



Power Generator

FD 1000 S-T

Code: F.1000.SAG24-T9000T1998-02

Main Features

- Digital voltage regulation +/-0,25 %
- Three phase voltage control
- Low disturbance level THD <1,5%
- Alternator short circuit capacity 270 % I_n (optional 300 %)
- Class H insulation
- Protection index IP23
- Common power output busbar
- Performance class G3 (acc. ISO 8528-5)
- Ready to load just after start
- Synchronization with other units
- Synchronization with mains available as additional option
- Autonomy 12,4 h with 75 % load
- Even wear-off due to automatic operation priority swap

General Data

Maximum power ESP	1100,0 kVA / 880,0 kW
Nominal power PRP	1000,0 kVA / 800,0 kW
Nominal Current PRP	1443,0 A
Frequency	50 Hz
Voltage	400 V
Emission standard	fuel optimized
Fuel	Diesel (EN 590)
Fuel tank capacity	2x990 l
Fuel consumption @ 50% / 75% 100% /110% PRP	97,6 / 143,4 / 199,0 / 223 l/h
Autonomy @ 75% / 100% load	12,4 / 9,0 h
Weight without fuel	10100 kg
Dimensions L x W x H	9000 x 1900 x 2600 mm
Guaranteed noise power L_{wa}	104 dBA
Acoustic pressure @7mL_{pa}	73,7 ± 1 dBA

Main Components & Equipment

- Scania DC13 072A 02-14 engine
- Leroy Sommer TAL 0473 C alternator
- Brushless alternator
- Digital AVR
- ComAp IG4 200 Controller
- 2 x Schneider NS800 3P + Micrologic 2.0 type generator circuit breaker
- GCB undervoltage release coil
- Linear automatic battery charger
- Engine heater
- Electronic speed governor
- Fuel system unit injectors, PDE
- Welded frame with 2x990 l fuel tank, spill containment and noise insulation
- Two fuel inlets
- Four lifting eyes
- Extended supports for easy attachment to the ground

For details see page 3

Definitions

Nominal Power PRP:

Prime power available in variable load application in accordance with ISO 8528, 10% overload capacity is available for a period of 1 hour within a 12-hour period of operation. Average power consumption should not exceed 70% PRP for each 24-hour period of operation.

Maximum power ESP:

Emergency standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload allowed, limited to 200h of operation per year. Max mean load factor of 70% of rated power over 24-hour period of operation.

Norms and Directives

- Machinery directive 2006/42/EC
- Low voltage directive 2014/35/EU
- EMC directive 2014/30/EU
- Noise directive 2000/14/EC
- ISO 8528-1/2018, ISO 8528-5/2022
- ISO 8528-13:2016
- IEC 60204-1

Contact data

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Engine

Manufacturer	Scania
Type	DC13 072A 02-14
Made in	Sweden
Engine power	428,0 kW
Emission standard	fuel optimized
Rotation per minute	1500 rpm
Engine governor	electronic
Governor class	G3 (ISO 8528-5)
Displacement	12,7 l
No of cylinder	6
Fuel system	unit injectors, PDE
Electrical system	24 V
Cooling system capacity	38,0 l
Oil pan capacity	36,0 l
Fuel type	Diesel (EN 590)

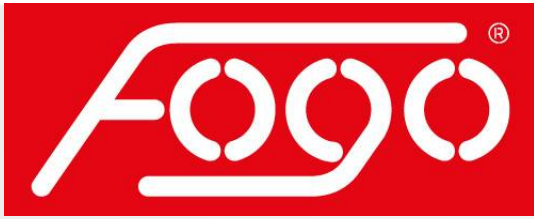
Alternator

Manufacturer	Leroy Sommer
Type	TAL 0473 C
Made in	Czech Republic
Nominal Voltage	400 V
Nominal power factor (cos φ)	0,8
Ambient temperature, altitude	40 °C, 1000 m a.s.l.
Nominal Power	500,0 kVA
Protection index	IP 23
No of bearing	Single bearing
Coupling	Direct
Technology	Brushless
Short circuit maintaining capacity	270% 10s
Efficiency	94,4 %
Insulation class	H
Total harmonic content THD	<1,5 %
Reactance Xd''	11,7 %
Voltage regulator type	AVR, digital
Voltage measurement	3 phase
Voltage accuracy	+/- 0,25 %
AVR supply system	AREP+
AVR supply optional	PMG

