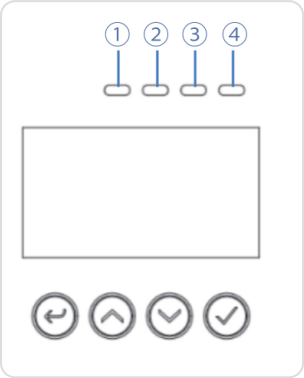
CONNECTION AND SETUP GUIDE

Hybrid inverter POWGROW 3.6 kW 24 V

Connection, cables, bottom panel, display menu (items 01–41), battery setup, fault and warning codes



Control panel (figure from the manufacturer's manual): ① AC, ② INV, ③ CHG, ④ FAULT.

Control panel

Front panel: display, four indicators (AC, INV, CHG, FAULT) and four buttons.

ESC	UP	DOWN	ENTER
exit settings	previous item / value	next item / value	enter settings and confirm

How to change settings

1. Press and hold **ENTER** 2 seconds: the inverter enters settings mode.
2. Use **UP / DOWN** to choose the item (program) number. The display shows the item code, its number and value, e.g. "OPU 01 230".
3. Press **ENTER** and choose the value with **UP / DOWN**.
4. Press **ENTER** to confirm or **ESC** to exit.



Most important: battery type is item 17.

Item 05 is the **charging source priority,** not the battery type. Item 17 defaults to **AGM.** For LiFePO4 choose **FEL,** for ternary lithium **LIb.** BMS link on this model: item **38,** SOC control: items **39–41** (numbers differ from the 5 and 6.5 kW models).

Front panel indicators

Indicator	Steady	Flashing	Off
● ① **AC** (green)	Grid normal, inverter runs from grid	Grid normal, but the inverter has not switched to it yet	Grid abnormal
● ② **INV** (yellow)	Output fed from battery or solar in battery mode	—	Other states
● ③ **CHG** (yellow)	Battery in float stage	Battery charging at constant voltage (CV)	Other states
● ④ **FAULT** (red)	Inverter fault	Warning	Inverter working normally

Where this manual comes from. POWGROW 3.6 kW 24 V is built on the manufacturer's factory platform. Menu, terminals, cables and codes are taken from the original manual of this exact model. Your inverter's bottom panel may differ slightly from the manufacturer's figure (see "Bottom panel and terminals"), and the POWGROW label specifications from the factory datasheet. **If a menu item, value or connector label on your inverter differs, go by the display and the label on the case.**

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SPECIFICATIONS AND SAFETY

Technical data POWGROW 3.6 kW 24 V

Per the manufacturer's datasheet. Check the label: in the POWGROW SMS-3.6KW datasheet some values differ (IP21, –10…+60 °C, efficiency 93.5 %).

AC output		AC input (grid)	
Rated power	**3.6 kW**	Rated voltage	**208 / 220 / 230 / 240 V; L + N + PE**
Peak power	**7.2 kVA**	Voltage range	**90–280 ±3 V (normal mode); 170–280 ±3 V (UPS)**
Voltage	**208 / 220 / 230 / 240 V**	Frequency	**50 / 60 Hz (auto-detect)**
Frequency	**50 / 60 Hz ±0.1 %**	Transfer time	**10 ms (APP / UPS), 20 ms (GEN)**
Waveform	**pure sine wave**	Power factor	**1**
Overload (on battery)	**60 s at 102–110 %; 10 s at 110–130 %; 3 s at 130–150 %; 0.2 s above 150 %**	Max. efficiency (battery)	**92.7 % at 24 V**
Solar panels (PV)		**Battery**	
Controller type	**MPPT**	Rated voltage	**24 V**
Max. PV current / power	**18 A / 5000 W**	Float voltage	**27 V**
MPPT range	**40–450 V**	Overcharge protection	**30.5 V**
Max. open-circuit voltage	**500 V**	Battery type	**lithium and lead-acid**
Max. PV charge current	**100 A**	Max. grid charge current	**100 A**
Max. charge current (PV + grid)	**100 A**	Parallel operation	**no (NA)**
General			
Interfaces	**RS485 / CAN / RS232 / dry contact**	Monitoring	**Wi-Fi (optional)**
Enclosure rating	**IP20**	Operating temperature	**–10…+50 °C**
Humidity	**5–95 % non-condensing**	Storage temperature	**–15…+60 °C**
Weight	**6.4 kg**	Dimensions (H×W×D)	**420×284×94 mm**
Altitude	**up to 4000 m (derating above 1000 m)**	Display	**LCD**

