



## ELECTRICAL SAFETY CERTIFICATE

*Electricity (Licensing) Regulations 1991, Regulation 52B*

This certificate warrants that the electrical installing work described below is safe and complies with the *Electricity (Licensing) Regulations 1991*.

This Electrical Safety Certificate is the certificate of compliance referred to in Regulation 52B of the *Electricity (Licensing) Regulations 1991*. This regulation requires that the electrical contractor/authorised<sup>1</sup> electrician completing electrical installing work must, with 28 days of completing the work, provide a certificate of compliance in respect to the work to the person for whom the work was carried out.

### Installation Details

Owner/Occupier Name Andrew Werczyk (0447711572) Meter No. 0530203438  
 Address 82 Safety Bay Road Shoalwater 6169  
 METER\_POSITION: Upstairs  
 Alteration/Addition  
 Date of Completion 17/09/2021 Related Notice of Completion E1009682

### Details of work completed (indicate a number/rating where relevant)

Solar PV installation

### Details of RCD Protection

All the socket outlet and lighting final subcircuits of the installation are protected by at least two RCDs? Yes  
 If NO, what circuits are not protected:

### Details of any defects observed (alterations and additions only)

### Certification by authorised<sup>1</sup> electrician

I certify that the electrical installing work that is subject of this certificate has been completed, checked and tested and, at the time of testing, met the requirements of the *Electricity (Licensing) Regulations 1991* and is safe.

Date	20/09/2021	Name	STUART CARR
		Licence No.	EW137372
		<b>Details of electrical contractor</b>	
		Licence No.	EC11654
		Business Name	KOALA SOLAR
		Business Address	1/5 ERCEG ROAD YANBUP WA 6164
		Phone No.	+61426805552, (08) 9456 4763
		Facsimile No.	0488278688 Matt
		Email Address	koalasolarwa@gmail.com

<sup>1</sup> Authorised pursuant to Regulation 52B(5) of the *Electricity (Licensing) Regulations 1991*

# Sonnenschein SOLAR, SOLAR BLOCK, A600 SOLAR, PowerCycle Operating Instruction Stationary valve-regulated lead-acid batteries

## Nominal data

- Nominal voltage  $U_n$  : 2.0 V x number of cells
- Nominal capacity  $C_n = C_{100}$  or  $C_{20}$  : 100 h or 120 h discharge (see type plate on cells/blocks and technical data in these instructions)
- Nominal discharge current  $I_n = I_{100}$  or  $I_{20}$  :  $I_{100} = C_{100} / 100$  h or  $I_{20} = C_{20} / 120$  h
- Final discharge voltage  $U_f$  : see technical data in these instructions
- Nominal temperature  $T_n$  : 20 °C

Battery type : \_\_\_\_\_ Number of cells/blocks \_\_\_\_\_

Assembly by: \_\_\_\_\_ GNB order no.: \_\_\_\_\_ date: \_\_\_\_\_

Commissioned by: \_\_\_\_\_ date: \_\_\_\_\_

Security signs attached by: \_\_\_\_\_ date: \_\_\_\_\_



- Observe these instructions and keep them located near the battery for future reference.



- Work on the battery should be carried out by qualified personnel only.
- Do not smoke.
- Do not use any naked flame or other sources of ignition. Risk of explosion and fire.



- While working on batteries wear protective eye-glasses and clothing.



- Observe the accident prevention rules as well as EN 50272-2/IEC 62485-2, EN 50110-1.



- Any acid splashes on the skin or in the eyes must be flushed with plenty of clean water immediately. Then seek for medical assistance.
- Spillages on clothing should be rinsed out with water!



- Warning: Risk of fire, explosion or burns. Do not disassemble, heat above 60 °C, or incinerate. Avoid short circuits.
- Avoid electrostatic charges and discharges/sparks!



- Electrolyte is very corrosive. In normal working conditions the contact with the electrolyte is impossible. If the cell/block container is damaged do not touch the exposed electrolyte because it is corrosive.



- Blocks/cells are very heavy! Make sure they are installed securely! Only use suitable means of transport!



- Block/cell containers are sensitive to mechanical damage.
- Handle with care!
- Do not lift or pull up blocks/cells on the poles.



- Caution! Metal parts of the battery are always alive, therefore do not place items or tools on the battery.



- Keep children away from batteries.