Controller

- Controller type: ComAp IntelliGen4 200,
- Intuitive operator interface,
- Parallel operation for up to 32 gen-sets,
- Support of MINT and SPTM applications,
- Running Hours equalization,
- Load sharing and VAr sharing via CAN,
- Power management, load demand start / stop,
- Comprehensive history log with up to 350 events,
- Total remote monitoring and control,
- Real time clock,
- Detailed event based history with up to 350 records,
- Rental timers,
- PLC support with PLC editor and monitor,
- True RMS measurement,
- Generator protection (over/under frequency, voltage, overcurrent),
- Battery voltage measurement,
- Complete engine and alternator protection,
- Multipurpose flexible timers with full calendar,
- Communication with ECU, supporting CAN J1939 standard,
- Up to 5 languages in the controller,
- Active SMS and emails in different languages,
- Integrated communication and control ports (USB/CAN/RS485 on board, USB host),
- Support of MODBUS RTU/TCP or SNMP v1/v2c *
- 2 slots for plug-in modules,
- Plug-in module concept for more capabilities (RS232, RS485, Ethernet, GPRS, 4G/LTE, Modbus, SNMP, emails, SMS, I/Os),
- Cloud-based monitoring and control via WebSupervisor (optional module required),
- Geofencing and tracking via WebSupervisor (optional module required),
- 3 levels of password protection,
- PLC module for extended, customized functionality,
- Spare signals available: 4 binary inputs, 2 binary outputs, 3 analogue inputs





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Standard equipment

- Scania DC13 072A 02-14 engine
- Electronic engine speed governor
- Oil low pressure switch
- Oil pressure sensor
- Engine high temperature switch
- Engine high temperature sensor
- Engine preheating with thermostat
- Engine oil Titan Cargo 15W40
- Fuel filter with water separator
- Coolant Fuchs Maintain Fricofin LL-50
- Coolant inlet outside, on the top of the canopy
- Starting batteries 4x180Ah
- Linear automatic battery charger
- Leroy Sommer TAL 0473 C alternator
- Digital AVR
- GCB 2 x Schneider NS800 3P + Micrologic 2.0
- GCB undervoltage release coil
- Busbar power output
- ComAp IG4 200 controller
- Acoustic alarm
- Emergency stop button
- Silenced canopy, RAL 7024
- Fuel tank integrated with a frame and spill containment
- Two fuel inlets inside the canopy
- Fuel level indicator
- Engine and alternator anti vibration mounts
- Exhaust silencer with compensator
- Lifting eyes

Optional equipment

- Electronic engine speed governor
- Battery disconnecter
- 4P Schneider NS Micrologic 2.0 GCB
- Transfer switch with ATS controller
- ATS accessories for outdoor application
- GPRS communication card
- Ethernet card
- RS 485, RS 232 card
- Remote display
- Fuel inlet outside of the canopy with lock
- Generator spill containment level detector
- External, double wall fuel tank 1 000 – 10 000 l
- Fuel tank filling pump and shut-off valve

Maintenance guidelines

Fuel filters replacement	500 h / 1 year
Oil replacement	After first 100h, then every 500 h / 1 year
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Coolant replacement	1000 h / 2 years
Air filter replacement	500 h
Battery replacement	2 years
Electrical installation	According to local requirements, at least once per year

Installation guidelines

Power terminal	Common busbar
Recommended cable for up to 30m power cable way	Flexible 3x5x240 mm ²
Recommended cable for do 30m generator heater supply	Flexible 5x2,5 mm ²
Exhaust pipe min diameter (max. 7 m, 4 bends)	133 mm
Exhaust pipe min diameter (max. 15 m, 4 bends)	

*For additional cable connection with FOGO ATS see ATS wiring diagram

Warranty

Continuous operation generators	12 months up to 1000 working hours
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