


## 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

1 Phase,50 Hz, PF 1

| Voltage (V) | STANDBY RATING (ESP) | | PRIME RATING (PRP) | | STANDBY CURRENT (A) |
|---|---|---|---|---|---|
| | kW | kVA | kW | kVA | |
| 220 | 10,0 | 10,0 | 9,5 | 9,5 | 45,4 |

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 12500-M |
| Frequency (Hz) | 50 |
| Fuel Type | Diesel |
| Engine Make and Model | Aksa HR1105FDE |
| Alternator Make and Model | Aksa 245x130(S) |
| Control Panel Model | HGM4020CAN |
| Canopy | APB 12500 KABIN |

## Engine Specifications

### General Data

| | |
|---|---|
| Manufacturer | Aksa |
| Engine Model | HR1105FDE |

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice. 11/06/2026
The stated values may vary depending on environmental conditions and operating circumstances.
Images may be subject to change.

| | |
|---|---|
| Number of Cylinders / Type | 1 cylinder |
| Bore mm (in) | 105 |
| Stroke mm (in) | 88 |
| Displacement l (cu. In) | 761 |
| Compression Ratio | 20:1 |
| Engine Speed (rpm) | 3000 |
| Rated Power (kW) | 13 |
| Rated Output (hp) | 17.2 |
| Governor System | Electronic |
| Air Filter | Dry Air Filter |

### Lubrication System

| | |
|---|---|
| Oil Capacity l (qal) | 2.2 |

### Fuel System

| | |
|---|---|
| Fuel Type | Diesel |
| Injection Type | Direct |
| Type of Fuel Pump | Solenoid Valve Fuel Pump |

### Electrical System

| | |
|---|---|
| Operating Voltage (Vdc) | 220V |
| Battery and Capacity (Qty/Ah) | 36 |

### Cooling System

| | |
|---|---|
| Cooling Method | Air Cooled |

### Fuel Consumption

| | |
|---|---|
| Fuel Cons. @100% Prime Load l/h (kg/h) | 3.38 |
| Fuel Cons. @75% Prime Load l/h (kg/h) | 2.58 |
| Fuel Cons. @50% Prime Load l/h (kg/h) | 1.93 |

## Alternator Characteristics

| | |
|---|---|
| Manufacturer | Aksa |
| Alternator Model | 245x130(S) |
| Frequency (Hz) | 50 |
| Voltage (V) | 380 |
| Phase | 1 |
| A.V.R. | Mechanical |

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice. 11/06/2026
The stated values may vary depending on environmental conditions and operating circumstances.
Images may be subject to change.

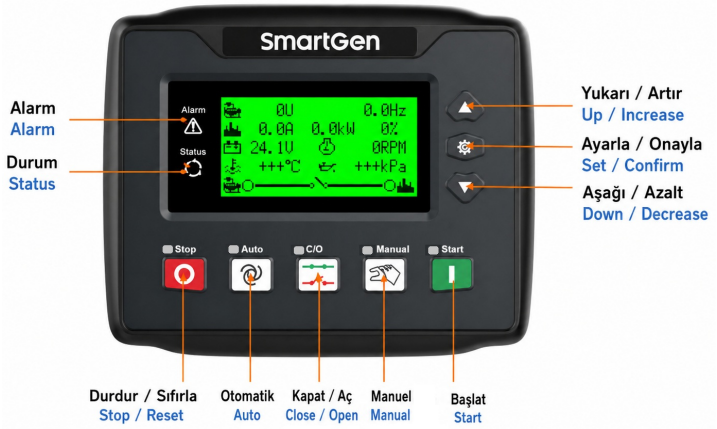
| | |
|---|---|
| Voltage Regulation | 1 |
| Insulation Class | H |
| Protection Class | IP23 |
| Rated Power Factor | 1 |
| Temperature Rise Class | H |

## Canopy Characteristics

| | |
|---|---|
| Length (mm) | 1120 |
| Width (mm) | 735 |
| Height (mm) | 860 |
| Full Tank Capacity (l) | 30 |
| Weight (kg) | 240 |

## Control Panel

| | |
|---|---|
| Manufacturer | SmartGen |
| Control Module Model | HGM4020CAN |
| Communication Ports | CANBUS |




### Standard Devices

132×64 backlit LCD display.
Selectable language support: Chinese, English, Spanish, Russian, Turkish, French, Portuguese, and Polish.
Push-button operation.
Durable hard acrylic screen protection with excellent wear and scratch resistance.
Silicone panel and buttons suitable for operation in extreme temperature environments.
RS485 communication interface supporting the following functions via MODBUS protocol:

- Remote Control
- Remote Monitoring

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice. 11/06/2026
The stated values may vary depending on environmental conditions and operating circumstances.
Images may be subject to change.

CANBUS communication port (HGM4020CAN model).
Compatible with engine ECUs supporting the J1939 protocol.
Enables monitoring of the following ECU parameters:

- Engine coolant temperature
- Oil pressure
- Engine speed (RPM)
- Fuel consumption
- Other essential engine parameters

CANBUS functions include:

- Engine start
- Engine stop
- Speed increase
- Speed decrease

Suitable for the following electrical system configurations:

- 3-Phase 4-Wire
- 3-Phase 3-Wire
- Single-Phase 2-Wire
- 2-Phase 3-Wire

Operating voltage:

- 120/240 V

Operating frequency:

- 50 Hz / 60 Hz

Measures and displays the following generator or mains parameters:

- Three-phase voltages
- Currents
- Power values
- Frequency

## Warnings

### Warning Alarms

- High Temperature
- Low Oil Pressure
- Gen Over Current
- Fail to Stop
- Low Fuel Level
- Charge Alt Failure
- Battery Under Volt
- Battery Over Volt
- Auxiliary Input
- Loss of Speed Signal
- Low Coolant Level
- Temp. Sensor Open
- Oil Pressure Sensor
- Open Level Sensor Open
- Temp. Sensor 2 Open
- Oil Pressure Sensor 2 Open
- Coolant Level Sensor Open
- High Temperature 2
- Low Oil Pressure 2
- Low Coolant Level
- Maintenance Due
- Gen Over Volt.
- Gen Under Volt.
- Gen Over Freq.
- Gen Under Freq.
- Charge Alt Failure
- Over Power
- ECU Warn

### Shutdown Alarms

- Emergency Stop
- Over Speed
- Under Speed
- Loss of Speed Signal
- Over Frequency
- Under Frequency
- Over Voltage
- Under Voltage
- Over Current
- Fail to Start
- High Temp.
- Low Oil Pressure
- No Generate Electricity
- Low Fuel Level
- Low Coolant Level
- Temp. Sensor Open
- Oil Pressure Sensor Open
- Fuel Level Sensor Open
- Temp. Sensor 2 Open
- Pressure Sensor 2 Open
- Coolant Level Sensor
- Open High Temp. 2
- Low Pressure 2
- Low Coolant Level
- Maintenance Due
- Over Power
- Digital Input Port
- ECU Alarm
- ECU Comm. Failure

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice. 11/06/2026
The stated values may vary depending on environmental conditions and operating circumstances.
Images may be subject to change.

## Standard Equipment

-High-quality, reliable, and complete power unit
-Compact design
-Easy starting and maintenance
-Each generator set undergoes a comprehensive test program including full load testing, checking and testing of all control and safety stop functions
-Complete engineering solution with a wide range of options and accessories: Cabin, soundproof canopy, and road-suitable trailer

## 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 50001:2018
ISO 27001:2013
ISO 10002:2018

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice. 11/06/2026
The stated values may vary depending on environmental conditions and operating circumstances.
Images may be subject to change.