



MAN | PrimeServ



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**Description**

- 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
- 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.

**S710M**

Engine type	DC16 093A
Alternator type	ECO40 2L4B
Performance class	G2

**GENERAL CHARACTERISTICS**

Frequency (Hz)	50
Reference voltage (V)	400/230
Max power ESP (kVA)	721
Max power ESP (kWe)	577
Max power PRP (kVA)	650
Max power PRP (kWe)	520
Intensity (A)	923
Standard Control Panel	DSE 7110
Optional control panel	DSE 7210

**DIMENSIONS COMPACT VERSION**

Length (mm)	3474
Width (mm)	1520
Height (mm)	1910
Dry weight (kg)	4851
Tank capacity (L)	1000

**GENERAL CHARACTERISTICS**

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	577	721	520	650	1003
400/230	577	721	520	650	1041
380/220	577	721	520	650	1096



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### ENGINE SPECIFICATIONS

#### GENERAL ENGINE DATAS

Engine model	SCANIA Sweden DC16 093 A,4- temps, Turbo , Air/Air DC 8
Cylinder arrangement	V
Displacement (C.I.)	16.4
Bore (mm) x Stroke (mm)	130 x 154
Compression ratio	16.7:1
Speed (RPM)	1500
Pistons speed (m/s)	8.0
Maximum stand-by power at rated RPM (kW)	680
Frequency regulation (%)	+/- 0.5%
BMEP (bar)	
Governor type	Electronic

#### COOLING SYSTEM

Radiator & Engine capacity (L)	68
Max water temperature (°C)	90
Outlet water temperature (°C)	95
Fan power (kW)	25
Fan air flow w/o restriction (kg/s)	20
Available restriction on air flow (pa)	260
Type of coolant	Cool Guard
Thermostat (°C)	82-87

#### EMISSIONS

Emission PM (g/kW.h)	N/A
Emission CO (g/kW.h)	N/A
Emission HCNOx (g/kWh)	N/A
Emission HC (g/kW.h)	N/A

#### EXHAUST

Exhaust gas temperature (°C)	565
Exhaust gas flow (kg/m)	41
Max. exhaust back pressure (mm EC)	750

#### FUEL

Consumption @ 110% load (L/h)	156
Consumption @ 100% load (L/h)	141
Consumption @ 75% load (L/h)	104
Consumption @ 50% load (L/h)	70

#### OIL

Oil capacity (L)	40-48
Min. oil pressure (bar)	.7
Max. oil pressure (bar)	6
Oil consumption (g/kWh)	<0.2
Carter oil capacity (L)	N/A

#### HEAT BALANCE

Heat rejection to exhaust (kW)	419
Radiated heat to ambient (kW)	57
Haet rejection to coolant (kW)	232

#### AIR INTAKE

Max. intake restriction (mm EC)	625
Intake air flow (kg/m)	39



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### ALTERNATOR SPECIFICATIONS

#### GENERAL DATAS

Alternator brand	Mecc Alte
Alternator type	ECO40 2L4B
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0 to 1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	SHUNT
Insulation class / T° class, continuous 40°C	H / H / 125°K
Regulation	DSR
Wave Distors (THD Full Load) LL	3,1/3
Wave Distors (THD NoI Load) LL	2,8 / 2,7
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (%)	+/- 0.5%

#### OTHER DATAS

Continuous Nominal Rating 40°C (kVA)	650
Standby Rating 27°C (kVA)	721
Efficiencies 4/4 load (%)	95.1
Air flow (m3/min)	54
Short circuit ratio (Kcc)	0.4
Direct axis synchro reactance unsaturated (Xd) (%)	258.7
Quadra axis synchro reactance unsaturated (Xq) (%)	111.8
Open circuit time constant (T'do) (sec)	2.8
Direct axis transient reactance saturated (X'd) (%)	18
Short circuit transient time constant (T'd) (sec)	0.14
Direct axis subtransient reactance saturated (X'd) (%)	9.79
Subtransient time constant (T"d) (sec)	0.021
Quadra axis subtransient reactance saturated (X"q) (%)	22.7
Zero sequence reactance unsaturated (Xo) (%)	3.1
Negative sequence reactance saturated (X2) (%)	14.4
Armature time constant (Ta) (sec)	0.031
No load excitation current (io) (A)	0.6
Full load excitation current (ic) (A)	3.2
Recovery time (Delta U = 20% transient) (ms)	
Heat rejection (kW)	25.34



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## CONTROL PANEL

### DSE Deep Sea Electronics 7110 Standard



The DSE 7110 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,  
 (In option: active power currents, effective power, power factor, oil pressure and coolant temperature levels)

**Supervision:**  
 Modbus RTU communication on RS485

**Reports:**  
 (In option: 2 configurable reports)

**Safety features:**  
 Over speed, oil pressure, coolant temperatures, minimum and maximum voltage, minimum and maximum frequency  
 (Maximum active power P<66kVA)

**Traceability:**  
 Stack of 50 stored events  
 For further information, please refer to the data sheet for the DSE 7110.

### DSE Deep Sea Electronics 7210 Standard



The DSE 7210 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,  
 (In option: active power currents, effective power, power factor, oil pressure and coolant temperature levels)

**Supervision:**  
 Modbus RTU communication on RS485

**Reports:**  
 (In option: 2 configurable reports)

**Safety features:**  
 Over speed, oil pressure, coolant temperatures, minimum and maximum voltage, minimum and maximum frequency  
 (Maximum active power P<66kVA)

**Traceability:**  
 Stack of 50 stored events  
 For further information, please refer to the data sheet for the DSE 7210.