Model: DE110D5

Powered by DEUTZ

Generator Specification

Service	PRP(1)	ESP(2)
Power (kVA)	100	110
Power (kW)	80	88
Rated speed (r.p.m)	1500	
Standard voltage (V)	400/230V	
Rated at power factor(cos phi)	0.8	

Dynamis Power gensets are compliant with ISO 9001 and CE standard, which include the following directives:

- 2006/42/EC Machinery safety.
- 2006/95/EC Low voltage
- EN 60204-1: 2006+A1: 2009, EN ISO 12100: 2010, EN ISO 13849-1: 2008, EN 12601 : 2010

(1) PRP (Prime Power):
According to ISO8528-1, prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during at 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

(2) ESP (Standby Power):
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. No overload capability is available.

Powers Voltage (V)	ESP KVA	ESP KW	PRP KVA	PRP KW	Standby Amps
415/240	110	88	100	80	153.0
400/230	110	88	100	80	158.8
380/220	110	88	100	80	167.1

Performance Data		
Model		DE110D5
Engine brand		Deutz
Engine model		BF4M1013EC
Speed control type		Mechanical
Phase		3
Control system		Digital
Starter motor voltage		12/24V
Frequency		50HZ
Engine speed (RPM)		1500
Fuel Consumption (L/H)	100% standby power	-
	100% prime power	23.9
	75% prime power	17.9
	50% prime power	12.2

Standard reference Conditions
Note: Standard reference condition 25℃ (77℉) air inlet temp, 100m(328ft) A.S.L 30% relative humidity. Fuel consumption dat with diesel fuel with specific gravity of 0.85 and conforming to BS 2869: 1998， Class A2

Dimension and Weight		
Dimension	Open	Silent
Length (L)	2195mm	3050mm
Width (W)	1040mm	1100mm
Height (H)	1670mm	1832mm
Net Weight	1180KG	1765KG
Fuel Tank (L)	210L	190L

DYNAMIS POWER SOLUTIONS

Engine Specification: BF4M1013EC

Basic technical data	
No. of cylinders	4
Cylinder arrangement	In-line
Cycle	4 stroke
Injection system	Single injection pumps
Displacement	4.764 L
Bore	108 mm
Stroke	130 mm
Compression ratio	17.6:1
Mean effective pressure	12.59 bar
Piston speed	9.97 m/s
Rotation	CCW
Exhaust emission standard	TBD

Cooling system	
Delivery of coolant pump	10.2 m^3/h
Min. pressure before coolant pump	0.3 bar
Coolant capacity(engine)	7.4 L
Coolant capacity (incl. cooling unit)	19.7 L
Air to boil	60℃
Fan power consumption	5.9 KW
Cooling air flow	6100 m^3/h
Air pressure loss, external	1.5 mbar
Heat balance	
Heat dissipation (engine radiator)	47.8 KW
Heat dissipation (CAC)	9.9 KW
Heat dissipation (Convection)	9.0 KW

Inlet / Exhaust Data	
Max. intake depression(switch setting)	25 mbar
Combustion air volume	329.2 m^3/h
Max. exhaust back pressure	30 mbar
Max. exhaust gas temperature	540℃
Exhaust gas flow (at above temp)	951 m^3/h
Exhaust flange/pipe diameter	TBD

Output	
Gross output (LTP)	102 KW
Fan reduction	5.9 KW
Net flywheel	96.1 KW
Electrical output	TBD
Gross output (PRP)	TBD
Gross output (Continous power)	TBD

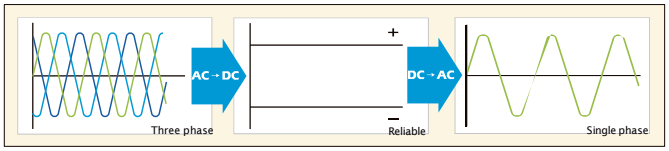
Lubrication system	
Oil specification	TR0199-99-3002/6
Oil consumption (as % of fuel consumption)	0.3
Oil capacity (sump)	11 L
Min. oil pressure (warning)	2.7 bar
Min. oil pressure (shut down)	2 bar
Max. permissible oil temp(oil pan)	TBD

