



#### DESCRIPTIVE

- 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

#### 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.

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.

## D700

Engine type	P222LE-S
Alternator type	LSA 49.1 S4

#### GENERAL CHARACTERISTICS

Frequency (Hz)	50
Reference voltage (V)	400/230
Max power ESP (kVA)	686
Max power ESP (kWe)	548.8
Max power PRP (kVA)	623.6
Max power PRP (kWe)	498.9
Intensity (A)	990
Standard Control Panel	TELYS
Optional control panel	KERYS

#### DIMENSIONS AND NOISE LEVELS

##### DIMENSIONS COMPACT VERSION

Length (mm)	3470
Width (mm)	1630
Height (mm)	2131
Dry weight (kg)	3870
Tank capacity (L)	610

##### DIMENSIONS SOUNDPROOFED VERSION

Canopy	M230
Length (mm).	5031
Width (mm).	1690
Height (mm).	2662
Dry weight (kg).	5330
Tank capacity (L).	610
Acoustic pressure level @1m in dB(A) (associated uncertainty)	85 (0.7)
Sound power level guaranteed (Lwa) in dB(A)	105

#### POWERS

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	549	686	499	624	954
400/230	549	686	499	624	990
380/220	549	686	499	624	1042

## D700

### ENGINE SPECIFICATIONS

#### GENERAL ENGINE DATAS

Engine model	DOOSAN P222LE-S , 4- temps, Turbo , Air/Air DC 12 X
Cylinder arrangement	V
Displacement (C.I.)	21.93
Bore (mm) x Stroke (mm)	128 x 142
Compression ratio	14.6
Speed (RPM)	1500
Pistons speed (m/s)	7.1
Maximum stand-by power at rated RPM (kW)	603
Frequency regulation (%)	N/A
BMEP (bar)	20.14
Governor type	Electronic

#### COOLING SYSTEM

Radiator & Engine capacity (L)	115
Max water temperature (°C)	103
Outlet water temperature (°C)	N/A
Fan power (kW)	16
Fan air flow w/o restriction (m3/s)	9.1
Available restriction on air flow (mm EC)	127
Type of coolant	Gencool
Thermostat (°C)	71 - 85

#### EMISSIONS

Emission PM (g/kW.h)	0.1
Emission CO (g/kW.h)	0.69
Emission HCNOx (g/kWh)	N/A
Emission HC (g/kW.h)	0.02

#### EXHAUST

Exhaust gas temperature (°C)	598
Exhaust gas flow (L/s)	1565
Max. exhaust back pressure (mm EC)	600

#### FUEL

Consumption @ 110% load (L/h)	142.2
Consumption @ 100% load (L/h)	130
Consumption @ 75% load (L/h)	99.8
Consumption @ 50% load (L/h)	68.3
Maximum fuel pump flow (L/h)	540

#### OIL

Oil capacity (L)	43
Min. oil pressure (bar)	0.5
Max. oil pressure (bar)	10
Oil consumption 100% load (L/h)	0.13
Carter oil capacity (L)	40

#### HEAT BALANCE

Heat rejection to exhaust (kW)	517.3
Radiated heat to ambient (kW)	71.8
Heat rejection to coolant (kW)	300

#### AIR INTAKE

Max. intake restriction (mm EC)	635
Intake air flow (L/s)	530

### GENERAL DATAS

Alternator brand	LERROY SOMER
Alternator type	LSA 49.1 S4
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	AREP
Insulation class / T° class, continuous 40°C	H / H / 125°K
Regulation	R450
Harmonic factor, no load 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 at established rating (%)	+/- 0.5%
Recovery time (Delta U = 20% transient) (ms)	500 ms

### OTHER DATAS

Continuous Nominal Rating 40°C (kVA)	660
Standby Rating 27°C (kVA)	725
Efficiencies 4/4 load (%)	93.9
Air flow (m3/s)	1
Short circuit ratio (Kcc)	0.38
Direct axis synchro reactance unsaturated (Xd) (%)	343
Quadra axis synchro reactance unsaturated (Xq) (%)	205
Open circuit time constant (T'do) (ms)	1958
Direct axis transient reactance saturated (X'd) (%)	17.5
Short circuit transient time constant (T'd) (ms)	100
Direct axis subtransient reactance saturated (X''d) (%)	14
Subtransient time constant (T''d) (ms)	10
Quadra axis subtransient reactance saturated (X''q) (%)	16.3
Zero sequence reactance unsaturated (Xo) (%)	0.9
Negative sequence reactance saturated (X2) (%)	15.2
Armature time constant (Ta) (ms)	15
No load excitation current (io) (A)	0.9
Full load excitation current (ic) (A)	3.6
Full load excitation voltage (uc) (V)	43
Recovery time (Delta U = 20% transient) (ms)	500 ms
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	1578
Transient dip (4/4 load) - PF : 0,8 AR (%)	13.3
No load losses (W)	8110
Heat rejection (W)	33710

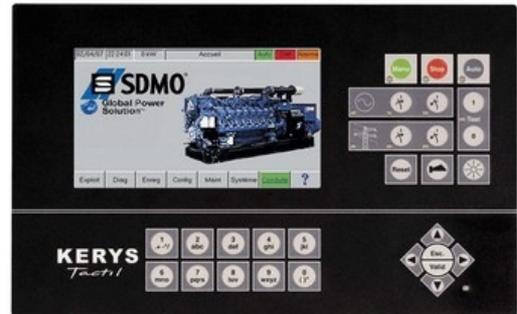
### CONTAINMENT

Canopy	M230 DW
Length (mm).	5083
Width (mm).	1690
Height (mm).	2922
Dry weight (kg).	5970
Tank capacity (L).	1950
Acoustic pressure level @1m in dB(A) (associated uncertainty)	85 (0.7)
Sound power level guaranteed (Lwa) in dB(A)	105

### DIMENSIONS AND NOISE LEVELS

TELYS, ergonomic and user-friendly

KERYS, coupling and adaptability



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.

The KERYS control unit has been designed to fulfil the specific requirements of professionals in terms of operating and monitoring generating sets. It therefore offers a wide range of functions.

This control unit is fitted as standard to all generating sets designed to be used for coupling and is offered as an option across the rest of our range.

The KERYS can be built into the central console, fitted directly on the generating set, or in a separate cabinet, to fulfil all the requirements for low and high output power plants.

>The KERYS 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.

**Additional functions:** coupling, website, diagnostic aid, assistance and maintenance, graphs and archiving, load impact management, 8 available installation configurations, certification in line with international standards.

For more information, please refer to the sales documentation.

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

