





# **Generating Set Base Frame - diesel**

# GE.YA.037/033.BF+011

1500 rpm - Threephase - 50Hz - 400V Automatic Panel with AMF without ATS



# **Standard equipment**

### Exhaust

Exhaust manifold protection Silenced muffler -15dB(A)

# Fuel Supply

Single wall daily tank with bunded base Automatic shutdown system for low fuel level Fuel gauge

## **A** Handling

Base frame with anti-overturning forklift pockets Forkliftable on the short side

### Base Frame

Anti-vibrating mounting pads Battery compartment externally accessible for easy service Anti pollution bunded base

# Engine

High coolant temperature and low oil pressure shutdown system External oil drain points Engine liquids (oil and antifreeze) Tropicalized radiator Rotating parts protection

## Alternator

Avr automatic voltage regulator Impregnation for marine environment lp23

# Panel & connection

Emergency stop button Cable output from the bottom lp44 wiring Start-up battery (pre-charged) Grounding point

### Documentation

Ce conformity declaration User and maintenance manual Wirings diagrams

### Normatives 1

All generating sets are compliant to CE marking 2014/30/UE electromagnetic compatibility 2000/14/CE noise emission for outdoor use Factory-designed systems built according to ISO 9001:2015 CEI EN 60204-1:2018 - Electrical equipment of machines













# **Primary data**

Speed	RPM	1500
Frequency	Hz	50
PRP	KVA	33
Prp - prime power	KW	26,4
Ltp - standby power	KVA	37
Ltp - standby power	KW	29,6
Standard voltage	V	400/230
Current	Α	47,7
Cosfi	0,8	0,8
General electrical protection		
Circuit-breaker rated current	A	50
Type	71	Magnetothermal switch on panel board
Circuit-breaker poles	N	4P
Fuel Consumption		
Туре		diesel
Standard fuel tank capacity	lt .	85
Autonomy @ 75% load	h	17
Fuel consumption at 100% load	lt/h	7,2
Fuel consumption at 75% load	lt/h	5,2
Fuel consumption at 50% load	lt/h	3,8
General data		
Rated capacity	Ah	1x100
Auxiliary voltage	V	12
Exhaust gas temperature	°C	500
Exhaust diameter	mm	50
Extraust diameter		
484		
	ст	170x80x127

Kg (+/-3%)

678

Weight with liquids (excluding optionals and fuel)





# Engine

Factory		Yanmar
Model		4TNV98
Emissions stage		Stage 3A
Speed governor		Mechanic +/-3%
Radiator	°C	50
Cooling	Tipo	liquid (water + 50% Paraflu11)
Active net power	Kwm	30,7
Nominal net power	CV	41,7
Cycle	Tipo	4 strokes
Injection	Tipo	Direct
Aspiration	Tipo	Natural
Numbers of cylinders	N	4
Cylinders arrangement		L
Bore	mm	98
Stroke	mm	110
Total displacement	lt	3,317
Engine oil features		15W40-API CI-4/CH-4 ACEA E5-E7
Total oil capacity	lt	10,5
Total coolant capacity	lt	11

# Alternator

### $\ensuremath{^{*}}$ May vary based on stock availability. However, a primary brand will be used.

Factory		Stamford
Model		S1L2-J1
Prime power prp 3ph+n	KVA	35
Voltage regulator (voltage accuracy)	+/- %	1
Poles	N°	4
Phases	N°	3+N
Standard windings connection		Star Series
Stator/rotor impregnation		H (Outdoor Temp 40°C)
Efficiency	%	88
Engine coupling		Elastic disk
Short circuit current		>= 300% (3In)
Protection degree	IP	23
Cooling system		Self ventilating
Maxium overspeed	rpm	2250
Exciter		Diode bridge

# Standard operating environmental conditions

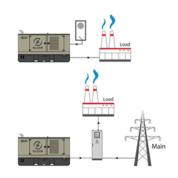
Ambient temperature	°C	25
Relative humidity	%	30
Max altitude	mt	1000





