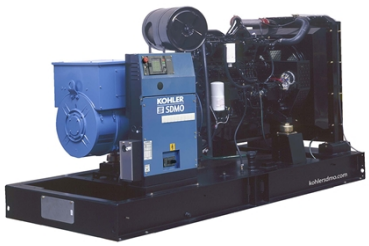
TRANSDIESEL

KOHLER SDMO

KH300

Engine ref.	P126TI
Alternator ref.	KH01720T
Performance class	G3



GENERAL CHARACTERISTICS

Frequency (Hz)	50 Hz
Voltage (V)	400/230
Standard Control Panel	APM303
Optional control panel	APM403
Optional Control Panel	TELYS
Optional control panel	M80

POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	240	300	218	273	417
400/230	240	300	218	273	433
380/220	240	300	218	273	456
200/115	240	300	218	273	866
240 TRI	240	300	218	273	722
230 TRI	240	300	218	273	753
220 TRI	240	300	218	273	787

DIMENSIONS COMPACT VERSION

Length (mm)	2900
Width (mm)	1300
Height (mm)	1670
Dry weight (kg)	2400
Tank capacity (L)	390

DIMENSIONS SOUNDPROOFED VERSION

Type soundproofing	M227
Length (mm)	4004
Width (mm)	1380
Height (mm)	2145
Dry weight (kg)	3250
Tank capacity (L)	390
Acoustic pressure level @1m in dB(A)	83
Sound power level guaranteed (Lwa)	102
Acoustic pressure level @7m in dB(A)	73

DESCRIPTIVE

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for core temperature of 48/50°C max with mechanical fan
- Protective grille for fan and rotating parts (CE option)
- 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 Intlet 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.

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ENGINE CHARACTERISTICS

GENERAL ENGINE DATA

Engine brand	DOOSAN
Engine ref.	P126TI
Air inlet system	Turbo
Cylinders configuration	L
Number of cylinders	6
Displacement (L)	11,05
Charge Air coolant	Air/Air DC
Bore (mm) x Stroke (mm)	123 x 155
Compression ratio	17 : 1
Speed (RPM)	1500
Pistons speed (m/s)	7,75
Maximum stand-by power at rated RPM (kW)	272
Frequency regulation, steady state (%)	+/- 0.25%
BMEP (bar)	17,90
Governor type	Electronic

COOLING SYSTEM

Radiator & Engine capacity (L)	50,50
Fan power (kW)	7
Fan air flow w/o restriction (m3/s)	5
Available restriction on air flow (mm H2O)	0
Type of coolant	Glycol-Ethylene

EMISSIONS

Emission PM (g/kW.h)	0,14
Emission CO (g/kW.h)	0,11
Emission HC+NOx (g/kWh)	8,34
Emission HC (g/kW.h)	0,33

EXHAUST

Exhaust gas temperature @ ESP 50Hz (°C)	560
Exhaust gas flow @ ESP 50 Hz (L/s)	715
Max. exhaust back pressure (mm H2O)	600

FUEL

Consumption @ 110% load (L/h)	66,20
Consumption @ 100% load (L/h)	58,10
Consumption @ 75% load (L/h)	43,60
Consumption @ 50% load (L/h)	30
Maximum fuel pump flow (L/h)	270

OIL

Oil capacity (L)	25
Min. oil pressure (bar)	0,50
Max. oil pressure (bar)	10
Oil consumption 100% ESP (L/h)	0,10
Oil sump capacity (L)	23

HEAT BALANCE

Heat rejection to exhaust (kW)	254
Radiated heat to ambiant (kW)	35
Haet rejection to coolant HT (kW)	107

AIR INTAKE

Max. intake restriction (mm H2O)	635
Intake air flow (L/s)	273

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ALTERNATOR CHARACTERISTICS

GENERAL DATA

Alternator ref.	KH01720T
Number of Phase	Three phase
Power factor (Cos Phi)	0,80
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Capacity for maintaining short circuit at 3 In for 10 s	Yes
Insulation class	H
T° class (H/125°), continuous 40°C	H / 125°K
T° class (H/163°C), standby 27°C	H / 163°K
Total Harmonic Distortion in no-load DHT (%)	2,6
AVR Regulation	Yes
Total Harmonic Distortion, on linear load DHT (%)	3,0
Wave form : NEMA=TIF	<40
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	1
Recovery time (Delta U = 20% transcient) (ms)	200
Indication of protection	IP 23
Technology	Without collar or brush

