



GENERATOR SPECIFICATION

R22C3	
Engine ref.	S4Q2-Z361SD
Alternator ref.	KH00440T
Canopy	M3126
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)	1850
Width (mm)	901
Height (mm)	1355
Dry weight (kg)	794
Tank capacity (L)	153
Autonomy @ 75% of load (h) -	
Autonomy @ 50% of load (h) -	

POWER DEFINITION

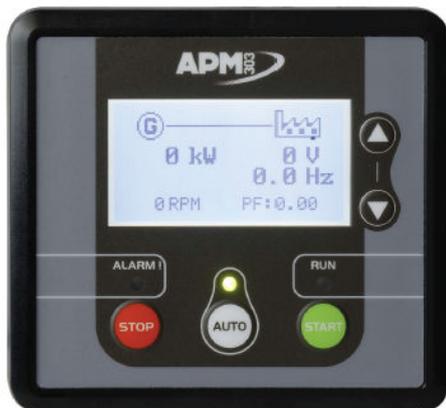
PRP : Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1. ESP : The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1. Overload is not allowed.

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

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.

ENGINE CHARACTERISTICS

GENERAL ENGINE DATAS	
Engine model	MITSUBISHI
Engine ref.	S4Q2-Z361SD
Air inlet	Athmo
Cylinders arrangement	L
Number of cylinders	4
Displacement (L)	2,51
Charge Air coolant	
Bore (mm) x Stroke (mm)	88 x 103
Compression ratio	22 : 1
Speed (RPM)	1500
Pistons speed (m/s)	5,15
Maximum stand-by power at rated RPM (kW)	22,20
Frequency regulation (%)	+/- 2.5%
BMEP (bar)	6,40
Governor type	Mechanical

COOLING SYSTEM	
Radiator & Engine capacity (L)	6
Fan power (kW)	0,70
Fan air flow w/o restriction (m3/s)	0,77
Available restriction on air flow (mm Water Column)	
Type of coolant	Glycol-Ethylene

EMISSIONS	
Emission PM (g/kW.h)	0.60
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)	6,90
Consumption @ 100% load (L/h)	6,20
Consumption @ 75% load (L/h)	4,70
Consumption @ 50% load (L/h)	3,40
Maximum fuel pump flow (L/h)	

OIL	
Oil capacity (L)	6,50
Min. oil pressure (bar)	1
Max. oil pressure (bar)	3,90
Oil consumption 100% ESP (L/h)	0
Carter oil capacity (L)	5,50

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)	

CONTACT US

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ALTERNATOR CHARACTERISTICS

GENERAL DATA	
Alternator ref.	KH00440T
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 (%)	<3.5
Total Harmonic Distortion, on linear load DHT (%)	<5
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)	22
Standby Rating 27°C (kVA)	22
Efficiencies 100% of load (%)	87,10
Air flow (m3/s)	0,06
Short circuit ratio (Kcc)	0,6080
Direct axis synchro reactance unsaturated (Xd) (%)	193
Quadra axis synchro reactance unsaturated (Xq) (%)	98
Open circuit time constant (T'do) (ms)	926
Direct axis transient reactance saturated (X'd) (%)	15,40
Short circuit transient time constant (T'd) (ms)	74
Direct axis subtransient reactance saturated (X''d) (%)	7,70
Subtransient time constant (T''d) (ms)	7
Quadra axis subtransient reactance saturated (X''q) (%)	16,20
Subtransient time constant (T''q) (ms)	7
Zero sequence reactance unsaturated (Xo) (%)	0,60
Negative sequence reactance saturated (X2) (%)	12,01
Armature time constant (Ta) (ms)	11
No load excitation current (io) (A)	0,98
Full load excitation current (ic) (A)	2,66
Full load excitation voltage (uc) (V)	17
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	58,43
Transient dip (4/4 load) - PF : 0,8 AR (%)	11
No load losses (W)	644,97
Heat rejection (W)	2352,29
Unbalanced load acceptance ratio (%)	100

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