



DESCRIPTIVE

- Mechanic 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 Inlet 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 generating sets used indoor, where the acoustic pressure levels depends on the installation conditions, it is not possible to specify the ambient noise level in the exploitation and maintenance instructions . You will also find in our exploitation and maintenance instructions a warning concerning the air noise dangers and the need to implement appropriated preventive measures.

J44K

Engine ref.	3029TFS29
Alternator ref.	KH00602T
Performance class	G3

GENERAL CHARACTERISTICS

Frequency (Hz)	50 Hz
Voltage (V)	400/230
Standard Control Panel	APM303

POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	35	44	32	40	61
400/230	35	44	32	40	64
380/220	35	44	32	40	67

DIMENSIONS COMPACT VERSION

Length (mm)	1700
Width (mm)	896
Height (mm)	1243
Dry weight (kg)	673
Tank capacity (L)	100

DIMENSIONS SOUNDPROOFED VERSION

Type soundproofing	M137
Length (mm)	2100
Width (mm)	938
Height (mm)	1285
Dry weight (kg)	852
Tank capacity (L)	100
Acoustic pressure level @1m in dB(A)	74
Sound power level guaranteed (Lwa)	91
Acoustic pressure level @7m in dB(A)	62

GENERAL ENGINE DATA

Engine brand	JOHN DEERE
Engine ref.	3029TFS29
Air inlet system	Turbo
Cylinders configuration	L
Number of cylinders	3
Displacement (L)	2.91
Charge Air coolant	
Bore (mm) x Stroke (mm)	106 x 110
Compression ratio	17.2 : 1
Speed (RPM)	1500
Pistons speed (m/s)	5.5
Maximum stand-by power at rated RPM (kW)	42
Frequency regulation, steady state (%) +/- 2.5%	
BMEP at Max Power (bar)	11.5
Governor type	Mechanical

COOLING SYSTEM

Radiator & Engine capacity (L)	16.1
Fan power (kW)	1.3
Fan air flow w/o restriction (m3/s)	1.86
Available restriction on air flow (mm H2O)	20
Type of coolant	Glycol-Ethylene

EMISSIONS

Emission PM (mg/Nm3) 5% O2	70
Emission CO (mg/Nm3) 5% O2	190
Emission HC+NOx (g/kWh)	0
Emission HC (g/kW.h)	

EXHAUST

Exhaust gas temperature @ ESP 50Hz (°C)	510
Exhaust gas flow @ ESP 50 Hz (L/s)	105.6
Max. exhaust back pressure (mm H2O)	625

FUEL

Consumption @ 110% load (L/h)	10.8
Consumption @ 100% load (L/h)	9.8
Consumption @ 75% load (L/h)	7.5
Consumption @ 50% load (L/h)	5.3
Maximum fuel pump flow (L/h)	111

OIL

Oil system capacity including filters (L)	6
Min. oil pressure (bar)	1
Max. oil pressure (bar)	5
Oil consumption 100% ESP (L/h)	0.21
Oil sump capacity (L)	5.3

HEAT BALANCE

Heat rejection to exhaust (kW)	
Radiated heat to ambient (kW)	5
Heat rejection to coolant HT (kW)	28

AIR INTAKE

Max. intake restriction (mm H2O)	300
Intake air flow (L/s)	37.8

GENERAL DATA

Alternator ref.	KH00602T
Number of Phase	Three phase
Power factor (Cos Phi)	0.8
Altitude (m)	0 à 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 (H/163°C), standby 27°C	H / 163°K
Total Harmonic Distortion in no-load DHT (%)	<3.5
AVR Regulation	Yes
Total Harmonic Distortion, on linear load DHT (%)	<5
Wave form : NEMA=TIF	<50
Wave form : CEI=FHT	<2
Number of bearing	Single Bearing
Coupling	Direct
Voltage regulation at established rating (+/- %)	0.5
Recovery time (Delta U = 20% transient) (ms)	500
Indication of protection	IP 23
Technology	Brushless

OTHER DATA

Continuous Nominal Rating 40°C (kVA)	40
Standby Rating 27°C (kVA)	45
Efficiencies 100% of load (%)	88.9
Air flow (m3/s)	0.1
Short circuit ratio (Kcc)	0.424
Direct axis synchro reactance unsaturated (Xd) (%)	281
Quadra axis synchro reactance unsaturated (Xq) (%)	143
Open circuit time constant (T'do) (ms)	944
Direct axis transient reactance saturated (X'd) (%)	14.8
Short circuit transient time constant (T'd) (ms)	50
Direct axis subtransient reactance saturated (X"d) (%)	7.4
Subtransient time constant (T"d) (ms)	5
Quadra axis subtransient reactance saturated (X"q) (%)	10.6
Subtransient time constant (T"q) (ms)	5
Zero sequence reactance unsaturated (Xo) (%)	0.6
Negative sequence reactance saturated (X2) (%)	9.02
Armature time constant (Ta) (ms)	8
No load excitation current (io) (A)	0.56
Full load excitation current (ic) (A)	2.19
Full load excitation voltage (uc) (V)	32.1
Engine start (Delta U = 20% perm. or 30% trans.) (kVA)	94.57
Transient dip (4/4 load) - PF : 0,8 AR (%)	15
No load losses (W)	888.22
Heat rejection (W)	3955.16
Unbalanced load acceptance ratio (%)	100

DIMENSIONS

Dimensions soundproofed version

Type soundproofing	M137
Length (mm)	2100
Width (mm)	938
Height (mm)	1285
Dry weight (kg)	852
Tank capacity (L)	100
Acoustic pressure level @1m in dB(A)	74
Sound power level guaranteed (Lwa)	91
Acoustic pressure level @7m in dB(A)	62

Dimensions DW soundproofed version

Type soundproofing	M137-DW
Length (mm)	2100
Width (mm)	932
Height (mm)	1486
Dry weight (kg)	1058
Tank capacity (L)	240
Acoustic pressure level @1m in dB(A)	74

Dimensions DW compact version

Type soundproofing	
Length (mm)	2074
Width (mm)	932
Height (mm)	1444
Dry weight (kg)	879
Tank capacity (L)	240
Acoustic pressure level @1m in dB(A)	
Sound power level guaranteed (Lwa)	
Acoustic pressure level @7m in dB(A)	

Dimensions DW 48h soundproofed version

Type soundproofing	M137-DW48
Length (mm)	2100
Width (mm)	932
Height (mm)	1539
%PdnetE_5%	1068
Tank capacity (L)	470
Acoustic pressure level @1m in dB(A)	74

Sound power level guaranteed (Lwa)	91	Sound power level guaranteed (Lwa)	91
Acoustic pressure level @7m in dB(A)	62	Acoustic pressure level @7m in dB(A)	62

APM303, comprehensive and simple



The APM303 is a versatile unit which can be operated in manual or automatic mode. It offers the following features:

Measurements:

phase-to-neutral and phase-to-phase voltages, fuel level
(In option : active power currents, effective power, power factors, Kw/h energy meter, oil pressure and coolant temperature levels)

Supervision:

Modbus RTU communication on RS485

Reports:

(In option : 2 configurable reports)

Safety features:

Overspeed, oil pressure, coolant temperatures, minimum and maximum voltage, minimum and maximum frequency
(Maximum active power $P < 66\text{kVA}$)

Traceability:

Stack of 12 stored events

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