Safety (manufacturer's manual, section 1.5)

- Decide in advance which battery system you are installing, lithium or lead-acid. With the wrong choice the storage system will not work properly.
- Before use read all instructions and warning marks on the inverter, batteries and in this manual.
- Connection must be done by a qualified electrician; all wiring per local electrical safety rules.
- If you install solar panels in daytime, cover them with opaque material: panel terminals carry high voltage in the sun.
- Charge only deep-cycle lead-acid and lithium batteries. Other types may explode.
- Do not disassemble the inverter: repairs only at a service centre. Wrong reassembly risks electric shock or fire.
- Before servicing or cleaning disconnect all cables: switching off with the button does not remove the danger. Start servicing at least 5 minutes after disconnecting all power sources (mark on the case).
- Never charge a frozen battery.
- Choose cable sizes per the recommendations below.
- Take care with metal tools near batteries: a dropped tool can cause a spark or short circuit and an explosion.
- When disconnecting AC or DC terminals, follow the order in the installation section.

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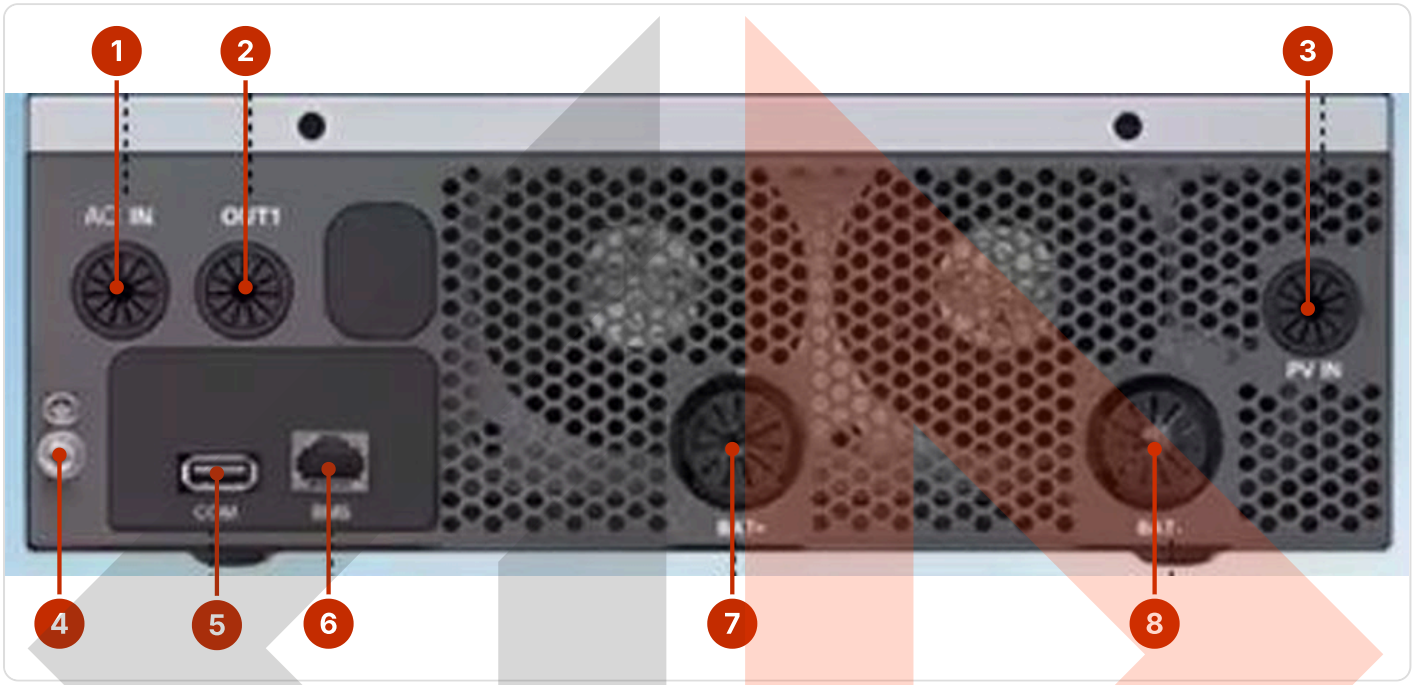
- The inverter must be connected to a permanent earth.
- Never short the AC output and DC input. Do not connect the grid if the DC input is shorted.
- Switch the inverter on only fully assembled (with the bottom cover fitted).
- Do not disconnect under load (mark on the case).

