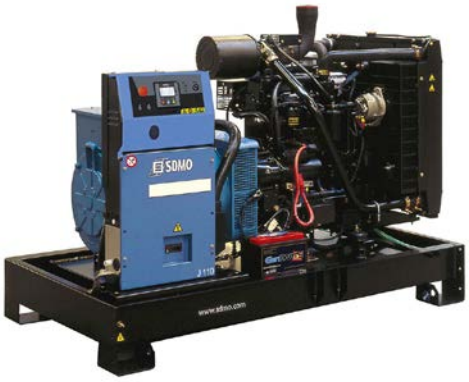
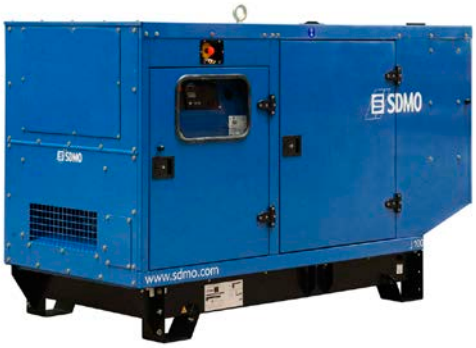
J100U





Engine ref.	4045HF120
Alternator ref.	AT00911T
Performance class	G3

GENERAL CHARACTERISTICS

Frequency (Hz)	60
Voltage (V)	480/277
Standard Control Panel	APM303
Optional control panel	TELYS

POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
480/277	100	125	91	114	150
440/254	100	125	91	114	164
220/127	100	125	91	114	328
208/120	100	125	91	114	347
600/347	100	125	91	114	120

DIMENSIONS COMPACT VERSION

Length (mm)	1950
Width (mm)	1084
Height (mm)	1330
Dry weight (kg)	1187
Tank capacity (L)	190

DIMENSIONS SOUNDPROOFED VERSION

Commercial reference of the enclosure	M129
Length (mm)	2554
Width (mm)	1150
Height (mm)	1680
Dry weight (kg)	1587
Tank capacity (L)	190
Acoustic pressure level @1m in dB(A)	80
Sound power level guaranteed (Lwa)	0
Acoustic pressure level @7m in dB(A)	70

DESCRIPTIVE

- Mechanic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for wiring 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 UNCERTAINLY

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.

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ENGINE CHARACTERISTICS

GENERAL ENGINE DATA

Engine model	JOHN DEERE
Engine ref.	4045HF120
Air inlet	Turbo
Cylinders arrangement	L
Number of cylinders	4
Displacement (C.I.)	4.48
Air coolant	Air/Air DC
Bore (mm) x Stroke (mm)	106 x 127
Compression ratio	17 : 1
Speed (RPM)	1800
Pistons speed (m/s)	7.62
Maximum stand-by power at rated RPM (kW)	111
Frequency regulation (%)	+/- 2.5%
BMEP (bar)	15
Governor type	Mechanical

COOLING SYSTEM

Radiator & Engine capacity (L)	20.20
Max water temperature (°C)	105
Outlet water temperature (°C)	93
Fan power (kW)	4.30
Fan air flow w/o restriction (m3/s)	4.10
Available restriction on air flow (mm Water Column)	20
Type of coolant	Glycol-Ethylene
Thermostat (°C)	82-94

EMISSIONS

Emission PM (g/kWh)

Emission CO (g/kW.h)

Emission HCNOx (g/kWh)

Emission HC (g/kW.h)

EXHAUST

Exhaust gas temperature (°C)	460
Exhaust gas flow (L/s)	350
Max. exhaust back pressure (mm EC)	750

FUEL

Fuel consumption 110% load (L/hr)	29
Fuel consumption 100% load (L/hr)	26.50
Fuel consumption 75% (L/h)	19
Fuel consumption 50% (L/h)	13
Maximum fuel pump flow (L/h)	112

OIL

Oil capacity (L)	13.50
Min. oil pressure (bar)	1
Max. oil pressure (bar)	5
Oil consumption 100% load (L/h)	0.0260
Carter oil capacity (L)	12.50

HEAT BALANCE

Heat rejection to exhaust (kW)	70
Radiated heat to ambiant (kW)	11.50
Haet rejection to coolant (kW)	40

