MARINE GENERATORS

# 16 VSC

**Single-Phase**

## General data

| | | | |
|---|---|---|---|
| **Maximum power (2)** | 15.5 kWe (15.5 kVA) | **Voltage** | 230 V |
| **Prime Power (3)** | 14.1 kWe (14.1 kVA) | **Amperage** | 67.4 A |
| **Frequency** | 50 Hz | **Phases** | 1 |

## Dimensions and weights

| | |
|---|---|
| **Total length with canopy** | 830 mm |
| **Total width with canopy** | 560 mm |
| **Total height with canopy** | 625 mm |
| **Dry weight with canopy** | 260 Kg |

## Engine

| | | | |
|---|---|---|---|
| **Base engine manufacturer** | Mitsubishi | **Diameter** | 78 mm (3.07 in) |
| **Model** | MINI-33 Stage V | **Stroke** | 92 mm (3.62 in) |
| **Type** | Diesel, 4 stroke | **Compression ratio** | 22:1 |
| **Engine RPM** | 1700 - 2500 | **Injection system** | Mechanical and indirect |
| **Number of cylinders** | 3 | **Intake system** | Naturally aspirated |
| **Total displacement** | 1318 cc | **SAE Flywheel housing** | SAE 5 |
| **Oil** | SAE 15W40 | **Coolant capacity** | 5.7 L (1.51 gal) |
| **Oil capacity** | 4.2 L (1.11 gal) | **Flywheel** | SAE 7 1/2 |
| **Power (1)** | 18.4 kW (25.02 CV) | **Coolant flow rate** | 47 l/min (12.42 gal/m) |
| **Salt water flow rate** | 28.3 l/min (7.48 gal/m) | **Intake air flow rate** | 1.4 m3/m |
| **Exhaust type** | Wet exhaust elbow | **Speed regulator** | Electronic with actuator |
| **Emission compliance** | EU Stage V | | |

(1) Rating conditions according to ISO 3046 (100 kPa barometric pressure, 30 % relative humidity and 25 °C (77 ° F))
(2) Maximum output power: maximum power supplied by the genset at full load
(3) Prime Power: rated power according to ISO 3046 and ISO 8528-1. 10 % overload capacity one hour in twelve hours.
1 kW = 1,36 CV  1 kW = 1,36 HP (metric)  1 kW = 1,36 CH

## Fuel system details

| | | | |
|---|---|---|---|
| **Consumption 25%** | 1.45 l/h (0.38 gal) | **Fuel type** | Diesel |
| **Consumption 50%** | 2.79 l/h (0.74 gal) | **Fuel standards** | Fueloil diesel ASTM |
| **Consumption 75%** | 4.27 l/h (1.13 gal) | **Injection pump type** | In line |
| **Consumption 100%** | 5.8 l/h (1.53 gal) | | |

## Electrical system

| | | | |
|---|---|---|---|
| **Battery voltage** | 12 V | **Stop solenoid type** | ETR |
| **Starter motor** | 1.7 kW | **Alternator** | 40 A |
| **Earth isolated** | Optional | **IP 65 box kit** | Optional |
| **SCO 11 double panel** | Optional | **Current transformers** | Included |

## Installation details

| | | | |
|---|---|---|---|
| **Exhaust hose inner diameter** | 50 mm (1.97 in) | **Maximum fuel lift height** | 0.3 m (0.98 ft) |
| **Sea water hose inner diameter** | 20 mm (0.79 in) | **Maximum raw water lift height** | 1.5 m (59.06 in) |
| **Fuel feeding hose inner diameter** | 8 mm (0.31 in) | **Maximum sea water temperature** | 32 ° (89.6 °F) |
| **Fuel return hose inner diameter** | 8 mm (0.31 in) | **Maximum installation angle (6)** | 15 ° |
| **Minimum battery capacity** | 12 V 65 Ah | | |

## Alternator details

| | | | |
|---|---|---|---|
| **Brand** | Meccalte | **Cos Phi** | 1 |
| **Model** | PM5G | **Tropicalized** | Yes |
| **Number of poles** | 20 | **Excitation system** | Brushless |
| **Isolation type (4)** | H | **Alternator type** | PMG |
| **IP protection** | 23 | | |
| **Standards** | EN61000-6-3, EN61000-6-2, EN61000 3-2/3-12, EN550002, EN1000 6-1 | | |

## Inverter details

| | | | |
|---|---|---|---|
| **Power Output** | 20 kW | **Phases** | 2 |
| **Voltage Output** | 230 V | **Input Voltage** | 3 PH 300-490 VAC RMS |
| **Output Current** | 87 arms | **Input Frequency** | 200-600 |
| **Output Frequency** | 50 Hz | **Weight** | 25 Kg |
| **Peak Current** | 200 apk | **Protection** | IP21 + DCA SCC3 |