CONNECTORS

Bottom panel and terminals

Bottom panel: what goes where



Real photo of the underside of POWGROW 3.6 kW (from the product page). Numbers in the photo match the table. The dark rectangular blank between OUT1 and the grille is not numbered: the manufacturer's manual does not describe it.

	Port	What and why	What to connect
1	**AC IN**	Grid or generator input (L, N; the PE of this cable goes to earth).	Cable from the grid via a separate **25 A** breaker. Generator also here, item 04 = **GEN.**
2	**OUT1 (AC OUT)**	AC output 230 V. This model has **one** output.	Cable to the load panel (PE, L, N).
3	**PV IN**	Solar panel cable entry to the PV+ and PV− terminals.	Panels via a **25 A** DC breaker rated above 500 V.
4	**⏚ PE**	External case earthing point.	Yellow-green wire with an OT lug, M4 screw. The manufacturer recommends using the PE of the AC IN cable as the earth wire.
5	**COM**	Port for the Wi-Fi module (USB socket). In the manufacturer's manual this port is labelled **WiFi**.	The Wi-Fi module (stick) plugs in here directly.
6	**BMS**	RJ45 port for communication with the lithium battery BMS, RS485 or CAN.	Comms cable from the battery BMS. Protocol: item 38.
7	**BAT+**	Battery "plus" cable entry.	Battery plus via fuse / disconnector **175 A,** cable **35 mm².**
8	**BAT−**	Battery "minus" cable entry.	Battery minus, cable **35 mm².**

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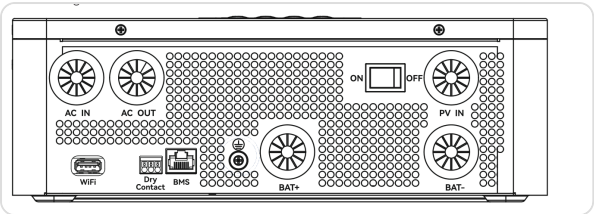
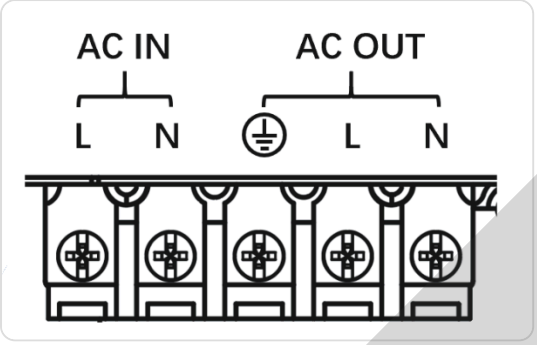


Bottom panel figure from the manufacturer's manual. Besides the connectors in the photo, it shows an **ON/OFF switch** and a **dry contact** connector (Dry Contact: NO, C, NC), and the Wi-Fi port is labelled "WiFi". On the POWGROW photo the switch and dry contact are not visible on the bottom panel. Check your inverter: the layout may differ between batches.

Terminals under the bottom cover



AC block: figure from section 3.4 of the manufacturer's manual.

Remove the bottom cover (four screws). Beneath it is the AC block: **AC IN** (L, N) and **AC OUT (⏚** PE, L, N). Separately: **PV+** and **PV–** terminals on the right and **BAT+** and **BAT–** terminals.

Do not mix up input and output. Observe polarity: L and N for AC, "+" and "–" for PV and battery.

BMS port (RJ45): pin assignment

Pin	Signal
1	**RS485B**
2	**RS485A**
3	—
4	**CANH**
5	**CANL**
6, 7, 8	—

The BMS cable must be wired pin to pin. Link via RS485 or CAN.

For the inverter to exchange data with the BMS, choose type **LIb** or **FEL** in item **17,** and your BMS protocol in item **38.**

INSTALLATION AND CONNECTION

Cables, protection and step-by-step connection

All values from section 3 "Installation" of the manufacturer's manual.

Cables and protective devices

Section	Cable	Protection	Note
AC input (grid / generator)	2.5 mm²	separate AC breaker **25 A**	between inverter and source, for safe isolation
AC OUT output	2.5 mm²	—	the manual gives no breaker rating for the output
Solar panels (PV)	2.5 mm²	DC breaker **25 A,** rated above 500 V DC	Panel Voc ≤ 500 V and above start voltage 60 V; MPPT 40–450 V
Battery 24 V	**35 mm², DT** lugs	fuse / disconnector **175 A**	battery of at least 200 Ah recommended; for lead-acid charge current 0.3C
Case earthing	yellow-green, OT lug	—	M4 screw; the AC IN cable PE can be used

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Step-by-step connection

Step 1 Inspect the inverter and choose a location

- Check the packaging and inverter for damage; if any, contact the seller.
- Mount only on concrete or another non-combustible solid surface, vertically, at eye level.
- Ambient temperature −10...+50 °C. Leave 30 cm free on all sides.

