



R44C3

Engine ref.	S4S-Z3DT61SD
Alternator ref.	AT00601T
Canopy	M3127
Performance class	G2

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Voltage (V)	400/230
Max power ESP (kVA)	40
Max power ESP (kWe)	32
Max power PRP (kVA)	40
Max power PRP (kWe)	32
Intensity (A)	58
Standard Control Panel	APM303
Optional control panel	TELYS

DESCRIPTIVE

- Stage 3a engine
- Four-pole circuit breaker
- Connection terminal box rental type
- Containment fuel tank and large autonomy
- Forks and frame protection pads
- Differential protection and earthing rod
- Inlet air preheating
- Battery isolating switch
- Oil drainage pump
- Heavy duty air filter with interchangeable cartridge
- Primary filter
- Heat hand protections (EC standards)
- Access door to the radiator

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)	
Acoustic pressure level @7m in dB(A)	

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.

ASSOCIATED UNCERTAINTY

For the generating sets used indoors, 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 DATAS

Engine model	MITSUBISHI
Engine ref.	S4S-Z3DT61SD
Air inlet	Turbo
Cylinders arrangement	L
Number of cylinders	4
Displacement (L)	3,33
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)	
Frequency regulation (%)	+/- 2.5%
BMEP (bar)	8,65
Governor type	Mechanical

COOLING SYSTEM

Radiator & Engine capacity (L)	9,50
Max water temperature (°C)	102
Outlet water temperature (°C)	93
Fan power (kW)	0,80
Fan air flow w/o restriction (m ³ /s)	1,10
Available restriction on air flow (mm Water Column)	
Type of coolant	Glycol-Ethylene
Thermostat (°C)	76.5-90

EMISSIONS

Emission PM (g/kW.h)	<0.6
Emission CO (g/kW.h)	<5
Emission HC+NO _x (g/kWh)	<7.5
Emission HC (g/kW.h)	

EXHAUST

Exhaust gas temperature (°C)	
Exhaust gas flow (L/s)	
Max. exhaust back pressure (mm H ₂ O)	680

FUEL

Consumption @ 110% load (L/h)	
Consumption @ 100% load (L/h)	10,38
Consumption @ 75% load (L/h)	8,10
Consumption @ 50% load (L/h)	4,45
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% load (L/h)	0,11
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 H ₂ O)	200
Intake air flow (L/s)	



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ALTERNATOR CHARACTERISTICS

Alternator ref.	AT00601T
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
Total Harmonic Distortion, on load DHT (%)	<2
Wave form : NEMA=TIF	<50
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	
Recovery time (Delta U = 20% transient) (ms)	< 500
Indication of protection	IP 23
Technology	Without collar or brush

Continuous Nominal Rating 40°C (kVA)	40
Standby Rating 27°C (kVA)	45
Efficiencies 100% of load (%)	88,60
Air flow (m3/s)	0,10
Short circuit ratio (Kcc)	0,44
Direct axis synchro reactance unsaturated (Xd) (%)	276
Quadra axis synchro reactance unsaturated (Xq) (%)	138
Open circuit time constant (T'do) (ms)	848
Direct axis transient reactance saturated (X'd) (%)	16,30
Short circuit transient time constant (T'd) (ms)	50
Direct axis subtransient reactance saturated (X''d) (%)	8,10
Subtransient time constant (T''d) (ms)	5
Quadra axis subtransient reactance saturated (X''q) (%)	11,60
Subtransient time constant (T''q) (ms)	5
Zero sequence reactance unsaturated (Xo) (%)	0,10
Negative sequence reactance saturated (X2) (%)	9,88
Armature time constant (Ta) (ms)	7
No load excitation current (io) (A)	0,49
Full load excitation current (ic) (A)	1,73
Full load excitation voltage (uc) (V)	29
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	107
Transient dip (4/4 load) - PF : 0,8 AR (%)	18
No load losses (W)	881
Heat rejection (W)	4237
Unbalanced load acceptance ratio (%)	100

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.

Automatic control: automatic start.

For more information on the product and its options, please refer to the sales documentation.