
## Einführung

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.

## Leistung

3 Phase,50 Hz, PF 0.8

| Spannung (V) | Bereitschaftsleistung (ESP) | | Primärleistung | | Standby-Strom |
|---|---|---|---|---|---|
| | kW | kVA | kW | kVA | |
| 400 / 231 | 352,0 | 440 | 308.00 | 385 | 635 |

„STANDBY-RATING (ESP) Gilt für die Stromversorgung wechselnder elektrischer Lasten für die Dauer einer Stromunterbrechung einer zuverlässigen Versorgungsquelle. ESP entspricht ISO 8528-1. Überlast ist nicht erlaubt.“

PRIME RATING (PRP) Gilt für die Stromversorgung unterschiedlicher elektrischer Lasten für unbegrenzte Stunden. PRP entspricht ISO 8528-1. 10 % Überlast ist für einen Zeitraum von 1 Stunde innerhalb eines 12-stündigen Betriebszeitraums verfügbar.

## Allgemeine Charakteristiken

| | |
|---|---|
| Modellname | APG 440 LPG |
| Frequenz (Hz) | 50 |
| Treibstoffart | LPG |
| Motor Marke und Modell | PSI 32L |
| Marke und Modell des Generators | Mecc Alte ECO 40-1S/4 C |
| Steuerung Modell | DSE 7320 |
| Schalldämmhaube | AUL 96 |

## Motorspezifikationen

### Allgemeine Daten

| | |
|---|---|
| Hersteller | PSI |
| Motor Modell | 32L |
| Anzahl der Zylinder | 12 cylinders - V type |
| Bohrung (mm) | 150 (5,9) |



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| | |
|---|---|
| Hub (mm.) | 150 (5,9) |
| Hubraum (lt.) | 31.8 (1941) |
| Kompressionsrate | 10.5:1 |
| Motorumdrehungen (U/min) | 1500 |
| Standby-Leistung (kW/PS) | 405 (543) |
| Prime Leistung (kW/PS) | 344 (462) |
| Kühlwasservorwärmung Anzahl | 1 |
| Kühlwasservorwärmung (Watt) | 3000 |
| Drezahlregelung | ECU |
| Luftfilter | Dry Type |
| Ansaugung | Turbo Charged |

## Schmiersystem

| | |
|---|---|
| Ölkapazität (lt) | 122,1 |
| Max. Öltemperatur (˚C) | 121 (250) |

## Kraftstoffsystem

| | |
|---|---|
| Treibstoffart | LPG |
| Injektionsart und -system | Spark-Ignited |
| Typ der Kraftstoffpumpe | - |

## Elektrisches System

| | |
|---|---|
| Betriebsspannung (Vdc) | 24 Vdc |
| Batterie und Kapazität (Menge/Ah) | 2 / 120 |
| Lichtmaschine | 53 |

## Kühlsystem

| | |
|---|---|
| Kühlungsmethode | Water Cooled |
| | 110 (29,1) |

## Abgassystem

| | |
|---|---|
| Abgasstrom (m³/min.) | 77 (2729) |
| Abgastemp. (C) | 631 (1168) |
| Wärmeabgabe an das Abgas | 313 (17788) |

## Kühler

| | |
|---|---|
| Gesamtkühlmittelkapazität (lt) | 212,1 (54,4) |
| Luftstrom des Kühlgebläses (m³/min.) | 971 |
| Externe Einschränkung des Kühlluftstroms (Pa) | 50000 |

### Kraftstoffverbrauch

| | |
|---|---|
| Kraftstoffverbrauch Prime mit 100 % Leistung (l/h) | 173 (88) |
| Kraftstoffverbrauch Prime mit 75 % Leistung (l/h) | 141 (72) |
| Kraftstoffverbrauch Prime mit 50 % Leistung (l/h) | 100 (51) |

## Eigenschaften des Generators

| | |
|---|---|
| Hersteller | Mecc Alte |
| Generatormodell | ECO 40-1S/4 C |
| Frequenz (Hz) | 50 |
| Leistung (kVA) | 400 |
| Spannung (V) | 400 |
| Phase | 3 |
| Regler | DER1 |
| Spannungsregulierung | 0.5 |
| Isoliersystem | H |
| Schutz | IP23 |
| Nennleistungsfaktor | 0.8 |
| Gewicht kompletter Generator (kg) | 1047 |
| Kühlungsluft (m³/min) | 54 |