Step 2 Fix the inverter

- Drill two holes with a φ8 drill 200 mm apart, insert M6 anchors.
- Hang the inverter vertically on the screws.
- Remove the bottom cover by unscrewing four screws.

Step 3 Earth the case

- Crimp an OT lug on the yellow-green wire (the manufacturer advises using the AC IN cable PE).
- Screw it to the earth point with an M4 screw.

Step 4 Connect AC input and output

- Fit a separate 25 A AC breaker between inverter and grid and **switch it off.**
- Strip 12 mm of insulation, trim the conductor to 10 mm, crimp ferrules.
- Grid: **L** (brown or black) and **N** (blue) to the AC IN terminals. Output: first **PE** (yellow-green), then L and N to the AC OUT terminals.
- Do not mix up input and output, and do not swap L and N.
- Air conditioners need 2–3 minutes before restarting; check whether the air conditioner has a start delay.

Step 5 Connect the solar panels

- Fit a 25 A DC breaker (rated above 500 V) and **switch it off.**
- Do not earth panel "+" or "−". Panel open-circuit voltage no more than 500 V and above 60 V.
- Crimp ferrules, check polarity with a tester, connect **PV+** (red) and **PV−** (black).
- Do not switch on DC and AC breakers until all connections are complete.

Step 6 Connect the battery

- Fit a 175 A fuse or disconnector between battery and inverter.
- Crimp two DT lugs on 35 mm² cable, pass the cable through the hole at the bottom of the case, tighten the BAT+ and BAT− terminals.
- Check polarity. Put nothing between the terminal face and the lug and do not apply anti-oxidant before tightening.
- For a 24 V lead-acid battery choose AGM or FLD in item 17.

Step 7 Lithium battery: BMS comms cable

- Check that the BMS protocol is compatible with the inverter.
- Connect the RJ45 cable to the inverter's **BMS** port and to the battery comms port (RS485 or CAN).
- In item 17 choose **LIb** or **FEL,** in item 38 the BMS protocol.

Step 8 Wi-Fi and dry contact (if needed)

Plug the Wi-Fi module (stick) directly into the Wi-Fi port (COM in the photo). Per the manufacturer's manual the inverter has one dry contact usable as normally open (NO) or normally closed (NC); this connector is not visible on the POWGROW photo.

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Step 9 **Close the cover and switch on**

- Refit the bottom cover with four screws.
- Switch on the inverter with the **ON/OFF** (per the manufacturer's manual, on the bottom of the case) switch.

DISPLAY AND BATTERY

Using the display and battery setup

What the display shows

Pages are switched with the **UP** and **DOWN** buttons. The page number is at the top centre of the display.

Page	Left	Right
P1	Grid voltage	Output voltage
P2	Grid frequency	Output frequency
P3	Battery voltage	Charging current
P4	PV voltage	PV charge current
P5	PV voltage	PV power
P6 / P7 / P8	Output voltage	Active power / apparent power / load, %
P9	Firmware version	
10	Total PV yield	Yield per day
12–17	Only with the BMS link on (item 38): 12: battery network state (SIG / PAR), 13: voltage and current from BMS, 14: temperature and SOC, 15: rated and current capacity, 16: CV voltage from BMS, 17: BMS warnings and faults. Without a link ERR flashes.	

Default voltages for each battery type

When you choose the type in item 17, the inverter fills in these values itself. In brackets: the range in which a value can be changed.

Item	AGM	FLD	LIb	FEL (LiFePO4)	CUS
15 switch to grid	23 22–26	23 22–26	23.8 20–25	24.8 20–25	— 22–26
16 return to battery	26 24–29	26 24–29	27.2 23–29	26.6 23–29	26 24–29
18 "low" warning	21.6*	21.6*	23.8 20.6–25	24 20.6–25	— 21–27
19 shutdown	21*	21*	23 20–24	23.2 20–24	21 20–24
20 CV charge	28.2*	29*	28.2 25–29	27.6 25–29	— 24–29
21 float	27*	27*	27.6 24–28	27.6 24–28	— 26.6–27.8
30 equalising	29.2 for all types, range 25–31.5				

Values in volts. *: not adjustable for AGM and FLD. "—": the manual gives no CUS default, only the range.

