T2200C

Engine ref.	S16R-F1PTAW2
Alternator ref.	LSA 51.2 M60
Performance class	G3

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Voltage (V)	400/230
Standard Control Panel	Basic terminal block
Optional control panel	M80
Optional Control Panel	TELYS
Optional control panel	APM802

POWER

Voltage	ESP		PRP		DCC (*)		Standby Amps
	kWe	kVA	kWe	kVA	kWe	kVA	
415/240	1760	2200	1600	2000	1600	2000	3061
400/230	1760	2200	1600	2000	1600	2000	3176
380/220	1760	2200	1600	2000	1600	2000	3343

DIMENSIONS COMPACT VERSION

Length (mm)	6640
Width (mm)	3430
Height (mm)	2195
Dry weight (kg)	15006
Tank capacity (L)	0

DIMENSIONS SOUNDPROOFED VERSION

Commercial reference of the enclosure	
Length (mm)	0
Width (mm)	0
Height (mm)	0
Dry weight (kg)	0
Tank capacity (L)	0
Acoustic pressure level @1m in dB(A)	0
Sound power level guaranteed (Lwa)	0
Acoustic pressure level @7m in dB(A)	0

DESCRIPTIVE

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Air cooler for wiring temperature of 38/40°C with electric fan
- Protective grille for fan and rotating parts (CE option)
- Exhaust compensators with flanges
- 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.
*DCC : Data Center Continuous Power ratings apply to Data Center installations where a reliable utility power is available and comply with Uptime institute Tier III and IV requirements. At constant or varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Average load factor : ≤ 100%.

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.

T2200C

ENGINE CHARACTERISTICS

GENERAL ENGINE DATA

Engine brand	MITSUBISHI
Engine ref.	S16R-F1PTAW2
Air inlet system	Turbo
Cylinders configuration	V
Number of cylinders	16
Displacement (L)	65,37
Charge Air coolant	Air/Water DC
Bore (mm) x Stroke (mm)	170,00 x 180,00
Compression ratio	14 : 1
Speed (RPM)	1500
Pistons speed (m/s)	9,00
Maximum stand-by power at rated RPM (kW)	1947,00
Frequency regulation, steady state (%)	+/- 0.5%
BMEP (bar)	21,75
Governor type	Electronic

COOLING SYSTEM

Radiator & Engine capacity (L)	678,00
Max water temperature (°C)	98,00
Outlet water temperature (°C)	95
Fan power (kW)	44,00
Fan air flow w/o restriction (m3/s)	27,80
Available restriction on air flow (mm H2O)	20,00
Type of coolant	Glycol-Ethylene
Thermostat modulating range HT (°C)	71-85

EMISSIONS

Emission PM (mg/Nm3) 5% O2	50
Emission CO (mg/Nm3) 5% O2	650
Emission HC+NOx (g/kWh)	
Emission HC (mg/Nm3) 5% O2	150

EXHAUST

Exhaust gas temperature @ ESP 50Hz (°C)	524
Exhaust gas flow @ ESP 50 Hz (L/s)	7850,00
Max. exhaust back pressure (mm H2O)	600

FUEL

Consumption @ 110% load (L/h)	490,00
Consumption @ 100% load (L/h)	444,00
Consumption @ 75% load (L/h)	328,00
Consumption @ 50% load (L/h)	222,00
Maximum fuel pump flow (L/h)	588,00

OIL

Oil capacity (L)	230,00
Min. oil pressure (bar)	2,50
Max. oil pressure (bar)	5,80
Oil consumption 100% load (L/h)	1,600
Oil sump capacity (L)	140,0

HEAT BALANCE

Heat rejection to exhaust (kW)	1639
Radiated heat to ambiant (kW)	140,00
Haet rejection to coolant (kW)	608+514

