

# X1850

Engine MTU , 12V4000G23F  
Alternator LEROY SOMER , LSA512S55

## STANDARD FEATURES

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Air cooler for wiring temperature of 47/50°C with electric fan
- Exhaust compensators with flanges
- 24 V charge alternator and starter
- Delivered with oil
- Manual for use and installation



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps	Dimensions	Weight
415/240	1464 / 1830	1331 / 1664	2546		
400/230	1464 / 1830	1331 / 1664	2641	Leng : 4050mm [159in]	11405kg [25144lbs] Net
380/220	1464 / 1830	1331 / 1664	2780	Widt : 1885mm [74in]	11846kg [26116lbs] Gross
				Heig : 2158mm [85in]	



## 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.

## TERM OF USE

Standard reference conditions ESP/PRP 27 C°/40 C° Air Intlet Temp, 1000 m/1000 m m A.S.L. 60 % relative humidity.

Model	dB(A)@1m	dB(A)@7m	Dimensions	Weight	Tank
 EUR40Si	85	75	Leng : 12192mm [480in] Widt : 2438mm [96in] Heig : 2896mm [114in]	23303kg [51374lbs] 24680kg [54410lbs]	500 L
 EUR40SSi	79	69	Leng : 12192mm [480in] Widt : 2438mm [96in] Heig : 2896mm [114in]	24337kg [53654lbs] 25714kg [56690lbs]	500 L



## ENGINE SPECIFICATIONS

<b>DATA</b>  <b>GENERAL DATA</b>	Motor model	MTU 12V4000G23F , 4-temps, TURBO , AIR/WATER 12 X
	Cylinder arrangement	V
	Displacement (C.l.)	57.2
	Bore (mm) X Stroke (mm)	170 X 210
	Compression ratio	16.5
	Speed (RPM)	1500
	Pistons speed (m/s)	10.5
	Maximum stand-by power at rated RPM (kW)	1562
	Frequency regulation (%)	0.5
	BMEP (bar)	19.86
	Governor type	ELEC
<b>EXHAUST SYSTEM</b>	Exhaust gas temperature (°F)	455
	Exhaust gas flow (L/s)	4000
	Max. exhaust back pressure (mm CE)	300
<b>FUEL SYSTEM</b>	Consumption @ 110% load (L/h)	351
	Consumption @ 100% load (L/h)	317
	Consumption @ 75% load (L/h)	241
	Consumption @ 50% load (L/h)	168
	Maximum fuel pump flow (L/hr)	1500
<b>OIL</b>	Oil capacity (L)	260
	Min. oil pressure (bar)	3.5
	Max. oil pressure (bar)	7
	Oil consumption 100% load (L/h)	0.95
	Carter oil capacity (L)	200
<b>THERMAL BALANCE</b>	Heat rejection to exhaust (kW)	N/A
	Radiated heat to ambient (kW)	75
	Heat rejection to coolant (kW)	540/200
<b>AIR INTAKE</b>	AIR INTAKE_entree_max%	150
	Intake air flow (L/s)	1600
<b>COOLANT SYSTEM</b>	Radiator & Engine capacity (L)	N/A
	Max water temperature (°C)	104
	Outlet water temperature (°C)	100
	Fan power (kW)	N/A
	Fan air flow w/o restriction (m3/s)	N/A
	Available restriction on air flow (mm CE)	N/A
	Type of coolant	COOLELF-MDX
	Thermostat (°C)	79/92
<b>EMISSIONS</b>	Emissions PM (g/kW.h)	N/A
	Emission CO (g/kW.h)	N/A
	Emissions HCNOx (g/kWh)	N/A
	Emission HC (g/kW.h)	N/A

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## ALTERNATOR SPECIFICATIONS

<b>DATA</b> <b>GENERAL DATA</b>	Alternator brand	LEROY SOMER
	Alternator	LSA512S55
	Number of phase	3
	Power factor (Cos Phi)	0.8
	Altitude (m)	<1000
	Overspeed (rpm)	2250
	Number of pole	4
	Excitation system	AREP
	Insulation class / Temperature class	H / H
	Regulation	R449
	Total harmonics TGH/THC	N/A
	Wave form : NEMA=TIF-TGH/THC	<50
	Wave form : CEI=FHT-TGH/THC	<2
	Number of bearing	1
	Coupling	DIRECT
	Voltage regulation 0 à 100%	1
	Recovery time (Delta U = 20% transitoire) (ms)	<700
<b>OTHER</b> <b>DATA</b>	Continuous Nominal Rating 40°C (kVA)	1860
	Standby Rating 27°C (kVA)	2045
	Efficiencies 4/4 load (%)	95.6
	Air flow (m3/s)	2.5
	Short circuit ratio (Kcc)	0.33
	Direct axis synchro reactance unsaturated (Xd) (%)	374
	Quadra axis synchro reactance unsaturated (Xq) (%)	224
	Open circuit time constant (T'do) (ms)	2700
	Direct axis transient reactance saturated (X'd) (%)	33.4
	Short circuit transient time constant (T'd) (ms)	240
	Direct axis subtransient reactance saturated (X''d) (%)	14.8
	Subtransient time constant (T''d) (ms)	22
	Quadra axis subtransient reactance saturated (X''q) (%)	18.4
	Zero sequence reactance unsaturated (Xo) (%)	3.5
	Negative sequence reactance saturated (X2) (%)	16.6
	Armature time constant (Ta) (ms)	39
	No load excitation current (io) (ms)	1.5
	Full load excitation current (ic) (A)	6
	Full load excitation voltage (uc) (A)	63
	Recovery time (Delta U = 20% transitoire) (ms)	<700
	Motor start (Delta U = 20% perm. or 50% trans.) (ms)	3600
Transient dip (4/4 charge) - PF : 0,8 AR (%)	12	
No load losses (kW)	16	
Heat rejection (kW)	64.7	

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## CONTROL PANEL

Standard

M80



M80

Specifications : Tachometer, Emergency stop button, client connection terminal strip, EC certified  
 Engine parameters : Hours counter, Oil pressure gauge, Water temperature indicator, Oil pressure indicator

Option

TELYS



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

Option

KERYS



KERYS

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  
 Additional specifications : Website, Troubleshooting, Assistance and Maintenance, Plotting and logging, Load impact, 8 configurations available, Compliance with international standards...