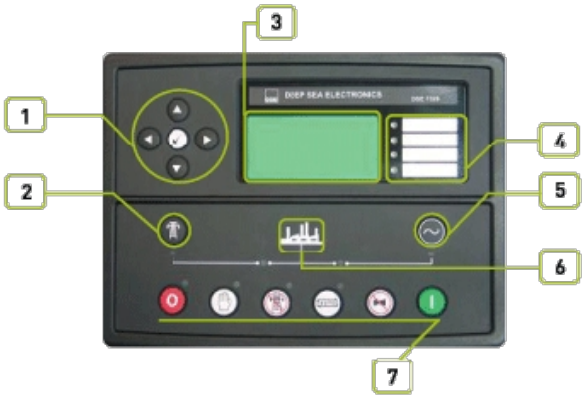
## Eigenschaften der Schalldämmhaube

| | |
|---|---|
| Length3 | 5502 (217) |
| Width3 | 2311 (91) |
| Height3 | 2514 (99) |

## Steuerung

| | |
|---|---|
| Hersteller | DSE |
| Steuerungsmodul Modell | DSE 7320 |
| Kommunikationsanschlüsse | 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




## Standardgeräte

DSE model 7320, Auto Mains Failure control module, with a highly sophisticated level of new features and functions
Static battery charger, Fuses for control circuits

## Steuergerät

- The DSE 7320 control module is a standard addition to our generator sets from 220 kVA upwards and it has been designed to start and stop diesel and gas 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.

## Bau und Fertigstellung

- Components 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

The Control panel is mounted at the generating set baseframe on robust steel stand or power module. Located at side of generating set with properly panel visibility.

## Motor

-Engine speed
-Oil pressure
-Coolant temperature
-Run time
-Battery volts
-Engine maintenance due

## Abschaltung

-Fail to start
-Emergency stop
-Low oil pressure
-High engine temperature
-Low coolant level
-Under/over speed
-Under/over generator frequency
-Under/over generator voltage
-Oil pressure sensor open
-Phase rotation

## Warnungen

-Charge failure
-Battery under voltage
-Fail to stop
-Low fuel level (opt.)
-kW over load
-Negative phase sequence
-Loss of speed signal

## Generator

## Warnung

## Elektrische Auslösung

-Voltage (L-L, L-N)
-Current (L1-L2-L3)
-Frequency
-Earthcurrent
-kW
-Pf
-kVAr
-kWh, kVAh, kVArh
-Phasesequence

-Low oil pressure
-High engine temperature
-Low engine temperature
-Under/over speed
-Under/over generator frequency
-Under/over generator voltage
-ECU warning

-Earth fault
-kW over load
-Generator over current
-Negative phase sequence

### Netz

-Voltage (L-L, L-N)
-Frequency

### Erweiterungen

-Additional LED module (2548)
-Expansion relay module (2157)
-Expansion input module (2130)

### Optionen

- High oil temperature shut down
- Low fuel level shut down
- Low fuel level alarm
- High fuel level alarm

### Compliance-Liste des Control Panels

- Electrical Safety / Electro Magnetic Compatibility (EMC)
- BS EN 61000-6-2 EMC Generic Immunity Standard
- BS EN 61000-6-4 EMC Generic Emission Standard
- BS EN 60950 Electrical Safety

### Statisches Batterieladegerät

- Battery charger is manufactured with switching-mode and SMD technology and it has high efficiency.
- Battery charger models' output V-I characteristic is very close to square
- 2405 has fully output shot circuit protection and it 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 Ausrüstung

- Water cooled, gas 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
- Base frame design incorporates an anti-vibration isolators
- Flexible fuel connection hoses
- Single bearing, class H alternator
- Industrial exhaust silencer and steel bellows supplied separately(for open sets)
- Static battery charger
- Manual for application and installation

## Aksa-Zertifikate

**Richtlinie**

- 2006/42/EC : Machinery Safety Directive
- 2004/108/EC : Electromagnetic Compatibility Directive
- 2006/95/EC : Low Voltage Directive

**Standards**

- EN ISO 8528-13:2016 : Reciprocating internal combustion engine-driven alternating current generating sets- Part:13: Safety

- Max load and overload ratings based on ISO 3046 gross flywheel power.
- Technical data based on ISO 3046-1 standards of 77°F(25°C), 14,5Psia (100kPa) and 30% relative humidity.
- Production tolerances in engines and installed components can account for power variations of ± 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.
- All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48,17 MJ/kg.
- At 0,5 in-H2O of Package Restriction at STP
-Volume calculated using density of 0,717 kg/m3 for NG and 0,51 kg/L for LPG