**Non-compliance with operating instructions, installations or repairs made with other than original accessories and spare parts or with accessories and spare parts not recommended by the battery manufacturer or repairs made without authorization (e. g. opening of valves) render the warranty void.**



Spent batteries have to be collected and recycled separately from normal household wastes (EWC 160601). The handling of spent batteries is described in the EU Battery Directive (2006/66/EC) and their national transitions (UK: HS Regulation 1994 No. 232, Ireland: Statutory Instrument No. 73/2000). Contact your supplier to agree upon the recollection and recycling of your spent batteries or contact a local and authorized Waste Management Company.

Stationary valve regulated lead acid batteries do not require topping-up water. Pressure valves are used for sealing and can not be opened without destruction.

## 1. Start Up

The commissioning should take place as soon as possible after receipt of the battery. If this is not possible, advises acc. to item 6. shall be taken into account.

Check all cells/blocks for mechanical damage, correct polarity and firmly seated connectors. Apply the following torques for screw connectors:

G-M5	G-M6	A	F-M8	M-M8-45°
5 ± 1 Nm	6 ± 1 Nm	8 ± 1 Nm	20 ± 1 Nm	8 ± 1 Nm

Rubber covers shall be fitted to both ends of the connector cables (pole covers) before installation.

## Control of insulation resistance:

New batteries: > 1M Ω

Used batteries: > 100 Ω/Volt.

Connect the battery with the correct polarity to the charger (pos. pole to pos. terminal). The charger must not be switched on during this process, and the load must not be connected. Switch on charger and start charging following item 2.2.

## 2. Operation

For the installation and operation of stationary batteries EN 50272-2/IEC 62485-2 is mandatory. Battery installation should be made such that temperature differences between individual cells/blocks do not exceed 3 degrees Celsius (Kelvin).

Methods for influencing the charging voltage of individual cells or block batteries within a string e.g. as a part of a battery management system (BMS) shall only be used in consultation with "GNB Industrial Power".

## 2.1 Discharge

Discharge must not be continued below the voltage recommended for the discharge time. Deeper discharges must not be carried out unless specifically agreed with the manufacturer. Recharge immediately following complete or partial discharge (special features see 2.4 and 2.5).

## 2.2 Charging

All charging must be carried out acc. to DIN 41773 (IU-characteristic).

Recommended charge voltages for cyclical application: See fig. 1 and item 2.8.

According to the charging equipment, specification and characteristics alternating currents flow through the battery superimposing onto the direct current during charge operation. Alternating currents and the reaction from the loads may lead to an additional temperature increase of the battery, and strain the electrodes with possible damages (see 2.5), which can shorten the battery life.

## 2.3 Maintaining the full charge (float charge)

Devices complying with the stipulations under DIN 41773 must be used. They are to be set so that the average cell voltage is 2.30 Vpc ± 1% (within temperature range 15 to 35 °C).

## 2.4 Operating in uncontrolled partial state of charge

Solar batteries have to be operated also at states of charge less than 100% due to seasonal or other conditions, for instance summer: 80 to 100% state of charge, winter: down to 20% state of charge. Therefore, depending on the state of charge an equalizing charge must be carried out at least every 3 months.



**koala**  
GROUP WA



Unit 1, 5 Erceg Road  
Yangebup WA 6164  
info@koalagroupwa.com.au  
www.koalasolar.com.au  
08 9456 4763  
ABN: 50 603 553 233  
EC 11654

## Tax Invoice

Bill To: Andrew Werczyk  
andrew\_werczyk@hotmail.com  
82 Safety Bay Rd  
Shoalwater, WA, 6169  
0447 711 572

Invoice No: 4427  
Date: 17/09/2021  
Terms: NET 0  
Due Date: 17/09/2021

Code	Description	Quantity	Rate	Amount
Fronius 5kW Symo	Supply and Install 6.4kW Solar System  1x 5kW Fronius Symo5.0-3M Three Phase Inverter 16x 400W SunPower Maxeon 3 Solar Panels Clenergy Rail and Tin Mounting Brackets  Warranties Fronius: Five Plus Five Years (After online registration of inverters) Sunpower: 25 Year Product & Linear Power Output Warranty Clenergy: 10 Year Warranty Koala Solar Workmanship: 10 Year Warranty	1	\$10,814.80	\$10,814.80
Extras	Tilt Brackets	1	\$150.00	\$150.00
Discount	Discount	1	-\$250.00	-\$250.00
Less Rebate 6.4kW	Less Government Rebate 6.4kW	1	-\$3,264.80	-\$3,264.80*
			Parts Subtotal	\$7,450.00

\*Indicates non-taxable item

### Payment Details

Full Payment required on the day of installation.

