



Image for demonstration purposes


Generating Set
Silent Pro - Diesel

GE.BD.022/020.SP+011

1500 rpm - Trifase - 50Hz - 400V
 Automatic panel without switching on board



Standard equipment

Canopy Soundproofing

Removable soundproof canopy
 Painting canopy (RAL) in galvanized sheet steel
 Soundproofing with class 1 polyester material
 Handles with key lock and automatic closing
 Inspection doors for controls and maintenance
 Inspection doors with hermetic gasket

Exhaust

Exhaust rain cap
 Insulated exhaust pipes
 Internal residential muffler

Fuel Supply

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

Handling

n.2 lifting hooks integrated into the bearing structure
 Base frame with anti-overturning forklift pockets
 Loadable side by side for truck transportation

Base Frame

Anti-vibrating mounting pads
 Anti pollution Bunded base

Engine

Tropicalized radiator
 Electronic speed governor

Alternator

AVR Automatic Voltage Regulator
 Impregnation for marine environment
 IP23

Panel & connection

Emergency Stop button
 Tamperproof panel IP55
 Cable output from side
 IP44 wiring
 Start-up battery (pre-charged)
 Grounding point

Documentation

CE conformity declaration
 User and Maintenance manual
 Wirings diagrams

Normatives

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

COMAP optional - AMF25 and INTELIGEN 200

CM-RS232-485 Plug-in module (RS232-485 communication port)
 (2)

Primary data

General Information

Speed	RPM	1500
Frequency	Hz	50
PRP - Prime power	KVA	20
LTP - Standby power	KVA	21
PRP - Prime power	KW	16
LTP - Standby power	KW	16,8
Standard Voltage	V	400/230
Current	A	28,9
Voltage for current calculation	V	400
COSFI	0,8	0,8

General electrical protection

Rated current	A	32
Type	Magnetothermal switch on panel board	
Poles	N	3P
Optional/notes	Opening coil	

Noise level +/- 3dB(A)

LWA	dB(A)	87
Sound pressure level @ 7 mt	dB(A)	62
Sound pressure level @ 1 mt	dB(A)	71

Fuel Consumption

TYPE	Diesel	
Standard Fuel Tank capacity	lt	35
Autonomy @ 75% load	h	8
Fuel consumption at 100% load	lt/h	6,1
Fuel consumption at 75% load	lt/h	4,5
Fuel consumption at 50% load	lt/h	3,2

General data

Rated capacity	Ah	1x70
Auxiliary Voltage	V	12
Exhaust gas temperature	°C	N/A
Exhaust gas flow	l/s	81,3
Combustion air flow	l/s	24
Cooling fan airflow	mc/s	0,8
Exhaust diameter	mm	50

Weight and Dimensions

Dimensions (L x W x H)	cm	186x86x113
Weight with liquids (excluding optionals and fuel)	Kg (+/-3%)	731

Engine

Factory		Baudouin
Model		4M06G4D0/S
Emissions stage		Stage 0
Speed governor		Electronic
Radiator	°C	50
Cooling	Tipo	liquid (water + 50% Paraflu11)
Active net power	Kwm	21,7
Nominal net power	CV	29,5
Cycle	Tipo	4 strokes
Injection	Tipo	Direct
Aspiration	Tipo	Natural
Numbers of cylinders	N	4
Cylinders arrangement		L
Bore	mm	89
Stroke	mm	92
Total displacement	lt	2,3
Engine oil features		15W40-API CI-4/CH-4 ACEA E5-E7
Engine oil consumption	%	<0,4
Total oil capacity	lt	9,5
Total coolant capacity	lt	8,6
ISO 8528-5 class		G3

Alternator

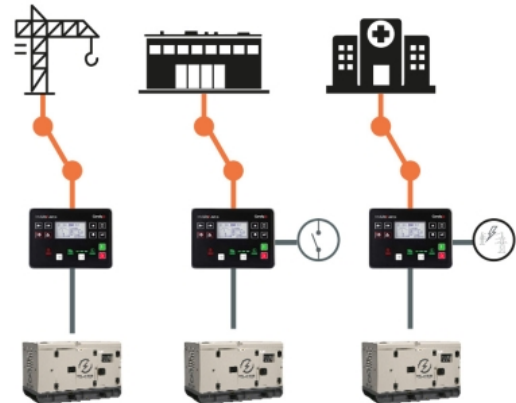
*** May vary based on stock availability. However, a primary brand will be used.**