## Standard equipment

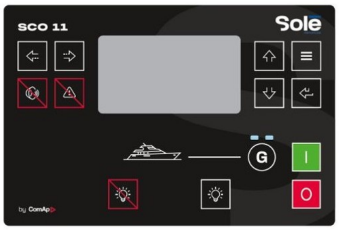
| | |
|---|---|
| Electronic Actuator | Dual anti-vibration system |
| Inverter | Rigid bench |
| Power wiring and inverter communication | Alternator & Owner`s Manual |
| Extension of 5m transformer wiring | Packaging |
| MCU box and electrical wiring extension | Oil extraction pump |
| 3 m electrical wiring extension | Cabin |
| SCO 11 Control Panel | |

## Optional accessories

| | |
|---|---|
| Anti-siphon pack (mandatory if the generator is low in water) | Water/diesel decanter filter |
| On Board Pack (fuel and oil filters, impeller, belt) | Water/smoke separator |
| Water filters | Diesel hoses |
| Bottom taps | Exhaust hoses |
| Start-up Pack | Salt Water Hoses |
| Low coolant alarm | |

(4) Other protections available
(5) With load from 0 to 100%, speed variation from -2% up to +5%, power factor 0,8 linear and balanced load.
(6) In all directions
For other requirements please contact the Sales Dept.
46224 - 7/26

# Panel Comap SCO 11 VSC Solē




## General Description

- Graphic LCD with light, 128 x 64 pixels display
- Genset measures (see Display Information)
- Configuration protected by user and password
- Running hour indication
- Multilingual
- Event history log
- Genset protections (see Alarm Management)
- Preheating function
- D+ pre-excitation Terminal
- Built-in PLC function
- CAN bus information with SAE J1939 protocol
- Maintenance hours control
- Dimensions 195 x 135 x 47 mm
- Panel cut-out 172 x 112 mm
- Weight 450 g

## Alarm Management

- Shutdown (SD)
- Low/High Speed
- Overload*
- Short Circuit*
- Overcurrent*
- High/Low Voltage
- High/Low Frequency
- Emergency Stop
- Warnings (WRN)
- High engine coolant temperature
- Low oil pressure
- High/Low Battery Voltage
- Maintenance warning
- Sensor failure detection (FLS)
- MCU Alarm

## Power Supply

- Voltage supply 12/24 DC with fuse protection
- Consumption 80mA (12V) or 51 (24V)

## Operating Conditions

- Operating temperature -20+70 °C
- Humidity 95 % without condensation
- Front Panel Protection IP65
- Standard Conformity
- EN 61000-6-2, EN 61000-6-4, EN 61010-1
- EN 60068-2-6 (2÷25 Hz / ±1,6 mm; 25÷100 Hz / 4.0 g)
- EN 60068-2-30:2005 25/55°C, RH 95%, 48hours
- EN 60529 (front panel IP65, back side IP20)

