SDMO°





DESCRIPTIVE

- Mechanic 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 (CE option)
- 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

T25KM

GENERAL CHARACTERISTICS	
Performance class	G2
Alternator ref.	AT00540T
Engine ref.	S4S-SD

GENERAL CHARACTERISTICS	
Frequency (Hz)	50
Voltage (V)	230 single phase
Standard Control Panel	APM303
Optional control panel	TELYS

POWER					
Valtaga	ESP		PRP		Standby Amps
Voltage	kWe	kVA	kWe	kVA	Stanuby Amps
240 MONO 230	25	25	22.7	22.7	104
MONO	25	25	22.7	22.7	109
220 MONO	25	25	22.7	22.7	114

DIMENSIONS COMPACT VERSION	
Length (mm)	1700
Width (mm)	896
Height (mm)	1144
Dry weight (kg)	710
Tank capacity (L)	100

DIMENSIONS SOUNDPROOFED VERS	ION
Commercial reference of the enclosure	M127
Length (mm)	2080
Width (mm)	960
Height (mm)	1415
Dry weight (kg)	940
Tank capacity (L)	100
Acoustic pressure level @1m in dB(A)	73
Sound power level guaranteed (Lwa)	90
Acoustic pressure level @7m in dB(A)	61

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 UNCERTAINLY

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 model	MITSUBISHI
Engine ref.	S4S-SD
Air inlet	Athmo
Cylinders arrangement	L
Number of cylinders	4
Displacement (C.I.)	3.33
Air coolant	
Bore (mm) x Stroke (mm)	94 x 120
Compression ratio	22 : 1
Speed (RPM)	1500
Pistons speed (m/s)	6
Maximum stand-by power at rated RPM (kW)	31.90
Frequency regulation (%)	+/- 2.5%
BMEP (bar)	6.96
Governor type	Mechanical

COOLING SYSTEM

Radiator & Engine capacity (L)	8.90
Max water temperature (°C)	100
Outlet water temperature (°C)	93
Fan power (kW)	0.70
Fan air flow w/o restriction (m3/s)	1
Available restriction on air flow (mm Water Column)	10
Type of coolant	Glycol-Ethylene
Thermostat (°C)	76.5-90

EMISSIONS

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

EXHAUST	
Exhaust gas temperature (°C)	600
Exhaust gas flow (L/s)	103
Max. exhaust back pressure (mm EC)	680
FUEL	
Consumption @ 110% load (L/h)	9.90
Consumption @ 100% load (L/h)	8.20
Consumption @ 75% load (L/h)	6
Consumption @ 50% load (L/h)	4.20
Maximum fuel pump flow (L/h)	36
OIL	
Oil capacity (L)	10
Min. oil pressure (bar)	1
Max. oil pressure (bar)	5

HEAT BALANCE	
Heat rejection to exhaust (kW)	29
Radiated heat to ambiant (kW)	5
Haet rejection to coolant (kW)	29

0.09

9

Oil consumption 100% load (L/h)

Carter oil capacity (L)

AIR INTAKE	
Max. intake restriction (mm EC)	250
Intake air flow (L/s)	38

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ALTERNATOR CHARACTERISTICS

GENERAL DATA

GENERAL DATA	
Alternator ref.	AT00540T
Number of Phase	Single phase
Power factor (Cos Phi)	1
Altitude (m)	0 to 1000
Overspeed (rpm)	2250
Number of pole	4
Capacity for maintaining short circuit at 3 ln for 10 s	Yes
Insulation class	Н
T° class, continuous 40°C	H / 125°K
T° class, standby 27°C	H / 163°K
AVR Regulation	Yes
Total Harmonic Distortion in no-load DHT (%)	3.7
Total Harmonic Distortion, on load DHT (%)	3.2
Wave form : NEMA=TIF	<45
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	+/- 1%
Recovery time (Delta U = 20% transcient) (ms)	500
Indication of protection	IP 21
Technology	Without collar or brush

OTHER DATA	
Continuous Nominal Rating 40°C (kVA)	28
Standby Rating 27°C (kVA)	31.60
Efficiencies 100% of load (%)	83.40
Air flow (m3/s)	0.1180
Short circuit ratio (Kcc)	0.80
Direct axis synchro reactance unsaturated (Xd) (%)	190
Quadra axis synchro reactance unsaturated (Xq) (%)	98
Open circuit time constant (T'do) (ms)	1320
Direct axis transcient reactance saturated (X'd) (%)	14.30
Short circuit transcient time constant (T'd) (ms)	61
Direct axis subtranscient reactance saturated (X"d) (%)	10
Subtranscient time constant (T"d) (ms)	15
Quadra axis subtranscient reactance saturated (X"q) (%)	30.60
Subtranscient time constant (T"q) (ms)	
Zero sequence reactance unsaturated (Xo) (%)	2.70
Negative sequence reactance saturated (X2) (%)	21.50
Armature time constant (Ta) (ms)	31
No load excitation current (io) (A)	0.70
Full load excitation current (ic) (A)	2.40
Full load excitation voltage (uc) (V)	25
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	107
Transcient dip (4/4 load) - PF : 0,8 AR (%)	15.50
No load losses (W)	959.68
Heat rejection (W)	4375

Unbalanced load acceptance ratio (%)

DIMENSIONS

Containment DW	
Commercial reference of the enclosure	M127 DW
Length (mm)	2160
Width (mm)	966
Height (mm)	1582
Dry weight (kg)	1132
Tank capacity (L)	230
Acoustic pressure level @1m in dB(A)	73
Sound power level guaranteed (Lwa)	90
Acoustic pressure level @7m in dB(A)	61

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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. Equipped with an LCD screen, the user-friendly APM303 offers high-quality basic functions to guarantee simple, reliable operation and supervision of your generating set. It offers the following features: Measurements:

phase-to-neutral and phase-to-phase voltages, active power currents, effective power, power factors, Kw/h energy meter Fuel, oil pressure and coolant temperature levels Supervision:

Modbus RTU communication on RS485 Reports: 2 configurable reports Safety features: Overspeed, oil pressure Coolant temperatures Minimum and maximum voltage Minimum and maximum frequency Maximum current Maximum active power Phase sequence Traceability: Stack of 12 stored events For further information, please refer to the data sheet for the APM303.

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.

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