

T12KM

Motor type S4L2-SD
Alternator type ECO28-1L

GENERAL CHARACTERISTICS

- Mechanic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for wiring temperature of 48/50°C max with
- Protective grille for fan and rotating parts
- 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



T12KM : MITSUBISHI, S4L2-SD - MECC ALTE, ECO28- 1L						
Voltage (V)	Voltage Code	Power ESP		Power PRP		Standby Amps
		kWe	kVA	kWe	kVA	
240MONO	T51M1	12	12	11	11	50
230MONO	T51M2	12	12	11	11	52
220MONO	T51M3	12	12	11	11	55

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

Standard reference conditions 25°C Air Inlet Temp, 100 m A.S.L. 60 % relative humidity. All engine performance data based on the above mentioned maximum continuous ratings.

ENGINE SPECIFICATIONS

	Description	S4L2-SD
GENERAL CHARACTERISTICS	Motor model	MITSUBISHI
	Cylinder arrangement	L
	Number of cylinders	4
	Bore (mm)	78
	Stroke (mm)	92
	Displacement (C.I.)	1.76
	Compression ratio	22 : 1
	Speed (RPM)	1500
	Pistons speed (m/s)	4.6
	Maximum stand-by power at rated RPM (kW)	16.61
	Governor type	Mechanical
	Frequency regulation (%)	+/- 2.5%
	BMEP (bar)	6.87
EXHAUST	Exhaust gas flow (L/s)	48.7
	Exhaust gas temperature (°C)	410
	Max. exhaust back pressure (mm CE)	700
FUEL	Consumption @ 100% load (L/h)	4.4
	Consumption @ 75% load (L/h)	3.4
	Consumption @ 50% load (L/h)	2.6
	Maximum fuel pump flow (L/hr)	18
OIL SYSTEM	Oil capacity (L)	5.9
	Min. oil pressure (bar)	1
	Max. oil pressure (bar)	4
	Oil consumption 100% load (L/h)	0.025
	Carter oil capacity (L)	5.4
HEAT BALANCE	Heat rejection to exhaust (kW)	14
	Radiated heat to ambient (kW)	2
	Heat rejection to coolant (kW)	14
AIR INTAKE	Intake air flow (L/s)	18.2
	Max. intake restriction (mm CE)	200
COOLING SYSTEM	Radiator & Engine capacity (L)	4.9
	Max water temperature (°C)	111
	Outlet water temperature (°C)	93
	Fan power (kW)	0.5
	Fan air flow w/o restriction (m3/s)	0.8
	Available restriction on air flow (mm CE)	10
	Type of coolant	Gencool
Thermostat (°C)	82-95	
EMISSIONS	Emission HC (mg/Nm3)	40
	Emission Nox (mg/Nm3)	1350
	Emission CO (mg/Nm3)	120
	Emissions PM (mg/Nm3)	100

ALTERNATOR SPECIFICATIONS

GENERAL CHARACTERISTICS	Description	ECO 28 1L/4
	Alternator brand	MECC ALTE
	Number of phase	3
	Altitude (m)	1000
	Overspeed (rpm)	0
	Number of pole	4
	Excitation system	NO
	Insulation class	H
	Regulation	AVR
	Number of bearing	1
	Coupling	Direct
Air flow (m3/s)	0.088	
POWERS	Power factor (Cos Phi)	0.8
	Continuous Nominal Rating 40°C (kVA)	20
	Standby Rating 27°C (kVA)	20
	Efficiencies 4/4 load (%)	84.2
REACTANCES (R) - TIME CONSTANT(CT)	Short circuit ratio (Kcc)	0.65
	Direct axis synchro reactance unsaturated (Xd) (%)	175
	Quadra axis synchro reactance unsaturated (Xq) (%)	76
	Open circuit time constant (T'do) (ms)	0.87
	Direct axis transient reactance saturated (X'd) (%)	16.5
	Short circuit transient time constant (T'd) (ms)	0.045
	Direct axis subtransient reactance saturated (X''d) (%)	9.4
	Subtransient time constant (T''d) (ms)	0.015
	Quadra axis subtransient reactance saturated (X''q)	21
	Zero sequence reactance unsaturated (Xo) (%)	3.2
	Negative sequence reactance saturated (X2) (%)	14.2
Armature time constant (Ta) (ms)	0.013	
OTHER CHARACTERISTICS	No load excitation current (io) (A)	0
	Full load excitation current (ic) (A)	0
	Full load excitation voltage (uc) (V)	0
	Motor start (Delta U = 20% perm. or 50% trans.)	0
	Transient dip (4/4 charge) - PF : 0,8 AR (%)	0
	No load losses (W)	0
	Heat rejection (W)	0

DIMENSIONS AND NOISE LEVELS

DIMENSIONS COMPACT VERSION	Length (mm)	1405
	Width (mm)	715
	Height (mm)	1053
	Tank capacity (L)	50
	Dry weight (kg)	452
DIMENSIONS CANOPIED VERSION	Canopy	M126
	Length (mm).	1750
	Width (mm).	775
	Height (mm).	1230
	Tank capacity (L).	50
	Dry weight (kg).	600
NOISE LEVEL	dB(A) @ 1m (50Hz)	70.7
	dB(A) @ 7m (50Hz)	60.7
	dB(A) @ 15m (50Hz)	56.7
	LWa (50Hz)	87

CONTAINMENT

DIMENSIONS COMPACT VERSION	Length (mm)	1797
	Width (mm)	775
	Height (mm)	1214
	Tank capacity (L)	93
	Dry weight (kg)	515
DIMENSIONS CANOPIED VERSION	Canopy	M126 DW
	Length (mm).	1797
	Width (mm).	775
	Height (mm).	1391
	Tank capacity (L).	93
	Dry weight (kg).	679
NOISE LEVEL	dB(A) @ 1m (50Hz)	70.7
	dB(A) @ 7m (50Hz)	60.7
	dB(A) @ 15m (50Hz)	56.7
	LWa (50Hz)	87

CONTROL PANELS

DESCRIPTION OF STANDARD CONTROL PANEL



The NEXYS is a versatile control unit allowing operation in manual or automatic mode. Equipped with an LCD screen, the user-friendly NEXYS offers high-quality basic functions to guarantee simple, reliable operation of your generating set.

Offers the following functions:

Standard electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, engine speed, battery voltage, fuel level.

DESCRIPTION OF CONTROL PANEL AS OPTION



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,