INTRODUCTION

Aksa is committed to providing the most effective solution to the Data Center industry with the power it takes from engineering, production, distribution, and customer-oriented experience and knowledge. We are constantly improving designs, products and infrastructure to offer the highest level of reliability for Emergency Power Systems. While serving the industry in hundreds of countries Globally, we design our products and systems in line with the needs of Data Center practitioners at the center of our focus. Aksa generator group provides continuity, reliability and ideal performance for Data Centers. For all generator groups produced, preliminary product testing and factory manufacturing testing are performed according to the Uptime Institute's Tier Standards

Power (kVA)

3 Phase,50 Hz, PF 0.8

Voltage	STANDBY RATING (ESP)		PRIME RATING (PRP)		Standby Amper
	kW	kVA	kW	kVA	
400/231	2400,00	3000,00	2200,00	2750,00	4330,25

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 perod of operation.

General Characteristics

Model Name	AC 3000
Frequency (Hz)	50
Fuel Type	Diesel
Engine Made and Model	CUMMINS QSK78-G9
Alternator Made and Model	ECO 46 -VL/4 A
Control Panel Model	DSE 7320
Canopy	AK 101

ENGINE SPECIFICATIONS

Engine	CUMMINS
Engine Model	QSK78-G9
Number of Cylinder (L)	18 cylinders - V type
Bore (mm.)	170
Stroke (mm.)	190
Displacement (lt.)	77.6
Aspiration	Turbo Charged and AfterCooled
Compression Ratio	15.5:1
RPM (d/dk)	1500
Oil Capacity (Total With Filter) (lt)	466
Standby Power (kW/HP)	2539/3404
Prime Power	2304/3088
Block Heater QTY	2
Block Heater Power (Watt)	3000
Fuel Type	Diesel

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Injection Type and System	Direct
Type of Fuel Pump	Cummins HPI-PT
Governor System	Electronic
Operating Voltage (Vdc)	24 Vdc
Battery and Capacity (Qty/Ah)	6x143
Charge Alternator (A)	55
Cooling Method	Water Cooled
Coolant Capacity (engine only / with radiator) (lt)	166.6/
Air Filter	Dry Type
Fuel Cons. Prime With %100 Load (lt/hr)	528
Fuel Cons. Prime With %75 Load (lt/hr)	406
Fuel Cons. Prime With %50 Load (lt/hr)	291

ALTERNATOR CHARACTERISTICS

Manufacturer	Mecc Alte
Alternator Made and Model	ECO 46 -VL/4 A
Frequency (Hz)	50
Power (kVA)	2800
Voltage (V)	400
Phase	3
A.V.R.	DER1
Voltage Regulation	(+/-)0.5%
Insulation System	H
Protection	IP23
Rated Power Factor	0.8
WEIGHT COMP. GENERATOR (Kg)	5120

Open Gen.Set Dimensions (mm)

LENGTH	7421
WIDTH	2637
HEIGHT	4736
DRY WEIGHT (kg.)	16300
TANK CAPACITY (lt.)	2500

Gen.Set Canopy Dimensions (mm)

LENGTH	11000
WIDTH	2800
HEIGHT	3888
DRY WEIGHT (kg.)	25000
TANK CAPACITY (lt.)	-

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No Data

Control Panel

Control Module	DSE
Control Module Model	DSE 7320
Communication Ports	MODBUS

1. Menu navigation buttons
2. Close mains button
3. Main Status and instrumentation display
4. Alarm LED's
5. Close generator button
6. Status LED's
7. Operation selecting buttons

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 conrol module is a standard addition to our generator sets from 220 kVA upwards and it has been designed to start and stop diesel andgas 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

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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

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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)

Expension relay module (2157)

Expansion input module (2130)

Standards

Elecrical 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 efficincy.

Battery charger models' output V-I characteristic is very close to square

2405 has fully output shot circuit protection and ıt 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

- Water cooled diesel engine

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- Verticalremote Radiator and electrical fan drive
- Protective cage to prevent rotating and touching hot parts
- Output breaker
- Electric starter and charge alternator
- Battery (lead acid), cables and stand
- Automatic synchronization and power control system (multiple parallel generator)
- Circulation pump (for engine block heater)
- Engine block water heater
- Steel chassis and anti-vibration wedges
- Fuel tank separate from the group (Açıkset group)
- Flexible fuel connection hoses
- Alternator with single bearing and H insulation class
- Industrial capacity muffler and flexible steel compensator
- Electronic battery charger
- Operating and installation instructions

OPTIONAL EQUIPMENTS

ENGINE

Fuel-water separator filter

Oil heater

ALTERNATOR

Anti-condensation heater,

Bigger Power rate alternator

CONTROL PANEL

Continuous parallel system with the network

Network synchronization system

Remote communication and control

Remote alarm panel

Alarm output relays

Earth leakage, single generator

Charging ammeter

TRANSFER BOARD

Three or four-pole ATS system

Three or four-pole motorized output breaker

AUXILIARY EQUIPMENT

Main Fuel Tank

Automatic or manual fuel filling system

Oil drain, electric pump

Low and high fuel level alarm

Exhaust muffler, critical ytpe

Tool kit (for maintenance)

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Maintenance kit for 1500/3000 working hours

Antifreeze and engine lubricating oil (for -30 ° C ambient temperature)

Note:Radiator and canopy applications may vary due to project specifications.

AKSA CERTIFICATES

- ISO 14001-2004
- TS ISO 8528
- TS ISO 9001-2008
- CE
- SZUTEST
- 2000/14/EC

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