



MODEL
40 KW/40 kVA
Stand-by Power @ 60 Hz

JS40UCM
36 kW / 36 kVA
Prime Power @ 60 Hz

Standard Features

- Engine (JOHN DEERE , 3029TF270)
- Engine EPA Carb Charge alternator 12 V, Governor: Meca/Mechanical
- Alternator (LEROY SOMER , LSA432M45)
- Single bearing alternator IP 23 , insulation class H /H
- Radiator 50°C [122°F]°C max. T°air inlet with cool ant cap
- Skid and vibration isolators
- Dry type air filter
- Microprocessor control panel
- Main line circuit breaker
- 12 V battery, rack and cable
- Industrial silencer (loose)
- User manual
CSA Certified (consult us)



Generator ratings

Voltage	HZ	Phase	PF	Stand by Amps	Stand by power kW/kVA	Prime power kW/kVA
240MONO V	60 Hz	1	1	167	40 / 40	36 / 36

Stand-By ratings are available for the duration of any power outage. No overload capacity is specified at this ratings. Prime ratings are available per BS 5514, DIN 6271, ISO-3046 and IEC 34-1 with 10% overload capacity one hour in twelve hours.

Conditions of sales

- SDMO provides a full line of products with high quality recognized engines and alternators.
- Service and parts are available from SDMO distributors as a single source of responsibility.
- Each and every units is factory tested. All generator sets are also prototype tested.
- Two years limited warranty , please refer to the conditions terms . Five years extended are also available.



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ENGINE DATA

Manufacturer / Model	3029TF270 , 4-cycle, Turbo , N/A
Cylinder Arrangement	3 X L
Displacement	2.9L [177.0C.I.]
Bore and Stroke	106mm [4.2in.] X 110mm [4.3in.]
Compression ratio	17,8:1
Rated RPM	1800 Rpm
Piston Speed	6.6m/s [21.7ft./s]
Max. stand by Power at rated RPM	44.5kW [60BHP]
Frequency regulation, steady state	+/-2, 5%
BMEP	11.19bar [162psi]
Governor : type	Meca/Mechanical

Exhaust System

Exhaust gas flow	138L/s [292cfm]
Exhaust temperature	517°C [963°F]
Max back pressure	625mm CE [25in. WG]

Fuel System

110% (Stand By power)	14.93L/h [3.9gal/hr]
100% (of the Prime Power)	13.11L/h [3.5gal/hr]
75% (of the Prime Power)	10.1L/h [2.7gal/hr]
50% (of the Prime Power)	6.91L/h [1.8gal/hr]
Total fuel flow	108L/h [28.5gal/hr]

Oil System

Total oil capacity w/filters	6L [1.6gal]
Oil Pressure low idle	1bar [14.5psi]
Oil Pressure rated RPM	5bar [72.5psi]
Oil consumption 100% load	0.01L/h [0.0gal/hr]
Oil capacity carter	5.3L [1.4gal]

Thermal balance 100% load

Heat rejection to exhaust	43kW [2445Btu/mn]
Radiated heat to ambient	5kW [284Btu/mn]
Heat rejection to coolant	28kW [1592Btu/mn]

Air intake

Max. intake restriction	300mm CE [12in. WG]
Engine air flow	48.6L/s [103cfm]

Coolant System

Radiator & engine capacity	16.1L [4.3gal]
Max water temperature	105°C [221°F]
Outlet water temperature	93°C [199°F]
Fan power	2 kW
Fan air flow	2.34m ³ /s [4959cfm]
Available restriction on air flow	20mm CE [0.8in. WG]
Type of coolant	Gencool
Thermostat	82-94 °C

Emissions

HC	49.98 gr/bhp/h
CO	11.19 gr/bhp/h
Nox	49.98 gr/bhp/h
PM	11.94 gr/bhp/h



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ALTERNATOR SPECIFICATIONS

GENERAL DATA

- Compliance with NEMA MG21, UTE NF C51.111, VDE 0530, BS 4999, CSA standards.
- Vacuum-impregnated windings with epoxy varnish.
- IP21 drip proof.

