KD250

Engine type	6068HFS55-228
Alternator type	KH01180T
Performance class	G2

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Voltage (V)	400/230
Standard control panel	APM303
Optional control panel	APM403

POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	200	250	182	227	348
400/230	200	250	182	227	361
380/220	200	250	182	227	380
200/115	200	250	182	227	722
240 TRI	200	250	182	227	601
230 TRI	200	250	182	227	628
220 TRI	200	250	182	227	656

DIMENSIONS COMPACT VERSION

Length (mm)	2370
Width (mm)	1114
Height (mm)	1479
Dry weight (kg)	1800
Tank capacity (L)	340

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

DESCRIPTIVE

- Kohler Co. Provides one-source responsibility for the generating system and accessories
- The generator set and its components are prototype-tested, factory-built, and production-tested
- A one-year limited warranty covers all systems and components
- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for core temperature of 48/50°C max with mechanical fan
- Protective grille for fan and rotating parts (CE option)
- 9 dB(A) silencer supplied separately
- Charger DC starting battery with electrolyte
- 12 V charge alternator and starter
- Delivered with oil and coolant -30°C
- Manual for use and installation

POWER DEFINITION

PRP : Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1. ESP : The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1. Overload is not allowed.

TERMS OF USE

According to the standard, the nominal power assigned by the genset is given for 25°C Air Intlet Temperature, of a barometric pressure of 100 kPA (100 m A.S.L), and 30 % relative humidity. For particular conditions in your installation, refer to the derating table.

ASSOCIATED UNCERTAINTY

For the generator sets used indoor, where the acoustic pressure levels depend on the installation conditions, it is not possible to specify the ambient noise level in the operating and maintenance instructions. You will also find in our operating and maintenance instructions a warning concerning the air noise dangers and the need to implement appropriate preventive measures.

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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)	-

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ALTERNATOR CHARACTERISTICS

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	IP 23
Technology	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 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 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 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

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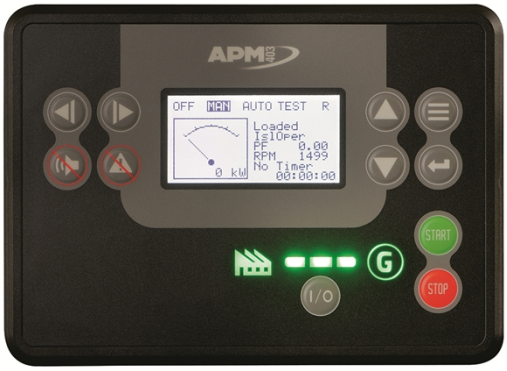
CONTROL PANEL

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

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GBD5-03026 (KD250) 05/19

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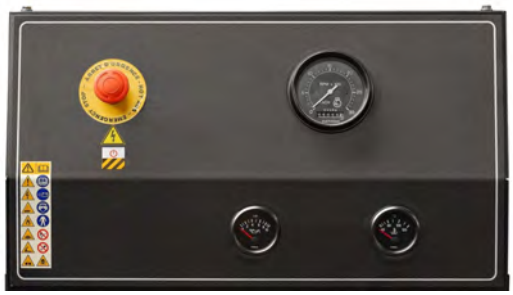
CONTROL PANEL

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.

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