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 (kVA)

3 Phase,50 Hz, PF 0.8

Voltage	STANDBY RATING (ESP)		PRIME RATING (PRP)		Standby Amper
	kW	kVA	kW	kVA	
400/231	1320,00	1650,00	1200,00	1500,00	2381,64

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 1650
Frequency (Hz)	50
Fuel Type	Diesel
Engine Made and Model	CUMMINS KTA50-GS8
Alternator Made and Model	ECO 46-1S/4 A
Control Panel Model	DSE 7320
Canopy	AK 98-AP1650

ENGINE SPECIFICATIONS

Engine	CUMMINS
Engine Model	KTA50-GS8
Number of Cylinder (L)	16 cylinders - V type
Bore (mm.)	159
Stroke (mm.)	159
Displacement (lt.)	50.3
Aspiration	Turbo Charged and AfterCooled
Compression Ratio	14.9:1
RPM (d/dk)	1500
Oil Capacity (Total With Filter) (lt)	204
Standby Power (kW/HP)	1429/1915
Prime Power	1287/1725
Block Heater QTY	2
Block Heater Power (Watt)	3000
Fuel Type	Diesel
Injection Type and System	Direct
Type of Fuel Pump	Cummins PT
Governor System	Electronic
Operating Voltage (Vdc)	24 Vdc

Battery and Capacity (Qty/Ah)	4x143
Charge Alternator (A)	35
Cooling Method	Water Cooled
Cooling Fan Air Flow (m3/min)	2631
Coolant Capacity (engine only / with radiator) (lt)	165/420
Air Filter	Dry Type
Fuel Cons. Prime With %100 Load (lt/hr)	309
Fuel Cons. Prime With %75 Load (lt/hr)	238
Fuel Cons. Prime With %50 Load (lt/hr)	167

ALTERNATOR CHARACTERISTICS

Manufacturer	Mecc Alte
Alternator Made and Model	ECO 46-1S/4 A
Frequency (Hz)	50
Power (kVA)	1500
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)	3010
COOLING AIR (m³/min)	135

Open Gen.Set Dimensions (mm)

LENGTH	5396
WIDTH	1950
HEIGHT	2444
DRY WEIGHT (kg.)	10200
TANK CAPACITY (lt.)	2000

Gen.Set Canopy Dimensions (mm)

LENGTH	9000
WIDTH	2270
HEIGHT	2648
DRY WEIGHT (kg.)	15100
TANK CAPACITY (lt.)	1900

INTRODUCTION

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

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

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

- Radiator with mechanical fan

- Protective grille for rotating and hot parts
- Electric starter and charge alternator
- Starting battery (with lead acid) including rack and cables
- Engine coolant heater
- Steel base frame and anti-vibration isolators
- Spare external fuel tank (open set)
- Flexible fuel connection hoses
- Single bearing, class H alternator
- Industrial exhaust silencer and steel bellows supplied separately
- Static battery charger
- Manual for application and installation
- Generators Sets' voltage and frequency regulation comply with ISO 8528-5
- Generators Sets' can take 100% load at one step according to NFPA110

OPTIONAL EQUIPMENTS

ENGINE

Remote Radiator Cooling
Fuel-Water Seperator Filter
Oil heater

ALTERNATOR

Anti-Condensation Heater
Over sized alternator
Main line circuit breaker

CONTROL SYSTEM

Automatic synchronising and power control system (multi gen-set Parallel)
Paralel system with mains.
Transition synchronization with mains
Remote annunciator panel
Remote relay output
Alarm output relays
Remote communication with modem
Earth fault, single set
Charge Ammeter

TRANSFER SWITCH

Three or four pole contactor
Three or four pole motor operated circuit breaker

OTHER ACCESSORIES

Main Fuel Tank
Automatic or manual fuel filling system
Electrical oil drain pump
Low and high fuel level alarm

Residential silencer
Enclosure: weater protective or sound attenuated
Duct adapter (on radiator)
Inlet and outlet motorised louvers
Inlet and outlet acoustic baffles
Tool kit for maintenance
1500/3000 hours maintenance kit
Double wall chassis
Supplied with oil and coolant - 30 °C
Automatic transfer switch

AKSA CERTIFICATES

- TS ISO 8528
- CE
- SZUTEST
- 2000/14/EC