# **Control Systems on board QLE-A-OSC-30**





operating scheme - schema di funzionamento

# **QLE** Multifunction panel without switching on board

The QLE command and control panel offers outstanding protection, monitoring and control for small and middle size generator sets. Elcos's control module MC2 offers advanced features to meet the most demanding on-site application. Elcos's control module MC2 is designed for offer an easy user interface. Variant without transfer switch on board. ATS panel type QC as optional. The panel manages the QC panels directly or any other ATS panel. The output line is protected by a breaker which protects from overload, short circuit.

# Mechanical features

Protection degree	IP	55

# Battery charger

Model		ELCOS - CB1
Maximum output current	Α	2,5
Output dc voltage (selectable)	Vdc	12-24
Input ac voltage (selectable)	Vac	220-260
Frequency	Hz	50-60

# Remotable functions in terminal box

Gs start
Genset contactor close/open command
Common alarm - volt free output
Gs test without load

Gs lock
Mains contactor close/open command
Common alarm - dc output





# Control Module



Brand	ELCOS
Model	MC2
Operating mode	AMF - MRS

### **Specifics**

#### **Applications**

Emergency to the mains Stand-alone

#### **ENGINE MEASURES**

Fuel tank level % Total run time Battery voltage Battery charging voltage Start-ups counter Engine speed

#### **ALTERNATOR MEASURES**

Generator voltage I1, I2, I3 Generator voltage l1-n, l2-n, l3-n Generator frequency

#### **MAINS MEASURES**

Mains voltage I1, I2, I3 Mains voltage I1-n, I2-n, I3-n Mains frequency

#### **COMMUNICATION PORTS**

Configurable via pc using usb port

#### **EQUIPMENT**

Microprocessor logic Back-lit display Programmable by pc software 10 event log Icons management Stop button Start button Aut mode button Reset alarm button

#### PRE-ALARMS/ ALARMS

Common alarm Fuel reserve (pre-alarm) Low fuel level (alarm) Charge alternator failed (dinamo) Low oil pressure (alarm) High coolant temperature (alarm) Battery undervoltage Gs failure to start Gs failure to stop Genset overvoltage Genset undervoltage Genset high frequency Genset low frequency Maintenance request Emergency button pressed Genset negative phase sequence

# VISUALIZATIONS ON CONTROL

MODULE/DISPLAY

Pre-alarms Alarms Engine measures Alternator measures Mains measures Operating mode Genset status Mains status

Mains contactor status Genset contactor status

#### **CONTROL MODULE FUNCTIONS**

Automatic start and stop when the mains fails (7) Remote start and stop Manual start and stop Emergency stop button on panel board Remote emergency stop Remote lock





# OPTIONAL



Soundproofed container 65 dB(A) @ 7 mt

Soundproofed container 55 dB(A) @ 7 mt and 60/62 dB(A) @

Air inlet/outlet sound attenuator for room



Exhaust flexible expansion joint External residential muffler Exhaust flexible pipe (fap) anti-particulate filter Exhaust catalyst (cat)

# Fuel Supply

Bulk tank connections with 3 way valve Bulk tank connections Automatic fuel refilling system on board

# Engine

Engine pre-heater 230vsuper hot

Oil pressure and coolant temperature gauge (only with qpe or +14 variant)

Oil change pump

Engine liquids + 50°c, - 40°c (oil and antifreeze)

Battery disconnector

Automatic refilling oil system

1000 working hours spare parts kit

Cyclone air filter

Redundant start-up battery kit



### Alternator

Avr pre-arranged for parallel Anti-condensation heater

### Panel & connection

Rcd block Automatic transfer switch (qc) Elcos polivalent panel (qpe)

