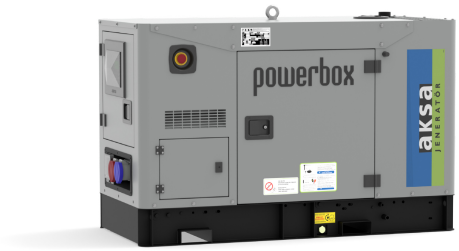


## Introduction

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 | 9.6 | 12 | 8.80 | 11 | 17 |

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 13A |
| Frequency (Hz) | 50 |
| Fuel Type | Diesel |
| Engine Make and Model | Aksa A4CRX19 |
| Alternator Make and Model | Aksa SC164B |
| Control Panel Model | HGM6120CAN |
| Canopy | ACP 1A-PB |

## Engine Specifications

### General Data

| | |
|---|---|
| Manufacturer | Aksa |
| Engine Model | A4CRX19 |
| Number of Cylinders / Type | 4 cylinders - in line |
| Bore mm (in) | 80 |
| Stroke mm (in) | 90 |

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| | |
|---|---|
| Displacement l (cu. In) | 1,809 |
| Compression Ratio | 18:1 |
| Engine Speed (rpm) | 1500 |
| Standby Power (kW/hp) | 13.7/18.4 |
| Prime Power (kW/hp) | 12.5/16.7 |
| Block Heater (QTY) | 1 |
| Block Heater Power (Watt) | 500 |
| Governor System | Mechanic |
| Air Filter | Dry Type |
| Aspiration | Naturally Aspirated |

## Lubrication System

| | |
|---|---|
| Oil Capacity l (qal) | 6 |
| Max. Oil Temperature ºC (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) | 5 |

## Exhaust System

| | |
|---|---|
| Exhaust Gas Flow (m³/min) | 3.14 |
| Exhaust Back Pressure in-Hg (kPa) | 6 |
| Exhaust Gas Temperature ºC (F) | 500 |

## Radiator

| | |
|---|---|
| Total Coolant Capacity (l) | 16.3 |
| Cooling Fan Air Flow m³/min (ft³/min) | 112.64 |
| External Restriction to Cooling Airflow (Pa) | 125 |

## Fuel Consumption

| | |
|---|---|
| Fuel Cons. @100% Prime Load l/h (kg/h) | 4.19 |

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| | |
|---|---|
| Fuel Cons. @75% Prime Load l/h (kg/h) | 3.51 |
| Fuel Cons. @50% Prime Load l/h (kg/h) | 2.42 |

## Alternator Characteristics

| | |
|---|---|
| Manufacturer | Aksa |
| Alternator Model | SC164B |
| 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 | 1672 |
| Width mm | 823 |
| Height mm | 1127 |
| Full Tank Capacity (l) | 32 |

## 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 Φ)
- Accumulated Generator Energy (kWh)
- Load Percentage (%)
- Engine Oil Pressure (kPa / psi / bar)
- Engine Temperature (°C / °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 (foraftertreatment 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

## Optıonal Equıpment

### Engine

Oil heater

### Alternator

3/4 Pole Output Circuit Breaker
Anti-condensation Heater

### Transfer Panel

Charge ammeter
Transfer Switch 3Pole
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

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