ALTERNATOR DATA

Manufacturer / Type	LERROY SOMER LSA432M45
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude	< 1000 m
Overspeed	2250 rpm
Pole : number	4
Exciter type	Shunt
Insulation : class, temperature rise	H / H
Voltage regulator	R230
Sustained short circuit current	-
Total harmonics (TGH/THC)	< 4%
Wave form : NEMA = TIF – TGH/THC	< 50
Wave form : CEI = FHT – TGH/THC	< 2%
Bearing : number	1
Coupling	Direct
Voltage regulation 0 to 100% load	+/- 1%
Recovery time (20% Volt dip) ms	500 ms
SkVA with 90 % of nominal sustained voltage (at 0.4 PF)	N/A

OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	65 kVA
Standby rating @ 27°C	78 kVA
Efficiencies @ 4/4 load	89.8 %
Air flow	0.32m ³ /s [678.04cfm]
Short circuit ratio (Kcc)	0.39
Direct axis synchro reactance unsaturated (Xd)	300 %
Quadra axis synchro reactance unsaturated (Xq)	180 %
Open circuit time constant (T'do)	1270 ms
Direct axis transient reactance saturated (X'd)	11.8 %
Short circuit transient time constant (T'd)	50 ms
Direct axis subtransient reactance saturated (X''d)	5.9 %
Subtransient time constant (T''d)	5 ms
Quadra axis subtransient reactance saturated (X''q)	7.3 %
Zero sequence reactance unsaturated (Xo)	0.5 %
Negative sequence reactance saturated (X2)	6.6 %
Armature time constant (Ta)	8 ms
No load excitation current (io)	0.4 A
Full load excitation current (ic)	1.6 A
Full load excitation voltage (uc)	29 V
Recovery time (Delta U = 20% transitoire)	500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	225 kVA
Transient dip (4/4 charge) – PF : 1.8 AR	15.3 %
No load losses	1.64 kW
Heat rejection	6.42 kW



Control Panels

Standard panel : NEXYS



Specifications :

Frequency meter, Ammeter, Voltmeter

Alarms and faults Oil pressure, water temperature, Overcrank, Overspeed, Min/max alternator, Low fuel level, Emergency stop

Engine parameters :

Hours counter, Engine speed, Battery voltage, Fuel level, Air preheating

Optional panel : TELYS



Specifications :

Frequency meter, Ammeter, Voltmeter

Alarms and faults :

Oil pressure, water temperature, No start-up, Overspeed, Min/max alternator, Min/max battery voltage, Low fuel level, Emergency stop

Engine parameters :

Hours counter, Oil pressure, Water temperature, Engine speed, Battery voltage, Fuel level



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Options

<p>Engine and Radiator</p> <ul style="list-style-type: none"> ▪ Heat shield protection ▪ Oil drain extension ▪ Heavy duty air filter ▪ Lube oil drain pump ▪ Radiator core guard ▪ Battery charger ▪ Block heater 	<p>Alternator</p> <ul style="list-style-type: none"> ▪ Anti condensation heater ▪ Enforced impregnation ▪ Oversized alternator <p>Exhaust</p> <ul style="list-style-type: none"> ▪ Residential silencer ▪ Critical silencer ▪ Flexible exhaust conn. 	<p>Control panel</p> <ul style="list-style-type: none"> ▪ NFPA 110 level 1 ▪ Paralleling system ▪ Remote annunciator ▪ Oil temperature shutdown ▪ Key start panel
<p>Fuel</p> <ul style="list-style-type: none"> ▪ Day tank ▪ Subbase fuel tanks UL ▪ Water separator fuel filter 	<p>Enclosure M107</p> <ul style="list-style-type: none"> ▪ Silent 0 db @ 23 Ft (stby) 	<p>Literature</p> <ul style="list-style-type: none"> ▪ Parts ▪ Maintenance

Weight and Dimensions

Open Model



Overall size l x w x h :
1520mm [60in] x 780mm [31in] x 1180mm [46in]

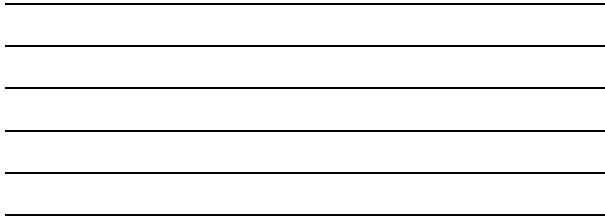
Weight :
780kg [1719lbs] Net 890kg [1962lbs] Brut

With Optional Enclosure



Overall size l x w x h :
2100mm [83in] x 920mm [36in] x 1445mm [57in]

Weight :
1100kg [2424lbs] Net 1200kg [2645lbs] Brut



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