



## 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

3 Phase, 50 Hz, PF 0.8

Voltage (V)	STANDBY RATING (ESP)		PRIME RATING (PRP)		STANDBY CURRENT (A)
	kW	kVA	kW	kVA	
400 / 231	20.0	25	17.60	22	36

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	APB 25A
Frequency (Hz)	50
Fuel Type	Diesel
Engine Make and Model	Aksa A4CRX27
Alternator Make and Model	Aksa SC184E
Control Panel Model	HGM6120CAN
Canopy	ACP 3A-PB

## Engine Specifications

### General Data

Manufacturer	Aksa
Engine Model	A4CRX27
Number of Cylinders / Type	4 cylinders - in line
Bore mm (in)	90
Stroke mm (in)	105



Displacement l (cu. In)	2.672
Compression Ratio	18:1
Engine Speed (rpm)	1500
Standby Power (kW/hp)	24.4/32.7
Prime Power (kW/hp)	22.2/29.8
Block Heater (QTY)	1
Block Heater Power (Watt)	500
Governor System	Mechanic
Air Filter	Dry Type
Aspiration	Naturally Aspirated

### Lubrication System

Oil Capacity l (gal)	6
Max. Oil Temperature °C (F)	120

### Fuel System

Fuel Type	Diesel
Injection Type	Direct
Type of Fuel Pump	Direct

### Electrical System

Operating Voltage (Vdc)	12 Vdc
Battery and Capacity (Qty/Ah)	1x36

### Cooling System

Cooling Method	Water Cooled
Coolant Capacity (engine only) l (gal)	7

### Exhaust System

Exhaust Gas Flow (m <sup>3</sup> /min)	4.64
Exhaust Back Pressure in-Hg (kPa)	6
Exhaust Gas Temperature °C (F)	510

### Radiator

Total Coolant Capacity (l)	15.1
Cooling Fan Air Flow m <sup>3</sup> /min (ft <sup>3</sup> /min)	84.7
External Restriction to Cooling Airflow (Pa)	125

### Fuel Consumption

Fuel Cons. @100% Prime Load l/h (kg/h)	6.43
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Fuel Cons. @75% Prime Load l/h (kg/h)	5.77
Fuel Cons. @50% Prime Load l/h (kg/h)	4.81

### Alternator Characteristics

Manufacturer	Aksa
Alternator Model	SC184E
Frequency (Hz)	50
Voltage (V)	400
Phase	3
A.V.R.	MC460B
Voltage Regulation	1
Insulation Class	H
Protection Class	IP23
Rated Power Factor	0,8
Temperature Rise Class	H

### Canopy Characteristics

Length mm	1974
Width mm	950
Height mm	1200
Full Tank Capacity (l)	60

### Control Panel

Manufacturer	SmartGen
Control Module Model	HGM6120CAN
Communication Ports	CANBUS





## Standard Devices

### 1. Auto Mains Failure Control Panel

#### Panel Equipments:

- Control with HGM module
- Static battery charger
- Emergency stop push button

#### A) Generating set control module HGM6120CAN features:

- Configurable via PC software or the front panel
- 5 programmable inputs (configurable for digital or analog signals)
- 4 programmable relay outputs
- Monitors 3-phase generator and mains (utility) voltage
- Event log (50 records)
- Configurable timers and alarm protection thresholds
- Automatic shutdown or alarm upon fault detection
- Supports remote start/stop and load transfer
- Engine pre-heat control (relay output)
- Precision measurement and display of engine and electrical parameters
- Engine total run time accumulation
- Red LED indicators for alarms/shutdown
- LCD display with backlight, supports 8 language interfaces
- Front panel test button
- Modular design, flush mounting

#### B) Metering via LCD display:

- Generator Voltage (L-L / L-N)
- Generator Current (L1, L2, L3)
- Generator Frequency (Hz)
- Generator Power (Kw)
- Generator Power Factor (COS  $\Phi$ )
- Accumulated Generator Energy (kWh)
- Load Percentage (%)
- Engine Oil Pressure (kPa / psi / bar)
- Engine Temperature ( $^{\circ}$ C /  $^{\circ}$ F)
- Fuel Level (%)
- Battery Voltage (V)
- Charger Voltage (V)
- Mains Voltage (L-L / L-N)

#### C) Alarms:

- Under Speed / Over Speed
- Under Voltage / Over Voltage
- Under Frequency / Over Frequency
- Overload / Over Current / Overpower
- Low Engine Oil Pressure
- High Engine Coolant Temperature
- Low Fuel Level (Optional)
- Low / High Battery Voltage



- Emergency Stop
- Charge Fail
- Sensor Open Circuit
- Fail to Start
- ECU Communication Failure (for EFI engines)
- Maintenance Due
- Aftertreatment System Related Alarms (for aftertreatment EFI gensets)

## 2. Power Outlet Terminal Board Mounted on the Gen-set Base Frame

### Standard Equipment

High quality, reliable and complete power unit  
Compact design  
Easy start and maintenance possibility  
Every generating set is subject to a comprehensive test program which includes full load testing, checking and provision of all control and safety shut down functions testing  
Fully engineered with a wide range of options and accessories: Canopy, sound proof canopy and on-road trailer

### Optional Equipment

#### Engine

Oil heater

#### Alternator

3/4 Pole Output Circuit Breaker  
Anti-condensation Heater

#### Transfer Panel

Charge ammeter  
Transfer Switch 3 Pole  
Transfer Switch 4 Pole  
Earth Fault, single set

### Auxiliary Equipment



Bulk fuel tank  
Automatic filling system  
Fuel-water separator filter  
Low fuel level alarm  
Residential silencer  
Enclosure or sound proof canopy  
Trailer  
Manual oil drain pump  
Tool kit for maintenance

## Aksa Certificates

### Directive

- 2006/42/EC : Machinery Safety Directive
- 2014/30/EU : Electromagnetic Compatibility Directive
- 2014/35/EU : Low Voltage Directive

### Standarts

- TS ISO 8528-5:2022 / TS EN ISO 8528-13:2018 : Reciprocating internal combustion engine-driven alternating current generating sets- Part:13: Safety

Quality Management Systems  
ISO 9001:2015  
ISO 14001:2015  
ISO 45001:2018  
ISO 27001:2013  
ISO 10002:2018