- Bank Transfer

ANZ Bank

BSB: 016 353 Account: 224474483

- Cash

- Cheque

- Credit Card (1.75% Surcharge)

Subtotal \$7,450.00

Includes GST 10% \$974.07

Total \$7,450.00

PAID \$7,450.00

**Paid**

Balance Due **\$0.00**



## Registration Certificate

Fronius International GmbH hereby confirms the extension of the warranty for the following product:

**Symo 5.0-3-M**

**Article number: 4,210,034**

**Serial number: 32121719**

**Fronius Warranty Plus: 16.09.2026**

**Fronius Warranty: 16.09.2031**

DETAILED, COUNTRY-SPECIFIC WARRANTY TERMS AND CONDITIONS ARE AVAILABLE ONLINE: [WWW.FRONIUS.COM/SOLARWARRANTY](http://WWW.FRONIUS.COM/SOLARWARRANTY) TO MAKE A CLAIM UNDER THE FRONIUS MANUFACTURER'S WARRANTY YOU WILL NEED TO PROVIDE YOUR WARRANTY TERMS AND CONDITIONS, YOUR WARRANTY CERTIFICATE AND, WHERE APPLICABLE, PROOF OF PAYMENT FOR ANY EXTENSION FEES PAID. WHEN DEVICES OR COMPONENTS ARE REPLACED, THE REMAINING WARRANTY PERIOD IS TRANSFERRED TO THE REPLACEMENT DEVICE OR REPLACEMENT COMPONENT. THIS IS AUTOMATICALLY REGISTERED AT FRONIUS. NO NEW CERTIFICATE IS ISSUED. IF YOU CLAIM THE RIGHT TO WITHDRAW, THIS CERTIFICATE WILL NO LONGER BE VALID.

A handwritten signature in blue ink, appearing to read "M. Hackl", is written over the signature line.

**Ing Martin Hackl**

**Fronius International GmbH  
Head of Division Solar Energy**



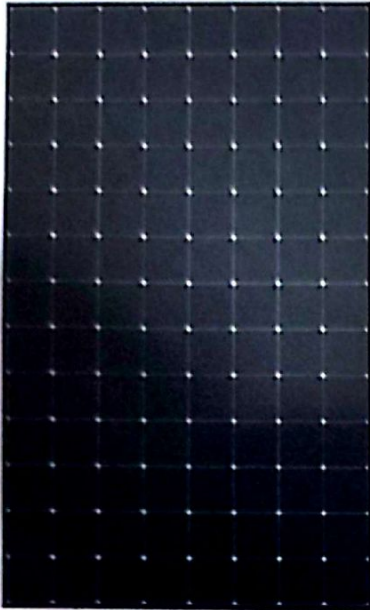
Back Contact



White Backsheet  
Black Frame



Residential  
Black Frame



## MAXEON 3

POWER RANGE: 390-400 W | EFFICIENCY: Up to 22.6%

Part of the record-setting SunPower Maxeon product line, the SunPower Maxeon 3 solar panel offers homeowners the highest efficiency available in the market today, maximising long-term energy production, as well as savings potential per available space.<sup>1</sup>

SunPower Maxeon panels are world-renowned for their energy production and savings advantages that combine unmatched efficiency and reliability with an industry-leading warranty and an estimated 40-year useful life.<sup>2,3,4</sup>

### SunPower Maxeon Solar Cell Technology

- Proven technology across 3.5 billion cells shipped
- Most efficient commercialized solar technology<sup>1</sup>
- Only solar cell with a solid-metal foundation, providing patented protection from breakage and corrosion



[sunpower.maxeon.com](http://sunpower.maxeon.com)

#### Maximum Lifetime Energy and Savings

The SunPower Maxeon 3 solar panel is designed to deliver 35% more energy in the same space over 25 years in real-world conditions such as partial shade and high temperatures.<sup>5,6,7</sup>

#### A Better Product. A Better Warranty.

The 25-year SunPower Complete Confidence Panel Warranty is backed by testing and field data from more than 30 million SunPower Maxeon panels deployed—and a demonstrated warranty return rate of .005%.<sup>8</sup>



• Year 1 Minimum Warranted Power Output	98.0%
• Maximum Annual Degradation	0.25%
• Year 25 Warranted Power Output	92.0%

#### Leadership in Sustainable Manufacturing

SunPower Maxeon panels—and the facilities in which they are produced—raise the bar for environmental and social responsibility. Included below are highlights of the certifications and recognition received by some of our products and manufacturing sites.



