





## KD250

### ENGINE CHARACTERISTICS

#### GENERAL ENGINE DATA

Engine model	JOHN DEERE
Engine type	6068HFS55-228
Air inlet	Turbo
Cylinders arrangement	L
Number of cylinders	6
Displacement (L)	6.72
Charge Air coolant	Air/Water DC
Bore (mm) x Stroke (mm)	106 x 127
Compression ratio	17 : 1
Speed (RPM)	1500
Pistons speed (m/s)	6.35
Maximum stand-by power at rated RPM (kW)	228
Frequency regulation, steady state (%) +/- 0.5%	
BMEP (bar)	24.7
Governor type	Electronic

#### COOLING SYSTEM

Radiator & Engine capacity (L)	27.7
Max water temperature (°C)	-
Outlet water temperature (°C)	-
Fan power (kW)	3.4
Fan air flow w/o restriction (m3/s)	3.8
Available restriction on air flow (mm H2O)	25
Type of coolant	Glycol-Ethylene
Thermostat modulating range HT (°C)	-

#### EMISSIONS

Emission PM (g/kWh)	0.05
Emission CO (g/kWh)	0.51
Emission HC+NOx (g/kWh)	7.81
Emission HC (mg/Nm3) 5% O2	0.13

#### EXHAUST

Exhaust gas temperature @ ESP 50Hz (°C)	530
Exhaust gas flow @ ESP 50Hz (L/s)	577
Max. exhaust back pressure (mm H2O)	750

#### FUEL

Consumption @ 110% load (L/h)	51.4
Consumption @ 100% load (L/h)	47.1
Consumption @ 75% load (L/h)	35.9
Consumption @ 50% load (L/h)	24.4
Maximum fuel pump flow (L/h)	-

#### OIL

Oil capacity (L)	32.5
Min. oil pressure (bar)	-
Max. oil pressure (bar)	-
Oil consumption 100% load (L/h)	-
Oil sump capacity (L)	-

#### HEAT BALANCE

Heat rejection to exhaust (kW)	151
Radiated heat to ambient (kW)	23
Heat rejection to coolant (kW)	88

#### AIR INTAKE

Max. intake restriction (mm H2O)	375
Intake air flow (L/s)	-

#### GENERAL DATA

Alternator type	KH01180T
Number of Phase	Three phase
Power factor (Cos Phi)	0.8
Altitude (m)	0 to 1000
Overspeed (rpm)	2250
Number of pole	4
Capacity for maintaining short circuit at 3 In for 10 s	Yes
Insulation class	H
T° class (H/125°), continuous 40°C	H / 125°K
T° class, standby 27°C	H / 163°K
AVR Regulation	Yes
Total Harmonic Distortion in no-load DHT (%)	2.6
Total Harmonic Distortion, on load DHT (%)	2.8
Wave form : NEMA=TIF	<40
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	1
Recovery time (Delta U = 20% transient) (ms)	200
Indication of protection Technology	IP 23 Without collar or brush

#### OTHER DATA

Continuous Nominal Rating 40°C (kVA)	225
Standby Rating 27°C (kVA)	250
Efficiencies 100% of load (%)	93
Air flow (m3/s)	0.533
Short circuit ratio (Kcc)	0.45
Direct axis synchro reactance unsaturated (Xd) (%)	198.7
Quadra axis synchro reactance unsaturated (Xq) (%)	109.7
Open circuit time constant (T'do) (ms)	1100
Direct axis transient reactance saturated (X'd) (%)	10.5
Short circuit transient time constant (T'd) (ms)	83
Direct axis subtransient reactance saturated (X''d) (%)	5.6
Subtransient time constant (T''d) (ms)	13
Quadrature-axis subtransient reactance saturated (X''q) (%)	19.1
Subtransient time constant (T''q) (ms)	23
Zero sequence reactance unsaturated (Xo) (%)	2.69
Negative sequence reactance saturated (X2) (%)	13.2
Armature time constant (Ta) (ms)	18
No load excitation current (io) (A)	0.67
Full load excitation current (ic) (A)	3
Full load excitation voltage (uc) (V)	47.1
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	155
Transient dip (4/4 load) - PF : 0,8 AR (%)	13.9
No load losses (W)	3100
Heat rejection (W)	13548
Unbalanced load acceptance ratio (%)	100