Factory		MeccAlte
Model		ECP28 M 4
PRP continuous power	KVA	20
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	%	87
Engine coupling		Elastic disk
Short circuit current		>= 300% (3In)
Protection degree	IP	23
Cooling system		Self ventilating
Maxium overspeed	rpm	2250
Waveform distortion	%	<3,5
Exciter		Ponte a diodi - MAUX

Environmental conditions

Ambient temperature	°C	40
Relative Humidity	%	60
Max altitude	mt	1000

Control Systems on board QBM-SP-AMF25-00



Operating scheme - Schema di funzionamento

QBM Automatic panel without switching on board

Mechanical features

Protection degree	IP	55
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Battery charger

Model		ELCOS - CB1
Maximum output current	A	2,5
Output DC voltage (selectable)	V _{dc}	12-24
Input AC voltage (selectable)	V _{ac}	220-260
Frequency	Hz	50-60

Remotable functions in terminal box

GS start	GS lock
Genset contactor close/open command (1)	Mains contactor close/open command (2)
Common Alarm - Volt free output	Management of the automatic fuel refilling system
Genset running	

Control Module



Specifics

Applications

Emergency to the Mains
Stand-alone
Construction site/Rental
Self-production

ENGINE MEASURES

Fuel tank level %
Engine oil pressure BAR (1)
Engine Coolant temperature °C (1)
Total run time
Partial run time
Hours to maintenance
Battery voltage
Battery charging voltage
Start-ups counter
Engine speed
Engine speed (2)
Engine Oil temperature (2)
Cooler temperature (2)
Engine oil level (2)
Engine coolant level (2)
Engine coolant pressure (2)
Turbo pressure (2)
Fuel Consumption (2)

ALTERNATOR MEASURES

Generator Voltage L1, L2, L3
Generator Voltage L1-N, L2-N, L3-N
Generator frequency
Generator current L1
Generator current L1, L2, L3
Generator Apparent Power kVA
Generator Active Power kW
Generator Reactive Power kVAR
Generator accumulated power kWh
Power factor Cosfi

MAINS MEASURES

Mains voltage L1, L2, L3
Mains voltage L1-N, L2-N, L3-N
Mains frequency

COMMUNICATION PORTS

Can-bus port
Configurable via PC using USB port

EQUIPMENT

Microprocessor Logic
Back-lit display
Programmable by PC software
250 event log
Multiple display languages
STOP button
START button
AUT mode button
MAN mode button
OFF mode button
Reset alarm button
Alarm mute button
Transfer to Mains button
Transfer to generator button

PRE-ALARMS/ ALARMS

Common Alarm
Fuel reserve (pre-alarm)
Low fuel level (alarm)
Tank overflow
Charge alternator failed (dinamo)
Low oil pressure (pre-alarm) (1)
Low oil pressure (alarm)
Oil sensor failed (alarm)
High coolant temperature (pre-alarm) (1)
High coolant temperature (alarm)
Low coolant temperature (pre-alarm)
Low water level (1)
Water in fuel (1)
Battery undervoltage
Battery overvoltage
GS failure to start
GS failure to stop
Can-bus Failure
No Can-bus communication
Genset overload L1, L2, L3 phases
Genset short circuit
Genset overvoltage
Genset undervoltage
Genset high frequency
Genset low frequency
overspeed
Reverse power
Maintenance request
Emergency button pressed
Remote emergency active
Fuel theft
Genset negative phase sequence
Mains negative phase sequence
Fuel theft protection

Model	AMF25
Operating mode	AMF - MRS

VISUALIZATIONS ON CONTROL MODULE/DISPLAY

Pre-alarms
Alarms
Engine measures
Alternator measures
Mains measures
Date and time
Operating mode
Genset status
Mains status
Mains contactor status
Genset contactor status
Digital Input and Output status

CONTROL MODULE FUNCTIONS

Automatic start and stop when the Mains Fails (7)
Manual Start and stop
Emergency stop button on panel board
Remote emergency stop
Remote lock
Scheduled start-ups
MODBUS commands (Start, Stop, Reset, Test)
Scada available with PC connected to the controller
PLC editor
Manual switching commands

CONTROL MODULE SPECIAL FUNCTIONS (on demand)

Dummy load (4)
Load shedding (4)
Idle mode
Master / Slave mode

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

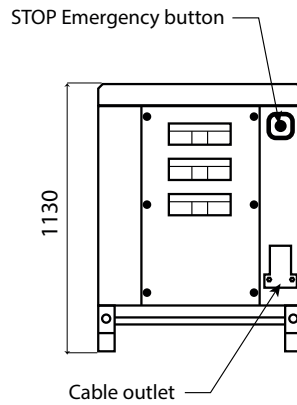
LTP

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.

