

V500C2

Engine VOLVO , TAD1640GE
Alternator LEROY SOMER , LSA472S5

STANDARD FEATURES

- Electronic 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
- 9 dB(A) silencer supplied separately
- Charger DC starting battery with electrolyte
- 24 V charge alternator and starter
- Delivered with oil and coolant -30°C
- Manual for use and installation



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps	Dimensions	Weight
415/240	400 / 500	364 / 455	696		
400/230	400 / 500	364 / 455	722	Leng : 3470mm [137in]	3490kg [7694lbs] Net
380/220	400 / 500	364 / 455	760	Widt : 1500mm [59in]	4030kg [8885lbs] Gross
240 TRI	400 / 500	364 / 455	1203	Heig : 2043mm [80in]	
230 TRI	400 / 500	364 / 455	1255		
220 TRI	400 / 500	364 / 455	1312		
200/115	400 / 500	364 / 455	1443		



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
 M229-DW	77.6	68	Leng : 5083mm [200in] Widt : 1560mm [61in] Heig : 2700mm [106in]	5370kg [11839lbs] 7080kg [15609lbs]	1770 L
 M229	77.6	68	Leng : 5031mm [198in] Widt : 1560mm [61in] Heig : 2435mm [96in]	4740kg [10450lbs] 5280kg [11640lbs]	500 L



ENGINE SPECIFICATIONS

DATA GENERAL DATA	Motor model	VOLVO TAD1640GE , 4-temps, TURBO , AIR/AIR 6 X
	Cylinder arrangement	L
	Displacement (C.l.)	16.12
	Bore (mm) X Stroke (mm)	144 X 165
	Compression ratio	17.5 : 1
	Speed (RPM)	1500
	Pistons speed (m/s)	8.25
	Maximum stand-by power at rated RPM (kW)	431
	Frequency regulation (%)	0.5
	BMEP (bar)	19.45
	Governor type	ELEC
EXHAUST SYSTEM	Exhaust gas temperature (°F)	456
	Exhaust gas flow (L/s)	1423
	Max. exhaust back pressure (mm CE)	1000
FUEL SYSTEM	Consumption @ 110% load (L/h)	103.35
	Consumption @ 100% load (L/h)	93.26
	Consumption @ 75% load (L/h)	69.24
	Consumption @ 50% load (L/h)	47.33
	Maximum fuel pump flow (L/hr)	165
OIL	Oil capacity (L)	48
	Min. oil pressure (bar)	0.7
	Max. oil pressure (bar)	6.5
	Oil consumption 100% load (L/h)	0.1
	Carter oil capacity (L)	42
THERMAL BALANCE	Heat rejection to exhaust (kW)	299
	Radiated heat to ambient (kW)	20
	Heat rejection to coolant (kW)	166
AIR INTAKE	AIR INTAKE_entree_max%	500
	Intake air flow (L/s)	603
COOLANT SYSTEM	Radiator & Engine capacity (L)	60
	Max water temperature (°C)	103
	Outlet water temperature (°C)	93
	Fan power (kW)	9
	Fan air flow w/o restriction (m3/s)	10.9
	Available restriction on air flow (mm CE)	30
	Type of coolant	GLYCOL
	Thermostat (°C)	86-96
EMISSIONS	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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SDMO Industries – 12bis rue de la Villeneuve – CS 92848 – 29 228 BREST CEDEX 2

Tel +33 (0)2 98 41 41 41 – Fax : +33 (0)2 98 41 63 07 – www.sdmo.com



ALTERNATOR SPECIFICATIONS

DATA GENERAL DATA	Alternator brand	LEROY SOMER
	Alternator	LSA472S5
	Number of phase	3
	Power factor (Cos Phi)	0.8
	Altitude (m)	<1000
	Overspeed (rpm)	2250
	Number of pole	4
	Excitation system	SHUNT
	Insulation class / Temperature class	H / H
	Regulation	R230
	Total harmonics TGH/THC	<4
	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%	0.5
	Recovery time (Delta U = 20% transitoire) (ms)	500
OTHER DATA	Continuous Nominal Rating 40°C (kVA)	455
	Standby Rating 27°C (kVA)	500
	Efficiencies 4/4 load (%)	93.8
	Air flow (m3/s)	0.9
	Short circuit ratio (Kcc)	0.33
	Direct axis synchro reactance unsaturated (Xd) (%)	357
	Quadra axis synchro reactance unsaturated (Xq) (%)	214
	Open circuit time constant (T'do) (ms)	1855
	Direct axis transient reactance saturated (X'd) (%)	19.2
	Short circuit transient time constant (T'd) (ms)	100
	Direct axis subtransient reactance saturated (X''d) (%)	15.4
	Subtransient time constant (T''d) (ms)	10
	Quadra axis subtransient reactance saturated (X''q) (%)	20.6
	Zero sequence reactance unsaturated (Xo) (%)	0.9
	Negative sequence reactance saturated (X2) (%)	18
	Armature time constant (Ta) (ms)	15
	No load excitation current (io) (ms)	0.9
	Full load excitation current (ic) (A)	3.8
	Full load excitation voltage (uc) (A)	38
	Recovery time (Delta U = 20% transitoire) (ms)	500
	Motor start (Delta U = 20% perm. or 50% trans.) (ms)	928
	Transient dip (4/4 charge) - PF : 0,8 AR (%)	16.7
No load losses (kW)	5.69	
Heat rejection (kW)	23.78	

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CONTROL PANEL

Standard



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...