OTHER DATA

Continuous Nominal Rating 40°C (kVA)	300
Standby Rating 27°C (kVA)	330
Efficiencies 100% of load (%)	93,70
Air flow (m3/s)	0,5330
Short circuit ratio (Kcc)	0,43
Direct axis synchro reactance unsaturated (Xd) (%)	215,30
Quadra axis synchro reactance unsaturated (Xq) (%)	124,20
Open circuit time constant (T'do) (ms)	1400
Direct axis transcient reactance saturated (X'd) (%)	13,10
Short circuit transcient time constant (T'd) (ms)	91
Direct axis subtranscient reactance saturated (X"d) (%)	7
Subtranscient time constant (T"d) (ms)	12
Quadra axis subtranscient reactance saturated (X"q) (%)	17,90
Subtranscient time constant (T"q) (ms)	20
Zero sequence reactance unsaturated (Xo) (%)	2,38
Negative sequence reactance saturated (X2) (%)	13,80
Armature time constant (Ta) (ms)	16
No load excitation current (io) (A)	0,78
Full load excitation current (ic) (A)	3,90
Full load excitation voltage (uc) (V)	61,30
Engine start (Delta U = 20% perm. or 30% trans.) (kVA)	230
Transcient dip (4/4 load) - PF : 0,8 AR (%)	14
No load losses (W)	3970
Heat rejection (W)	16137
Unbalanced load acceptance ratio (%)	100

DIMENSIONS

Dimensions soundproofed version

Type soundproofing	M227
Length (mm)	4004
Width (mm)	1380
Height (mm)	2145
Dry weight (kg)	3250
Tank capacity (L)	390
Acoustic pressure level @1m in dB(A)	83
Sound power level guaranteed (Lwa)	102
Acoustic pressure level @7m in dB(A)	73

Dimensions DW compact version

Type soundproofing	
Length (mm)	4056
Width (mm)	1360
Height (mm)	1885
Dry weight (kg)	2860
Tank capacity (L)	950
Acoustic pressure level @1m in dB(A)	
Sound power level guaranteed (Lwa)	
Acoustic pressure level @7m in dB(A)	

Dimensions DW soundproofed version

Type soundproofing	M227 DW
Length (mm)	4056
Width (mm)	1380
Height (mm)	2340
Dry weight (kg)	4050
Tank capacity (L)	950
Acoustic pressure level @1m in dB(A)	83

Dimensions DW 48h soundproofed version

Type soundproofing	M227 DW48
Length (mm)	4056
Width (mm)	1380
Height (mm)	2618
%PdnetE_5%	4050
Tank capacity (L)	2130
Acoustic pressure level @1m in dB(A)	83

13/09/2017

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CONTROL PANEL

APM303, comprehensive and simple

The APM303 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, fuel level
(In option : active power currents, effective power, power factors, Kw/h energy meter, oil pressure and coolant temperature levels)
Supervision:
Modbus RTU communication on RS485
Reports:
(In option : 2 configurable reports)
Safety features:
Overspeed, oil pressure,coolant temperatures, minimum and maximum voltage, minimum and maximum frequency
(Maximum active power P<66kVA)
Traceability:
Stack of 12 stored events
For further information, please refer to the data sheet for the APM303.

APM403, basic generating set and power plant control

The APM403 is a versatile control unit which allows operation in manual or automatic mode
Measurements : voltage and current
kW/kWh/kVA power meters
Standard specifications: Voltmeter, Frequency meter.
Optional : Battery ammeter.
J1939 CAN ECU engine control
Alarms and faults: Oil pressure, Coolant temperature, Overspeed, Start-up failure, alternator min/max, Emergency stop button.
Engine parameters: Fuel level, hour counter, battery voltage.
Optional (standard at 24V): Oil pressure, water temperature.
Event log/ Management of the last 300 genset events.
Mains and genset protection
Clock management
USB connections, USB Host and PC,
Communications : RS485 INTERFACE
ModBUS protocol /SNMP
Optional : Ethernet, GPRS, remote control, 3G, 4G, Websupervisor, SMS, E-mails

TELYS, ergonomic and user-friendly

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.

M80, transfer of information

The M80 is a dual-function control unit. It can be used as a basic terminal block for connecting a control box and as an instrument panel with a direct read facility, with displays giving a global view of your generating set's basic parameters.

Offers the following functions:

Engine parameters: tachometer, working hours counter, coolant temperature indicator, oil pressure indicator, emergency stop button, customer connection terminal block, CE.