AIR INTAKE

Max. intake restriction (mm EC)	625
Intake air flow (L/s)	130

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ALTERNATOR CHARACTERISTICS

GENERAL DATA

Alternator ref.	AT00911T
Number of Phase	Three phase
Power factor (Cos Phi)	0.80
Altitude (m)	0 to 1000
Overspeed (rpm)	2250
Number of pole	4
Capacity for maintaining short circuit at 3 In for 10 s	No
Insulation class	H
T° class, 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
Total Harmonic Distortion, on load DHT (%)	<5
Wave form : NEMA=TIF	<50
Wave form : CEI=FHT	
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	
Recovery time (Delta U = 20% transcient) (ms)	500
Indication of protection	IP 23
Technology	Without collar or brush

OTHER DATA

Continuous Nominal Rating 40°C (kVA)	125
Standby Rating 27°C (kVA)	138
Efficiencies 100% of load (%)	92.40
Air flow (m3/s)	0.30
Short circuit ratio (Kcc)	0.52
Direct axis synchro reactance unsaturated (Xd) (%)	299
Quadra axis synchro reactance unsaturated (Xq) (%)	179
Open circuit time constant (T'do) (ms)	2211
Direct axis transcient reactance saturated (X'd) (%)	13.50
Short circuit transcient time constant (T'd) (ms)	100
Direct axis subtranscient reactance saturated (X"d) (%)	8.10
Subtranscient time constant (T"d) (ms)	10
Quadra axis subtranscient reactance saturated (X"q) (%)	16.70
Subtranscient time constant (T"q) (ms)	
Zero sequence reactance unsaturated (Xo) (%)	0.41
Negative sequence reactance saturated (X2) (%)	12.44
Armature time constant (Ta) (ms)	15
No load excitation current (io) (A)	0.71
Full load excitation current (ic) (A)	2.26
Full load excitation voltage (uc) (V)	28
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	339
Transcient dip (4/4 load) - PF : 0,8 AR (%)	12.70
No load losses (W)	3410
Heat rejection (W)	8187
Unbalanced load acceptance ratio (%)	

DIMENSIONS

Containment DW

Commercial reference of the enclosure	M129 DW
Length (mm)	2602
Width (mm)	1150
Height (mm)	1900
Dry weight (kg)	2006
Tank capacity (L)	505
Acoustic pressure level @1m in dB(A)	80
Sound power level guaranteed (Lwa)	0
Acoustic pressure level @7m in dB(A)	70

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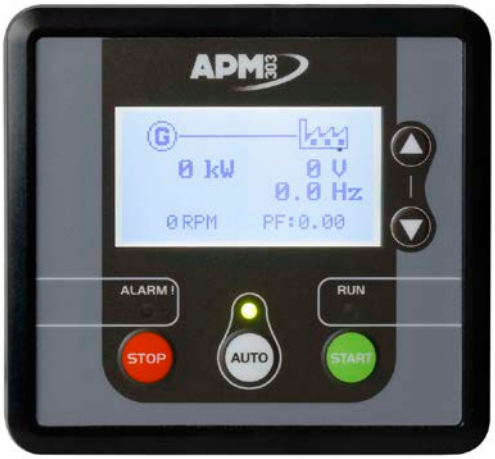
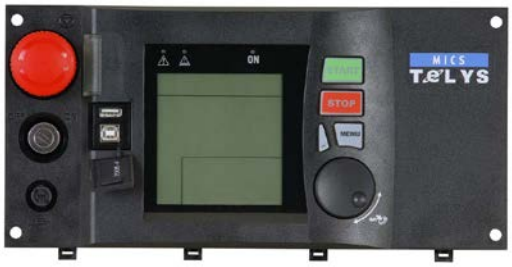
CONTROL PANEL

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.

TELYS, ergonomic and user-friendly



The highly versatile TELYS control unit is complex yet accessible, thanks to the particular attention paid to optimising its ergonomics and ease of use. With its large display screen, buttons and scroll wheel, it places the accent on simplicity and communication.

The TELYS offers the following functions:

Electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, oil pressure, coolant temperature, fuel level, engine speed, battery voltage.

Alarms and faults: oil pressure, coolant temperature, failure to start, overspeed, alternator min./max., battery voltage min./max., emergency stop, fuel level.

Ergonomics: wheel for navigating around the various menus.

Communication: remote control and operation software, USB connections, PC connection.

For more information on the product and its options, please refer to the sales documentation.