Electrical system	
Voltage	12V or 24V
Starter	TBD
Alternator output	TBD

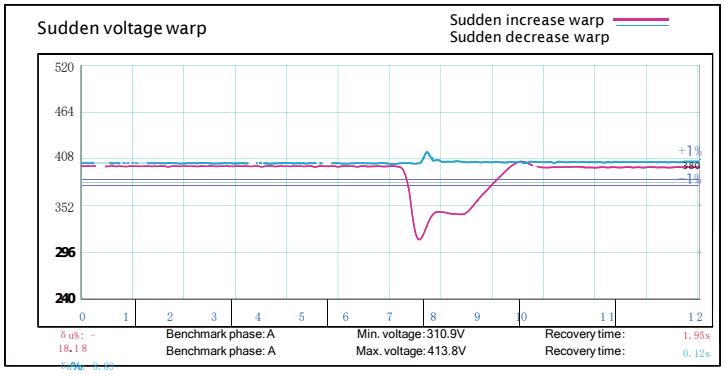
DYNAMIS POWER SOLUTIONS

Alternator Specification

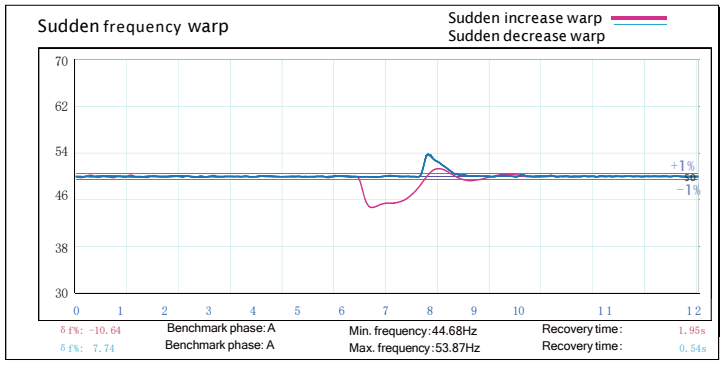
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
W inding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



Options

Engine	Alternator	Generator Sets	Fuel System
· Water Jacket Pre-heater · Fuel heater	· Winding Temp measuring Instrument · Alternator Pre-heater · PMG · Anti-damp and anti-corrosion treatment • Anti-condensation heater · Winding and bearing RTD	· Tools with the machine • Extended range fuel tank • Bunded fuel tank	• Low fuel level alarm • Automatic fuel feeding system · Fuel T-valves
Canopy	**Lub oil system**	**Cooling System**	**Control Panel**
· Rental type Canopy • Trailer	· Oil Pre-heater · Oil temp sensor	· Front heat protection	· Remote control panel · ATS · Synchronizing controller · Adjustable earth leakage relay

Control Panel

Configuration

- Emergency stop button
- Protection MCB
- Battery charger
- Integrated aviation plug
- ATS connection
- Digital control module

Features

- 3 phase generator set monitoring
- Support of engines equipped with electronic control unit
- Comprehensive diagnostic message
- Automatic or manual start/stop of the gensets
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display
- Parameters adjustable via keyboard or PC
- Mains measurements（50HZ/60HZ）
- Generator measurements（50HZ/60HZ）
- Comprehensive shutdown or warning on fault condition
- 3 phase Generator protections
  - Over-/under voltage
  - Over-/under frequency
  - Current/voltage asymmetry
  - Over current/overload
- 3 phase AMF function
  - Over-/under frequency
  - Over-/under voltage
  - Voltage asymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface
- Modem communication support
- Hours counter
- Sealed to Ip65
- Event log

Benefits

- Less wiring and components
- Integrated solution
- Less engineering and programming
- User friendly set-up and button layout
- Module can be configured to suit individual applications
- PC software for simplified configuration
- Wide range of communication capabilities

Operation conditions

- Operation temp: -20 ℃ to + 70 ℃
- Storage temp: -30 ℃ to + 80 ℃
- Operating humidity: 95% w/o condensation
- Vibration: 5-25Hz, ±1.6 mm
  5-100Hz, a=4g
- Shocks: a= 500m/s²

Options

- Ethernet interface (Remote monitoring and control)
- GSM modem/wireless internet (Remote monitoring and control)
- RS232-RS485 Dual port interface
- Synchronizing control panel
- Distribution board with sockets kit and power busbar
- Battery trickle charge ammeter
- Earth leakage protection
- Earth fault protection
- Low fuel level alarm
- Low fuel level shutdown
- High fuel level alarm
- Fuel transfer system control
- Low coolant level shutdown
- High lube oil temp shutdown
- Overload via alarm switch on breaker
- Engine coolant heater controls
- Control panel heater
- Speed adjust switch
- Oil temp displayed on LCD screen
- Additional 8 inputs and outputs

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