Declare.



Landfill-Free Facility  
NSF 1445





**WARNING**  
PV ARRAY DC ISOLATORS  
DO NOT DE-ENERGISE  
THE PV ARRAY AND  
ARRAY CABLES

**WARNING**  
MULTIPLE D.C. SOURCES  
TURN OFF ALL D.C.  
ISOLATORS TO ISOLATE  
EQUIPMENT



**SHUTDOWN INVERTER**  
1. Turn off either the "MAIN SWITCH/INVERTER SUPPLY" located in the switchboard or the "INVERTER AC ISOLATOR" adjacent below the inverter.  
2. Turn off all "PV ARRAY D.C. ISOLATOR(S)" located adjacent below the inverter.  
3. If battery connected to inverter, turn off "BATTERY DC ISOLATOR".  
**ENERGISE INVERTER**  
4. Turn on all "PV ARRAY D.C. ISOLATOR(S)" located adjacent below the inverter.  
5. If battery connected to inverter, turn on "BATTERY DC ISOLATOR".  
6. Turn on either the "MAIN SWITCH/INVERTER SUPPLY" located in the switchboard or the "INVERTER AC ISOLATOR" adjacent below the inverter.

  
**koala  
SOLAR**  
**08 9456 4763**

**FRONIUS SOLAR.WEB**  
  
**GET YOUR FREE MONITORING**  
Free software. Self-administered.  
Turn on free or all installed systems.  
Monitor and manage your solar system.  
Monitor system performance. All in English.  
**REGISTER YOUR WARRANTY**  
Free registration. No time limit.  
Registration valid for 10 years.  
Registration to guarantee.  
Register to improve your service.  
**FIND YOUR USER MANUAL**  
Free manual. Available online.  
Available for all Fronius inverters.  
The complete set of instructions for your system.  
Available for download. Free of charge.  
[www.solarweb.com](http://www.solarweb.com)

**FRONIUS SYMO**

Ser No 32121719  
Remove in Service Case



PV ARRAY  
D.C. ISOLATOR





www.victronenergy.com

# MultiPlus-II

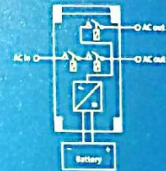
48V | 5000VA | 70A

AC transfer capacity: 50 A | Inverter 230 V



⚠️ Ⓜ️ CE Ⓜ️ IP21

- | charger                             | inverter                             |
|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> mains on   | <input type="checkbox"/> inverter on |
| <input type="checkbox"/> bulk       | <input type="checkbox"/> overload    |
| <input type="checkbox"/> absorption | <input type="checkbox"/> low battery |
| <input type="checkbox"/> float      | <input type="checkbox"/> temperature |



**WARNING: Explosive gases, prevent flames and sparks, provide adequate ventilation during charging. Charge lead-acid or Li-Ion batteries only.**

Before charging read the instructions. For indoor use only. Disconnect the supply before making or breaking the connections to the battery.







dryfit<sup>®</sup>  
+inside

# SOLAR BLOCK SB6/200 A

6 V

200 Ah C<sub>100</sub> (1.80V/cell at 20°C)

Recommended Charging Voltage at 15-35°C

7.05 V - 7.35 V (see Operating Instruction)

Terminal Hardware Torque: 8 Nm

Part Number: NGSB060200HS0CA



Made in Germany

by GNB<sup>®</sup> INDUSTRIAL POWER, a division of  
Exide Technologies GmbH

Im Thiergarten · 63654 Büdingen · [www.gnb.com](http://www.gnb.com)