AIR INTAKE

Max. intake restriction (mm H2O)	400
Intake air flow (L/s)	2965,00

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ALTERNATOR CHARACTERISTICS

GENERAL DATA

Alternator ref.	LSA 51.2 M60
Number of Phase	Three phase
Power factor (Cos Phi)	0,8
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 (H/125°), 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 load DHT (%)	<3.5
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% transcient) (ms)	700
Indication of protection	IP 23
Technology	Without collar or brush

OTHER DATA

Continuous Nominal Rating 40°C (kVA)	2050,0
Standby Rating 27°C (kVA)	2255,0
Efficiencies 100% of load (%)	95,7
Air flow (m3/s)	2,500
Short circuit ratio (Kcc)	0,350
Direct axis synchro reactance unsaturated (Xd) (%)	357,0
Quadra axis synchro reactance unsaturated (Xq) (%)	214,0
Open circuit time constant (T'do) (ms)	2770,00
Direct axis transcient reactance saturated (X'd) (%)	26,8
Short circuit transcient time constant (T'd) (ms)	245,000
Direct axis subtranscient reactance saturated (X"d) (%)	14,0
Subtranscient time constant (T"d) (ms)	23,000
Quadra axis subtranscient reactance saturated (X"q) (%)	17,50
Subtranscient time constant (T"q) (ms)	20,0
Zero sequence reactance unsaturated (Xo) (%)	3,300
Negative sequence reactance saturated (X2) (%)	15,70
Armature time constant (Ta) (ms)	41,000
No load excitation current (io) (A)	1,40
Full load excitation current (ic) (A)	5,50
Full load excitation voltage (uc) (V)	63,0
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	4100,00
Transcient dip (4/4 load) - PF : 0,8 AR (%)	11,80
No load losses (W)	16600,00
Heat rejection (W)	73000,00
Unbalanced load acceptance ratio (%)	8

DIMENSIONS

CONTAINER ISO 40

Commercial reference of the enclosure	ISO40 Si
Length (mm)	12192
Width (mm)	2438
Height (mm)	2896
Dry weight (kg)	22850
Tank capacity (L)	500
Acoustic pressure level @1m in dB(A)	91
Sound power level guaranteed (Lwa)	114
Acoustic pressure level @7m in dB(A)	83

CONTAINER CPU40 Ssi

Commercial reference of the enclosure	CPU40SSi
Length (mm)	12192
Width (mm)	2438
Height (mm)	2896
Dry weight (kg)	26180
Tank capacity (L)	500

CONTAINER CPU40 Si

Commercial reference of the enclosure	CPU40Si
Length (mm)	12192
Width (mm)	2438
Height (mm)	2896
Dry weight (kg)	25160
Tank capacity (L)	500
Acoustic pressure level @1m in dB(A)	86
Sound power level guaranteed (Lwa)	109
Acoustic pressure level @7m in dB(A)	78

Acoustic pressure level @1m in dB(A)	79
Sound power level guaranteed (Lwa)	102
Acoustic pressure level @7m in dB(A)	71

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CONTROL PANEL

Basic terminal block

The control unit can be used as a basic terminal block for connecting a control box.

Offers the following functions:

emergency stop button, customer connection terminal block, CE.

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.

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.

APM802 dedicated to power plant management

The new APM802 command/control system is specifically designed for operating and monitoring power plants for markets including hospitals, data centres, banks, the oil and gas sector, industries, IPP, rental and mining.
This unit is available as standard on all generating sets from 275 Kva designed for coupling. It is optional on the rest of our range.
The Human Machine Interface, designed in collaboration with a company specialising in interface design, facilitates operations with a large 100% touch screen. The pre-configured system for power plant applications features a brand new customisation function which complies with the international standard IEC 61131-3. New communication functions (PLC and regulation), improve the high level of equipment availability in the installation.

Advantages:
Dedicated to power plant management.
Specially researched ergonomics.
High level of equipment availability.
Modularity and long service life guaranteed.
Making it easy to extend the installation

For more information, please refer to the sales documentation.