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AGM	lead-acid AGM (default)
FLD	flooded lead-acid
LIb	ternary lithium
FEL	lithium iron phosphate (LiFePO4)
CUS	user settings

Li battery

1. Connect the battery power cables and the BMS comms cable to the **BMS** port (pinout in “Bottom panel and terminals”).

2. Item **17: FEL** for LiFePO4 or **LIb** for ternary lithium.
3. Item **38:** your BMS protocol: PYL, GRO, VOL or IRO.
4. Then items **39–41** (shutdown and switching by SOC) take effect.

> Do not enable equalising charge (items 29–34) with lithium batteries: the manufacturer’s manual says so directly.

SETTINGS MENU

All display menu items

The display looks as in the manufacturer’s figures: code, item number, default value. This model has items 01–41; there are no items 42–65. Items 27, 36 and 37 are in the menu but do not apply to this model.

Output and operating modes



01 Output voltage

230 V by default. Options: 208, 220, 230, 240 V.



02 Output frequency

50 Hz by default. Options: 50 or 60 Hz.



03 Load supply source priority

- **Grd: grid first** (default). The grid feeds the loads; solar charges the battery, and if solar is not enough, the grid charges it too. If the grid is not enough, solar is added, then the battery.
- **PV: solar first.** Solar feeds the loads; surplus charges the battery. If solar is not enough, the grid is added, surplus charges the battery. If solar and grid are not enough, the battery is added.
- **PbG: solar, then battery, then grid.** If solar is not enough, the battery supplies energy; if solar and battery are not enough, the grid feeds the loads.

In all modes: if solar, grid and battery together are not enough, the inverter goes to standby and charges the battery.



04 AC input mode

- **APP:** household appliances (default).
- **UPS:** computers and other equipment, transfer 10 ms.
- **GEN:** generator connected to the grid input (AC IN).

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05 Battery charging source priority

- **PnG:** solar and grid charge together (default).
- **OPV:** solar charging only.
- **Grd:** grid charging priority.
- **PV:** solar charging priority.

> Item 05 is the **charging source,** not the battery type. Battery type is item 17.

Charging current



06 Grid charging current

40 A by default, range 2–100 A.



07 Maximum charge current (solar + grid)

60 A by default. Options: 2, 10, 20 … 100 A in 10 A steps.

Battery



17 Battery type

- **AGn:** lead-acid AGM (default).
- **FLd:** flooded lead-acid.
- **LIb:** ternary lithium.
- **FEL:** lithium iron phosphate (LiFePO4).
- **CUS:** user settings.

The type sets items 15, 16, 18–21 (table “Default voltages for each battery type”). For AGM and FLD some voltages cannot be changed.



15 Battery voltage to switch to grid

AGM / FLD	LIb	FEL (LiFePO4)	CUS
23 V 22–26 V	23.8 V 20–25 V	24.8 V 20–25 V	22–26 V



16 Battery voltage to return to battery mode

AGM / FLD	LIb	FEL (LiFePO4)	CUS
26 V 24–29 V	27.2 V 23–29 V	26.6 V 23–29 V	26 V 24–29 V



18 Warning: low battery voltage

AGM / FLD	LIb	FEL (LiFePO4)	CUS
21.6 V fixed	23.8 V 20.6–25 V	24 V 20.6–25 V	21–27 V



19 Battery discharge cut-off

AGM / FLD	LIb	FEL (LiFePO4)	CUS
21 V fixed	23 V 20–24 V	23.2 V 20–24 V	21 V 20–24 V

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20 Constant voltage (CV) charge voltage

AGM / FLD	LIb	FEL (LiFePO4)	CUS
AGM 28.2 V FLD 29 V fixed	28.2 V 25–29 V	27.6 V 25–29 V	24–29 V

CV voltage must be above float voltage (item 21).



21 Float voltage

AGM / FLD	LIb	FEL (LiFePO4)	CUS
27 V fixed	27.6 V 24–28 V	27.6 V 24–28 V	26.6–27.8 V



24 Discharge time at low load

Default **8 h,** range 1–8 h. Long discharge at low load can exhaust the battery: if continuous discharge in battery mode lasts longer than set without reaching the cut-off point, the cut-off threshold rises to 22 V; when voltage falls to 22 V, the inverter beeps for 1 min and shuts down. When battery voltage is above 26.4 V for more than 30 s, the timer resets.