#### DIMENSIONS

##### Dimensions soundproofed version

Commercial reference of the enclosure	M226
Length (mm)	3508
Width (mm)	1200
Height (mm)	1830
Dry weight (kg)	2400
Tank capacity (L)	340
Acoustic pressure level @1m in dB(A)	82
Sound power level guaranteed (Lwa)	100
Acoustic pressure level @7m in dB(A)	71

##### Dimensions DW soundproofed version

Commercial reference of the enclosure	M226 DW
Length (mm)	3560
Width (mm)	1200
Height (mm)	2182
Dry weight (kg)	2740
Tank capacity (L)	868
Acoustic pressure level @1m in dB(A)	81
Sound power level guaranteed (Lwa)	101
Acoustic pressure level @7m in dB(A)	71

##### Dimensions DW compact version

Commercial reference of the enclosure	-
Length (mm)	3560
Width (mm)	1180
Height (mm)	1832
%PdnetE_3%	2140
Tank capacity (L)	868
Acoustic pressure level @1m in dB(A)	-
Sound power level guaranteed (Lwa)	-
Acoustic pressure level @7m in dB(A)	-

##### Dimensions DW 48h soundproofed version

Commercial reference of the enclosure	M226 DW48
Length (mm)	3560
Width (mm)	1200
Height (mm)	2364
%PdnetE_3%	2800
Tank capacity (L)	1630
Acoustic pressure level @1m in dB(A)	81
Sound power level guaranteed (Lwa)	101
Acoustic pressure level @7m in dB(A)	71

#### APM303, comprehensive and simple



The APM303 is a versatile unit which can be operated in manual or automatic mode. Equipped with an LCD screen, the user-friendly APM303 offers high-quality basic functions to guarantee simple, reliable operation and supervision of your generating set. It offers the following features:

**Measurements:**

phase-to-neutral and phase-to-phase voltages, active power currents, effective power, power factors, Kw/h energy meter

Fuel, oil pressure and coolant temperature levels

**Supervision:**

Modbus RTU communication on RS485

**Reports:**

2 configurable reports

**Safety features:**

Overspeed, oil pressure

Coolant temperatures

Minimum and maximum voltage

Minimum and maximum frequency

Maximum current

Maximum active power

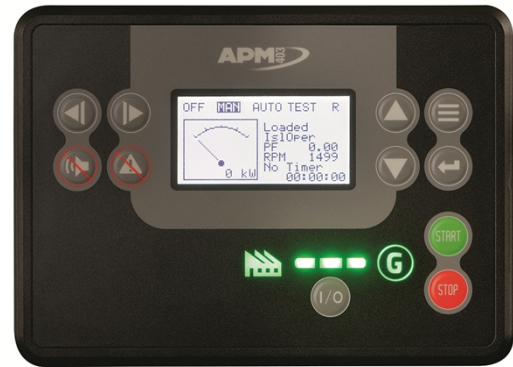
Phase sequence

**Traceability:**

Stack of 12 stored events

For further information, please refer to the data sheet for the APM303.

#### APM403, basic generating set and power plant control



The APM403 is a versatile control unit which allows operation in manual or automatic mode

Measurements : voltage and current

kW/kWh/kVA power meters

Standard specifications: Voltmeter, Frequency meter.

Optional : Battery ammeter.

J1939 CAN ECU engine control

Alarms and faults: Oil pressure, Coolant temperature,

Overspeed, Start-up failure, alternator min/max, Emergency stop button.

Engine parameters: Fuel level, hour counter, battery voltage.

Optional (standard at 24V): Oil pressure, water temperature.

Event log/ Management of the last 300 genset events.

Mains and genset protection

Clock management

USB connections, USB Host and PC,

Communications : RS485 INTERFACE

ModBUS protocol /SNMP

Optional : Ethernet, GPRS, remote control, 3G, 4G,

Websupervisor, SMS, E-mails

#### M80, transfer of information



The M80 is a dual-function control unit. It can be used as a basic terminal block for connecting a control box and as an instrument panel with a direct read facility, with displays giving a global view of your generating set's basic parameters.

Offers the following functions:

Engine parameters: tachometer, working hours counter, coolant temperature indicator, oil pressure indicator, emergency stop button, customer connection terminal block, CE.