

- ? Voltage (L-L, L-N).
- ? Current (L1-L2-L3).
- ? Frequency.
- ? Gen. Set ready.
- ? Gen. Set enabled.

MAINS

- ? Mains ready.
- ? Mains enabled.

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WARNING

- ? Charge failure.
- ? Battery Low/High voltage.
- ? Fail to stop.
- ? Low /High generator voltage.
- ? Under /Over generator frequency.
- ? Over /Under speed.
- ? Low oil pressure.
- ? High coolant temperature.

SHUT DOWNS

- ? Fail to start.
- ? Emergency stop.
- ? Low oil pressure.
- ? High coolant temperature.
- ? Over /Under speed.
- ? Under/over generator frequency.
- ? Under/over generator voltage.
- ? Oil pressure sensor open.
- ? Coolant temperature sensor open.

ELECTRICAL TRIP

- ? Generator over current.

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- ? Flexible sensor can be controlled with temperature, pressure, percentage (warning/shutdown/electrical trip)
- ? Local setting parameters and monitoring from PC to control module with USB connection (max 6 mt).

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- ? Electrical Safety / EMC compatibility
- ? BS EN 60950 Electrical business equipment.

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- ? 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 ?t has high efficiency.
- ? Battery charger models' output V-I characteristic is very close to square and output is 5 amper, 13,8 V for 12 volt and 27,6 V for 24 V . Input 198 - 264 volt AC.
- ? The charger is fitted with a protection diode across the output.
- ? Connect charge fail relay coil between positive output and CF output.
- ? They are equipped with RFI filter to reduce electrical noise radiated from the device.
- ? Galvanically isolated input and output typically 4kV for high reliability.

Introduction

Sound-attenuated and weather protective enclosures for generating sets from Aksa, 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 (8 – 275kVA) fit directly to the open generator set to 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.

STANDARD SPECIFICATIONS

- Compact footprint, low profile design.
- Enclosure, generator set, exhaust system and base-tank are pre-assembled, pre-integrated and shipped as one package
- Body made from steel components treated with polyester powder coating
- Fire retardant foam insulation
- Easy access to all service points
- Exhaust system inside canopy
- Large doors on each side
- Control panel viewing window in a lockable access door
- Emergency stop push button mounted on enclosure exterior
- Cooling fan and battery charging alternator fully guarded
- Fuel fill and battery can only be reached via lockable access doors.
- Lifting points on the top of canopy and base frame
- Customer options available to meet your applications needs.

CANOPY MODEL	ACP 1	
WIDTH	mm.	823
LENGTH	mm.	1522

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HEIGHT	mm.	1127
TANK CAPACITY (lt.)	Lt.	32

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CANOPY MODEL		ACP 1A
WIDTH	mm.	823
LENGTH	mm.	1672
HEIGHT	mm.	873
TANK CAPACITY (lt.)	Lt.	32

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