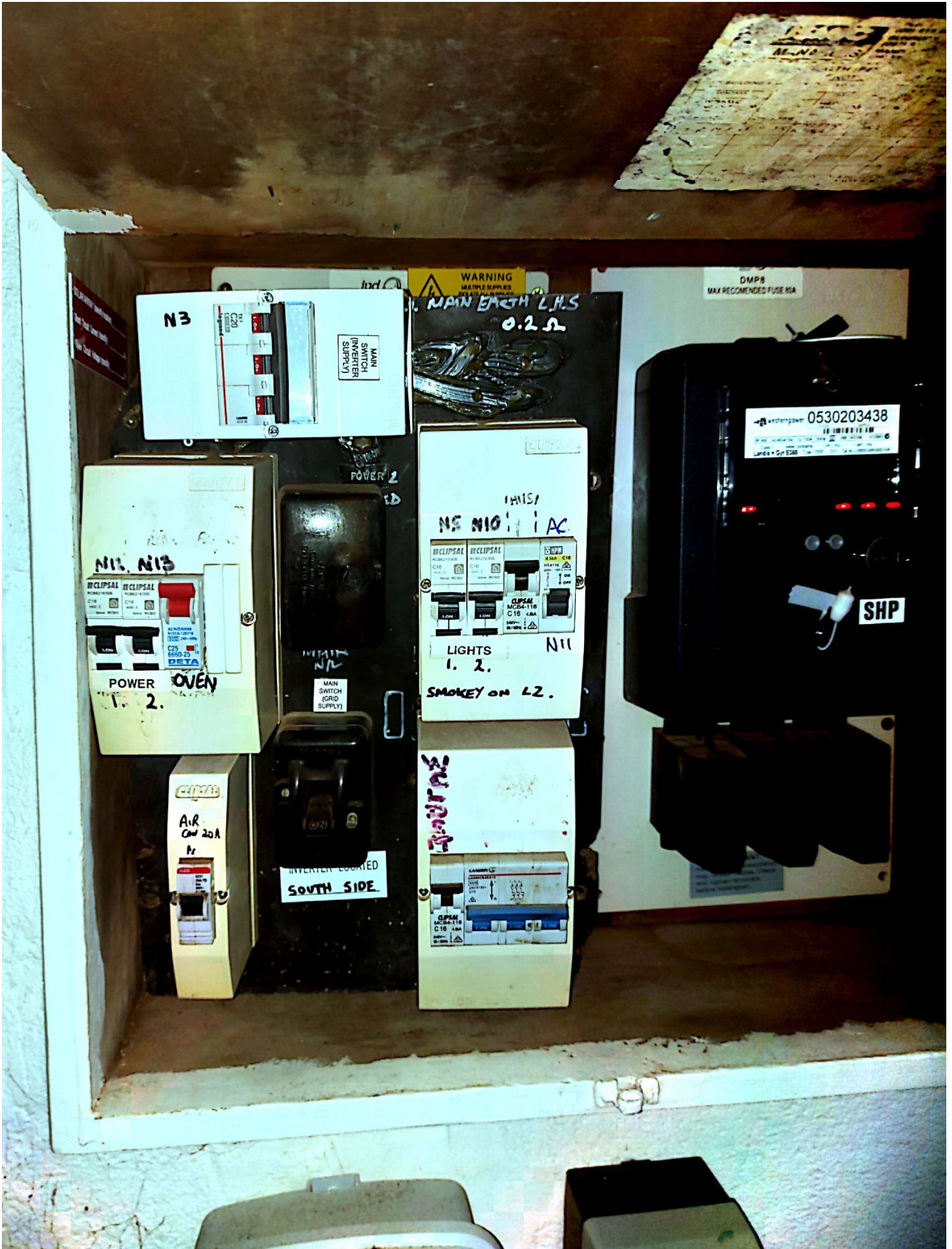
NONSPILLABLE



Pb



NGSB060200HS000



N3

MAIN SWITCH (INVERTER SUPPLY)

WARNING MULTIPLE SUPPLIES PLEASE READ MANUAL  
MAIN EACH L.H.S 0.2 Ω

DMP8  
MAX RECOMMENDED FUSE MSA

N15, N18  
CLIPSAL  
POWER 2  
OVEN  
1. 2.

POWER 2  
MAIN SWITCH (GRID SUPPLY)

N5 N10 AC  
CLIPSAL  
LIGHTS 1. 2.  
SMOKEY ON L2.

A.R. C.W. 20 A

INVERTER LOADED SOUTH SIDE

CLIPSAL

westernpower 0530203438  
SHP

westernpower 0530203438  
3P 4W 3x240/415V 10-100A 50Hz NMI 14/2/48 NT0943  
Class 1 Meter constants 1 Wh / imp 1 volt / p  
Landis + Gyr E350 Type U3300 2013 Cal No U33000 101WIP

SHP