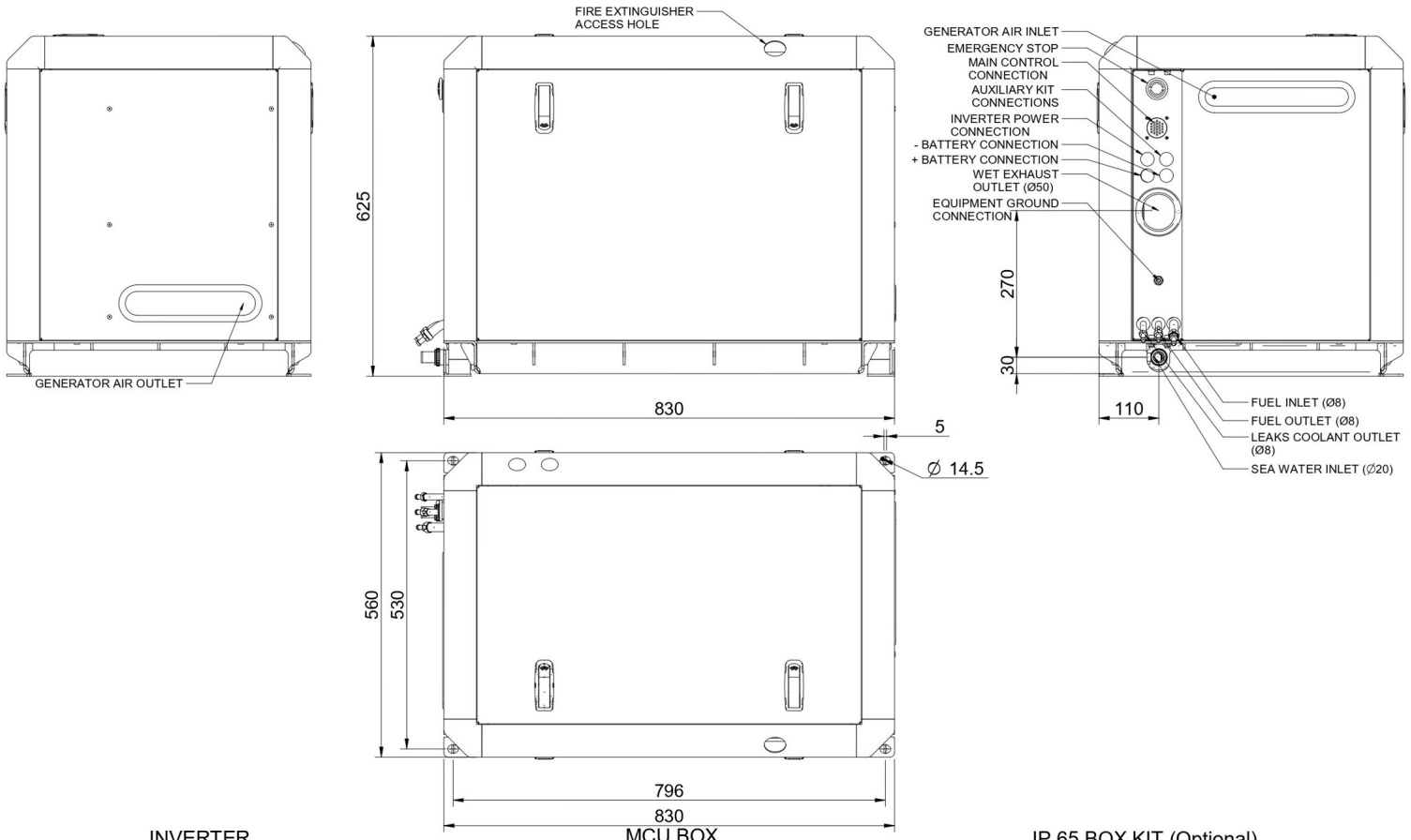
## Display Information

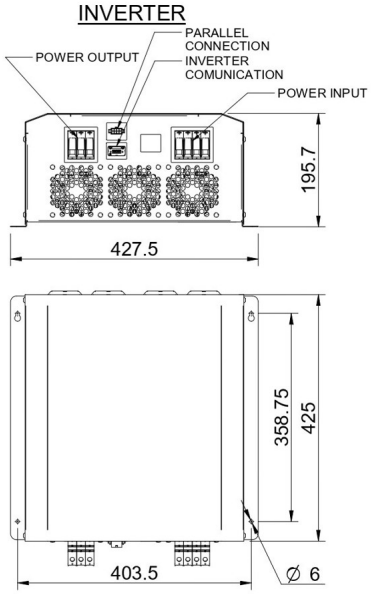
- Measurement
- L1-L3 Voltage (V)
- Frequency (Hz)
- Oil Pressure (bar)
- Coolant Temperature (°C)
- Battery Voltage (V)
- RPM
- Power* (kW)
- Apparent Power* (kVA)
- Current* (A)
- PF*
- Historical Log
- Alarm History

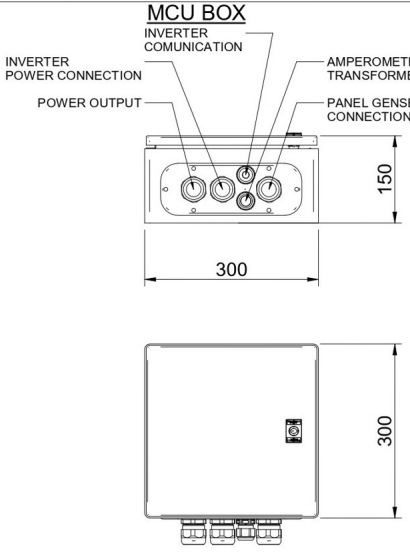
## Operating modes

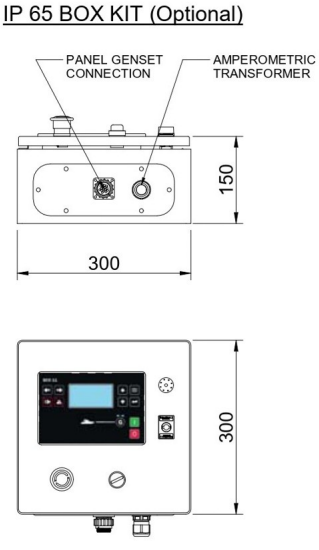
- OFF Mode
- MAN Mode (manual start/stop engine)
- AUT Mode (auto start/stop engine)

## Dimensions


FIRE EXTINGUISHER ACCESS HOLE
GENERATOR AIR OUTLET
625
830
5
Ø 14.5
560
530
796
830
GENERATOR AIR INLET
EMERGENCY STOP
MAIN CONTROL CONNECTION
AUXILIARY KIT CONNECTIONS
INVERTER POWER CONNECTION
- BATTERY CONNECTION
+ BATTERY CONNECTION
WET EXHAUST OUTLET (Ø50)
EQUIPMENT GROUND CONNECTION
270
30
110
FUEL INLET (Ø8)
FUEL OUTLET (Ø8)
LEAKS COOLANT OUTLET (Ø8)
SEA WATER INLET (Ø20)


INVERTER
POWER OUTPUT
PARALLEL CONNECTION
INVERTER COMUNICATION
POWER INPUT
195.7
427.5
358.75
425
403.5
Ø 6


MCU BOX
INVERTER COMUNICATION
INVERTER POWER CONNECTION
AMPEROMETRIC TRANSFORMER
POWER OUTPUT
PANEL GENSET CONNECTION
150
300
300


IP 65 BOX KIT (Optional)
PANEL GENSET CONNECTION
AMPEROMETRIC TRANSFORMER
150
300
300