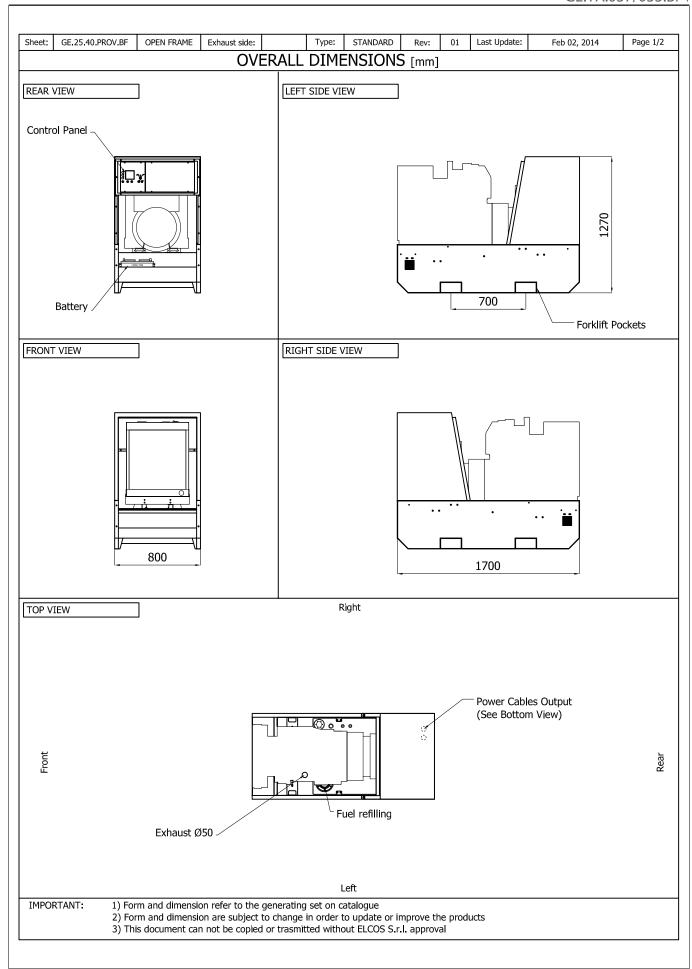
### **PRP**

Engines of this rating provide unlimited hours of usage in a variable load application. The average load factor should not exceed 70% of the engine's prime power rating with a maximum number of 500 operational hours at 100% prime power rating. An overload capability of 10% is available, however, is limited to a period of 1 in every 12 hours

### **LTP**

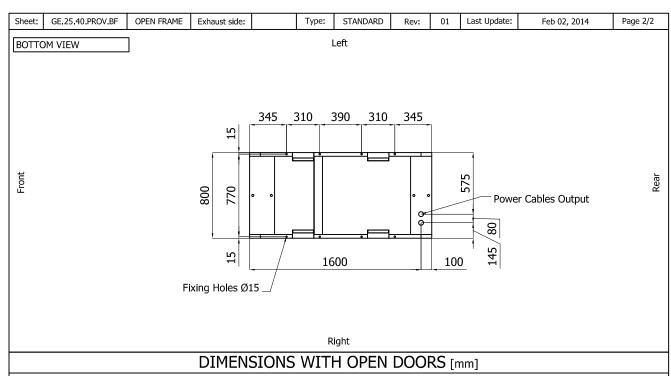
Limited-time running power is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500h of operation per year with the maintenance intervals. The overload is not allowed.











Right

Front

Rear

Left

### **VENTILATION OF THE ROOM**

The windows area in the generating set room needs to be (recommended):

Aspiration: on request Expulsion: on request

ATTENTION: for a correct ventilation the expulsion air and the exaust gas needs to be conveyed in the open-air

IMPORTANT:

- 1) Form and dimension refer to the generating set on catalogue
- 2) Form and dimension are subject to change in order to update or improve the products
- 3) This document can not be copied or trasmitted without ELCOS S.r.l. approval