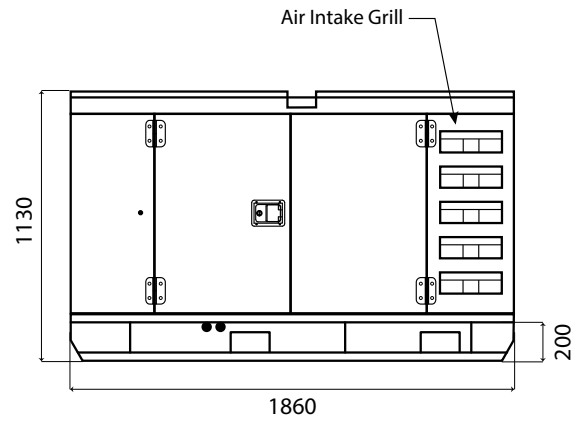
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OVERALL DIMENSIONS [mm]

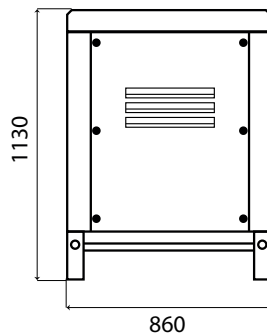
REAR VIEW



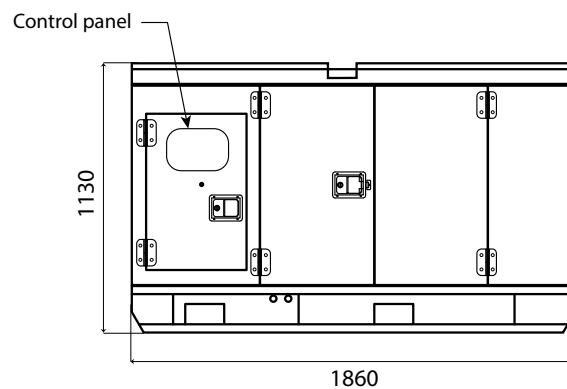
LEFT SIDE VIEW



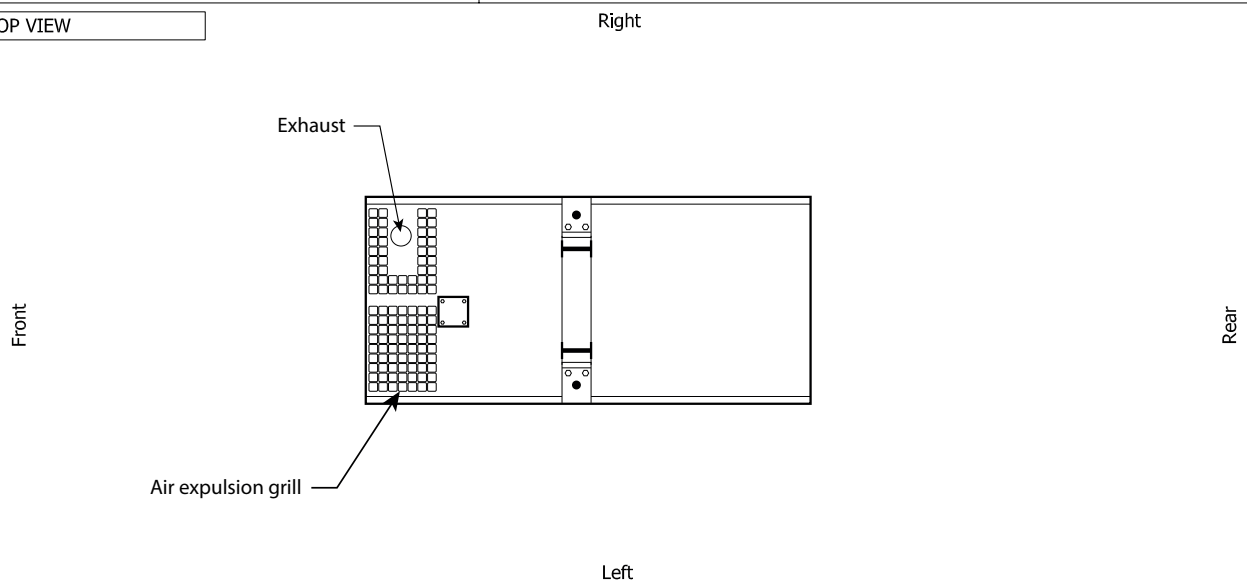
FRONT VIEW



RIGHT SIDE VIEW



TOP VIEW



- 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