



Picture for reference only

Power Generator

FD 100 Z5-Q

Article: 50500

Code: F.0100.Z5ZC2-Q2675T500-02

Main Features

- Digital voltage regulation +/-0,25 %
- Three phase voltage control
- Low disturbance level THD <3%
- Alternator short circuit capacity 320% I_n 10s
- Class H insulation
- Protection index IP23
- Performance class G3 (acc. ISO 8528-5)
- Ready to load just after start
- AMF and MRS functionality and protection
- Autonomy 27,2 h with 75 % load
- Compact design
- Forklift manouvvable from the front and side wall

General Data

Maximum power ESP	110,0 kVA / 88,0 kW
Nominal power PRP	100,0 kVA / 80,0 kW
Nominal Current PRP	144,0 A
Frequency	50 Hz
Voltage	400 V
Emission standard	stage V
Fuel	Diesel (EN 590)
Fuel tank capacity	500 l
Fuel consumption @ 50% / 75% / 100% / 110% PRP	11,3 / 16,5 / 21,7 / 23,7 l/h
Autonomy @ 75% / 100% load	27,2 / 20,7 h
Weight without fuel	~1700 kg
Dimensions L x W x H	2675 x 1200 x 1860 mm
Guaranteed noise power L_{wa}	97 dBA
Acoustic pressure @7mL_{pa}	~68 dBA

Main Components & Equipment

- Deutz TCD 4.0 L4 engine
- FOGO / Linz PRO22S D/4 alternator
- Brushless alternator
- Digital AVR
- ComAp IL4-AMF25 Controller
- Schneider NSX 160 3P + Mic.2.2 type generator circuit breaker
- GCB shunt release coil
- Linear automatic battery charger
- Engine heater
- ECU speed governor
- Fuel system
- Welded frame with 500 l fuel tank, spill containment and noise insulation
- Two fuel inlets
- Four lifting eyes
- Extended forklift skids 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 1h within a 12-hour period of operation. Average power consumption should not exceed 70% PRP for each 24 hours of work.

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 500h of operation per year, average power consumption should not exceed 80% ESP for each 24 hours of work. Continuous operation limited to 300h.

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

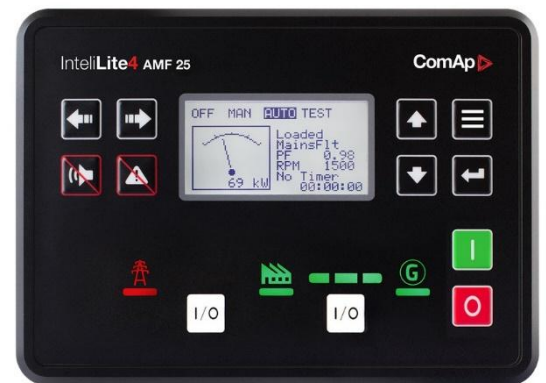
Manufacturer	Deutz
Type	TCD 4.0 L4
Made in	Germany
Engine power	92,7 kW
Emission standard	stage V
Rotation per minute	1500 rpm
Engine governor	ECU
Governor class	G3 (ISO 8528-5)
Displacement	3,9 l
No of cylinder	4
Fuel system	12 V
Fuel type	Diesel (EN 590)

Alternator

Manufacturer	FOGO / Linz
Type	PRO22S D/4
Made in	Italy
Nominal Voltage	400 V
Nominal power factor (cos φ)	0,8
Ambient temperature, altitude	40 °C, 1000 m a.s.l.
Nominal Power	100,0 kVA
Protection index	IP 23
No of bearing	Single bearing
Coupling	Direct
Technology	Brushless
Short circuit maintaining capacity	320% 10s
Efficiency	90,6 %
Insulation class	H
Total harmonic content THD	<3 %
Reactance Xd''	9 %
Voltage regulator type	Digital AVR
Voltage measurement	3 phase
Voltage accuracy	+/- 0,25 %
AVR supply system	Auxiliary winding
AVR supply optional	PMG

Controller

- Controller type: ComAp IntelliLite 4 AMF 25
- Support of Dual AMF/MRS applications
- Direct communication with EFI engines
- Total remote monitoring and control
- Intuitive operator interface, adjustable Main Screen
- Real time clock with battery back-up
- Comprehensive history log with up to 350 events
- 3 phase true RMS current and voltage measurement
- Both mains and generator voltage detection
- Active/Reactive Power and Power Factor per phase measurement
- Run Hours counter with source selector
- 3 maintenance timers (counting even under zero)
- Multipurpose flexible timers (also for rental)
- Battery voltage measurement
- Complete engine and alternator protection
- CAN modules support
- USB port on-board
- Inbuild RS485
- 2 slots for plug-in modules
- Full remote communications support (AirGate 2.0)
- Plug-in module concept for more remote communication capabilities (Ethernet /4G, Modbus TCP/RTU, SNMP v1/v2c.)
- Cloud-based monitoring and control via WebSupervisor (optional module required)
- Geofencing and tracking based on GPS position (optional module required)
- Active SMS and emails
- 3 levels of password protection
- Cyber security improvement
- In-built PLC, complemented with a monitoring/debugging tool, for additional functionality, if required
- Spare inputs and outputs available by default: binary input – 3, binary output – 1, analogue input – 3,
- A version for low temperature is also available





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Standard equipment

- Deutz TCD 4.0 L4 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 MAXX II 5W-30
- Fuel filter with water separator
- Coolant Fuchs Maintain Fuchs Maintain Fricofin LL 50
- Coolant inlet outside, on the top of the canopy
- Starting batteries 100 Ah
- Linear automatic battery charger
- FOGO / Linz PRO22S D/4 alternator
- Digital AVR DVR, cyfrowy
- GCB Schneider NSX 160 3P + Mic.2.2
- GCB shunt release coil
- ComAp IL4-AMF25 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
- Forklift supports and lifting eyes

Optional equipment

- Oil draining hand pump
- Battery disconnecter
- 4P Schneider NSX Micrologic 2.2 GCB
- Power Lock type power output
- Power sockets box
- Transfer switch controlled by generator controller
- 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 50h, then every 500 h / 1 year
Oil filters replacement	After first 100h, then every 500 h / 1 year
Coolant replacement	2000h / 2 years
Air filter replacement	1000 h
Battery replacement	2 years
Electrical installation	According to local requirements, at least once per year

Installation guidelines

Power terminal	GCB terminal
Recommended cable for up to 30m power cable way	Flexible 5x50 mm ²
Recommended cable for do 30m generator heater supply	Flexible 3x2,5 mm ²
Exhaust pipe min diameter (max. 7 m, 4 bends)	
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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