

VDE100-5

DIESEL GENERATOR SET / SILENT



100

kVA

STANDBY POWER

90

kVA

PRIME POWER

50

Hz

FREQUENCY

400/230

V

VOLTAGE

DEUTZ BF4M2012C G2

3 phase · 0.8 PF · 1500 rpm

CONFIGURATION COMPARISON

Configuration	Dimensions (L × W × H)	Dry weight	Fuel tank
Open set	2000 × 1035 × 1485 mm	1080 kg	170 L
Silent set	2750 × 1100 × 1735 mm	1450 kg	200 L

Performance, engine, alternator and controller data are common to both configurations.

GENERAL CHARACTERISTICS

VDE100-5 · 50 Hz · 3 Phase

RATED PERFORMANCE

Standby Power (kVA)	100
Standby Power (kW)	80
Prime Power (kVA)	90
Prime Power (kW)	72
Power Factor (Cos Phi)	0.8
Diesel Engine	BF4M2012C G2
Frequency (Hz)	50
Rated Speed (rpm)	1500
Phase	3
Standard Voltage (V)	400/230
Available Voltages (V)	380/220 · 415/240

POWER DEFINITIONS

STANDBY POWER (ESP)

Available for supplying emergency power during a utility interruption. The stated rating follows ISO 8528-1.

PRIME POWER (PRP)

Available for an unlimited number of annual operating hours in variable-load applications, in accordance with ISO 8528-1.

TERMS OF USE

Nominal power is stated at 25 °C inlet-air temperature, 100 kPa barometric pressure (100 m A.S.L.) and 30% relative humidity.

RATED OUTPUT CURRENT BY VOLTAGE

Rated voltage	Standby current (100 kVA)	Prime current (90 kVA)
380/220 V	151.9 A	136.7 A
400/230 V	144.3 A	129.9 A
415/240 V	139.1 A	125.2 A

ENGINE DATA

DEUTZ BF4M2012C G2

GENERAL ENGINE DATA

Engine brand	DEUTZ
Engine model	BF4M2012C G2
Engine type	4-stroke diesel
Governor type	Electronic
Injection type	Direct
Aspiration type	Turbocharged and Air to Air
Cylinders and arrangement	4-L

FUEL CONSUMPTION

100% load ESP	23.4 L/h
100% load PRP	21.3 L/h
75% load PRP	15.9 L/h
50% load PRP	10.8 L/h

AIR SYSTEM

Intake air flow	88.9 L/s
Cooling air flow	1500 L/s

GENERAL ENGINE DATA

Bore × stroke	101 × 126 mm
Displacement	4.04 L
Cooling system	Water-cooled
Lube oil consumption at full load	0.15% of fuel consumption
Compression ratio	19:1
Air filter	Dry

EXHAUST SYSTEM

Maximum exhaust temperature	600 °C
Exhaust gas flow	301.9 L/s
Maximum allowed back pressure	3 kPa

STARTING SYSTEM

Starting power	6 kW
Recommended battery	60 Ah
Number of batteries	2
Auxiliary voltage	24 VDC

OIL AND COOLING CAPACITIES

Engine oil capacity	8.5 L
Total coolant capacity	15.9 L

ALTERNATOR DATA

3-phase · Brushless · Electronic AVR

GENERAL ALTERNATOR DATA

Number of phases	3
Power factor (Cos Phi)	0.8
Poles	4
Winding connections (standard)	Star-series
Insulation	H class
Enclosure (according to IEC 34-5)	IP23
Excitation system	Self-excited, brushless
Voltage regulator	AVR (Electronic)
Number of bearings	Single bearing
Coupling system	Flexible disc
Coating type	Standard (vacuum impregnation)

CONTROL MODULE

ComAp IntelliNano AMF 5



AUTOMATIC MAINS FAILURE

AMF CONTROL

Provides automatic mains failure control plus manual or remote start/stop, with generator and mains measurement, protection, event logging and timer functions.

CORE FUNCTIONS

01	Automatic Mains Failure plus manual or remote start/stop	05	Detailed event history with up to 100 records for fault analysis
02	Configuration, commissioning and monitoring through IntelliConfig	06	USB-C for configuration/firmware update; CAN supports J1939 communication
03	3-phase generator and mains voltage measurement, plus 3-phase generator current measurement	07	User setpoints, protections and dedicated emergency-stop functionality
04	6 binary outputs, 4 + 1 binary inputs and 3 analog inputs for flexible I/O integration	08	One slot for optional Ethernet, 4G-GPS or dual-port RS232/RS485 module

CONNECTIVITY

InteliNano AMF 5 · Communication options

USB-C

CAN / J1939

INTERNET

MODBUS RTU

COMMUNICATION AND MONITORING FEATURES

- 01

USB-C supports controller configuration and firmware updates, including power-over-USB-C
- 02

CAN interface supports J1939 communication with compatible engine ECUs
- 03

One plug-in slot: choose Ethernet, 4G-GPS or dual-port RS232/RS485 (HW 2.0+)
- 04

Remote monitoring support via AirGate 2.0, WebSupervisor and InteliScada
- 05

Internet access is available through the optional Ethernet or 4G-GPS module
- 06

Modbus RTU is available through the optional dual-port RS232/RS485 module
- 07

4G-GPS supports geo-fencing; User Access Management improves access control

PLUG-IN MODULES

CM3-ETHERNET · CM2-4G-GPS · CM-RS232-485

Only one module can be installed. Plug-in support requires controller HW 2.0 or higher.