

VF16.5-5

DIESEL GENERATOR SET / OPEN + SILENT



OPEN SET



SILENT SET

16.5

kVA

STANDBY POWER

15

kVA

PRIME POWER

50

Hz

FREQUENCY

400/230

V

VOLTAGE

FAWDE 4DW81-23D

3 phase · 0.8 PF · 1500 rpm

CONFIGURATION COMPARISON

Configuration	Dimensions (L × W × H)	Dry weight	Fuel tank
Open set	1740 × 650 × 1195 mm	530 kg	80 L
Silent set	2000 × 900 × 1250 mm	780 kg	80 L

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

GENERAL CHARACTERISTICS

VF16.5-5 · 50 Hz · 3 Phase

RATED PERFORMANCE

Standby Power (kVA)	16.5
Standby Power (kW)	13.2
Prime Power (kVA)	15
Prime Power (kW)	12
Power Factor (Cos Phi)	0.8
Diesel Engine	4DW81-23D
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 (16.5 kVA)	Prime current (15 kVA)
380/220 V	25.1 A	22.8 A
400/230 V	23.8 A	21.7 A
415/240 V	23.0 A	20.9 A

ENGINE DATA

FAWDE 4DW81-23D

GENERAL ENGINE DATA

Engine brand	FAWDE
Engine model	4DW81-23D
Engine type	4-stroke diesel
Governor type	Mechanical
Injection type	Direct
Aspiration type	Naturally Aspirated
Cylinders and arrangement	4-L

FUEL CONSUMPTION

100% load ESP	5.2 L/h
100% load PRP	4.6 L/h
75% load PRP	3.5 L/h
50% load PRP	2.5 L/h

AIR SYSTEM

Intake air flow	25 L/s
Cooling air flow	/

GENERAL ENGINE DATA

Bore × stroke	85 × 95 mm
Displacement	2.27 L
Cooling system	Water-cooled
Lube oil consumption at full load	0.5%-1% of fuel consumption
Compression ratio	17:1
Air filter	Dry

EXHAUST SYSTEM

Maximum exhaust temperature	550 °C
Exhaust gas flow	70 L/s
Maximum allowed back pressure	6.7 kPa

STARTING SYSTEM

Starting power	3.5 kW
Recommended battery	60 Ah
Number of batteries	1
Auxiliary voltage	12 VDC

OIL AND COOLING CAPACITIES

Engine oil capacity	7.8 L
Total coolant capacity	4.85 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.