

GENERATOR SPECIFICATION



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 100kPa (100 m A.S.L), and 30 % relative humidity. For particular conditions in your installation, refer to the derating table.

R44C3

Engine ref.	S4S-Z3DT61SD
Alternator ref.	KH00601T
Canopy	M3127
Performance class	G2

GENERAL CHARACTERISTICS

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

SMALL AUTONOMY DIMENSIONS

Length (mm)	2200
Width (mm)	1000
Height (mm)	1528
Dry weight (kg)	1112
Tank capacity (L)	220

Autonomy @ 75% of load (h) -

Autonomy @ 50% of load (h) -

SOUND LEVELS

Acoustic pressure level @1m in dB(A) (Associated uncertainty)	71 (0,61)
Acoustic pressure level @7m in dB(A) (Associated uncertainty)	59
Sound power level guaranteed (Lwa)	88

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.



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ENGINE CHARACTERISTICS

GENERAL ENGINE DATAS	
Engine model	MITSUBISHI
Engine ref.	S4S-Z3DT61SD
Air inlet	Turbo
Cylinders arrangement	L
Number of cylinders	4
Displacement (L)	3,33
Charge Air coolant	
Bore (mm) x Stroke (mm)	94 x 120
Compression ratio	19 : 1
Speed (RPM)	1500
Pistons speed (m/s)	6
Maximum stand-by power at rated RPM (kW)	36
Frequency regulation (%)	+/- 2.5%
BMEP (bar)	7,90
Governor type	Mechanical

COOLING SYSTEM	
Radiator & Engine capacity (L)	9,50
Fan power (kW)	0,80
Fan air flow w/o restriction (m3/s)	1,10
Available restriction on air flow (mm Water Column)	
Type of coolant	Glycol-Ethylene

EMISSIONS	
Emission PM (g/kW.h)	8,50
Emission CO (g/kW.h)	5,50
Emission HC+NOx (g/kWh)	0
Emission HC (g/kW.h)	

EXHAUST	
Exhaust gas temperature (°C)	
Exhaust gas flow (L/s)	
Max. exhaust back pressure (mm EC)	680

FUEL	
Consumption @ 110% load (L/h)	0
Consumption @ 100% load (L/h)	10,40
Consumption @ 75% load (L/h)	8,10
Consumption @ 50% load (L/h)	4,40
Maximum fuel pump flow (L/h)	

OIL	
Oil capacity (L)	10
Min. oil pressure (bar)	1
Max. oil pressure (bar)	3,90
Oil consumption 100% ESP (L/h)	0,10
Carter oil capacity (L)	9

HEAT BALANCE	
Heat rejection to exhaust (kW)	
Radiated heat to ambient (kW)	
Heat rejection to coolant (kW)	

AIR INTAKE	
Max. intake restriction (mm EC)	200
Intake air flow (L/s)	



ALTERNATOR SPECIFICATION

GENERAL DATA	
Alternator ref.	KH00601T
Number of Phase	Three phase
Power factor (Cos Phi)	0,80
Altitude (m)	0 to 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, continuous 40°C	H / 125°K
T° class, standby 27°C	H / 163°K
AVR Regulation	Yes
Total Harmonic Distortion in no-load DHT (%)	<2
Total Harmonic Distortion, on linear load DHT (%)	<4
Wave form : NEMA=TIF	<50
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	0,50
Recovery time (Delta U = 20% transient) (ms)	500
Indication of protection	IP 23
Technology	Without collar or brush

OTHER DATA	
Continuous Nominal Rating 40°C (kVA)	40
Standby Rating 27°C (kVA)	45
Efficiencies 100% of load (%)	89,50
Air flow (m3/s)	0,10
Short circuit ratio (Kcc)	0,4630
Direct axis synchro reactance unsaturated (Xd) (%)	262
Quadra axis synchro reactance unsaturated (Xq) (%)	133
Open circuit time constant (T'do) (ms)	880
Direct axis transient reactance saturated (X'd) (%)	14,80
Short circuit transient time constant (T'd) (ms)	50
Direct axis subtransient reactance saturated (X''d) (%)	7,40
Subtransient time constant (T''d) (ms)	5
Quadra axis subtransient reactance saturated (X''q) (%)	10,60
Subtransient time constant (T''q) (ms)	5
Zero sequence reactance unsaturated (Xo) (%)	0,60
Negative sequence reactance saturated (X2) (%)	9,02
Armature time constant (Ta) (ms)	8
No load excitation current (io) (A)	0,75
Full load excitation current (ic) (A)	2,70
Full load excitation voltage (uc) (V)	18,80
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	95,87
Transient dip (4/4 load) - PF : 0,8 AR (%)	13
No load losses (W)	861,06
Heat rejection (W)	3736,15
Unbalanced load acceptance ratio (%)	100