28 Battery disconnect signal

OFF by default: no alarms for disconnected battery, low battery voltage or discharge.

Grid and grid feed-in



22 Grid voltage lower limit

APP and GEN modes: 90–154 V, default **154 V.** UPS mode: 170–200 V, default **185 V.**



23 Grid voltage upper limit

APP and GEN: 264–280 V, default **264 V.** UPS: always 264 V.



35 Grid feed-in

OFF by default: no export to the grid. ON: in “solar first” and PbG modes with the grid present the inverter runs at the maximum power point and exports the surplus.

Lithium battery: BMS link and state of charge (SOC)



38 BMS communication

OFF by default. Choose your BMS protocol, and the inverter will receive battery data from it:

PYL PYLON (485 / CAN)	**GRO** GROWATT (485)
VOL VOLTRONIC (485)	**IRO** China Tower (485)

If the link fails, warning 56 appears and the inverter stops following BMS data.



39 Low-SOC cut-off

Default **20 %,** range 5–50 %. When SOC in battery mode falls to the setting, the inverter shuts down with warning 68 (cleared at SOC = setting + 5 %). From standby the inverter goes to battery only at SOC ≥ setting + 10 %, otherwise warning 69. OFF: no SOC action. If the BMS link is lost, the inverter ignores SOC and clears these warnings.

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40 **Grid to battery transfer at high SOC**

Default **95 %,** range 10–100 %. In PbG mode the inverter switches from grid to battery when SOC is above the setting **and** battery voltage is above item 16. OFF: no SOC-based transfer.



41 **Battery to grid transfer at low SOC**

Default **50 %,** range 10–90 %. In PbG mode the inverter switches to grid when SOC is below the setting **or** battery voltage is below item 15. OFF: no SOC-based transfer. If the value is above item 40, after the next switch-on items 40 and 41 stop working.

Equalization charge



29 **Equalising charge mode**

> Equalising charge is for lead-acid batteries. Do not enable it with lithium.

OFF by default. ON: equalising starts in float stage when the set interval comes (item 33) or it is started at once (item 34). Enable this item first, then set 30–34.



30 **Equalization charge voltage**

29.2 V by default, range 25–31.5 V.



31 **Equalization charge time**

60 min by default, 5–900 min, step 5 min: the inverter charges the battery to the voltage in item 30 and holds it for the set time.



32 **Equalising charge extension**

If the time is up and the voltage in item 30 is not reached, charging is extended by this time; then the battery goes to float. Default **120 min,** 5–900 min, step 5 min.



33 **Equalization charge interval**

How often to run equalising: default **30 days,** 1–90 days.



34 **Start equalising now**

OFF by default. ON: equalising starts at once in float stage, with equalising mode enabled and the battery connected.

Display, buzzer and protections



08 **Return to main screen**

ON: after 1 min without presses the display returns to the first page. OFF: stays on the current one.



09 **Auto restart after overload**

ON by default.



10 **Auto restart after overheating**

ON by default.

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11 Alarm on grid or solar loss

ON by default: when the grid fails, the buzzer sounds for 3 s. OFF: silent.



12 Power saving mode

OFF by default. ON: in battery mode with a load below 25 W the output periodically switches off; above 35 W it runs continuously.



13 Switch to bypass on overload

OFF by default. ON: in PbG mode on overload the inverter immediately switches the loads to grid (bypass).



14 Silent mode

OFF by default. ON: the buzzer stays silent on any warnings and faults.



25 Soft start

OFF by default. ON: output voltage ramps up smoothly from 0. Can be set only for a single inverter.



26 Reset to factory settings

Set ON: all settings return to factory defaults, then the item shows OFF again. Works on grid and in standby; not in battery mode.

Items not applicable to this model



27 Parallel operation

SIG. Per the manufacturer's manual, not applicable to this model.



36 Second output shutdown by battery voltage

Not applicable to this model (one output).



37 Second output run time on battery

Not applicable to this model (one output).

DISPLAY CODES

Faults and warnings

Faults: the red FAULT indicator is lit

The inverter enters fault mode: the red indicator is lit and the display shows a fault code. The buzzer sounds for 10 seconds. The inverter tries to restart by itself; if it does not work after six attempts, it stays in fault mode: switch it off completely (until the display goes dark) or wait 30 minutes.

Code	Meaning	When it occurs	When it clears
1	**Bus boost soft-start failure**	Bus voltage does not reach the set value during soft start	does not recover
2	**Bus high voltage**	Bus voltage above the protection threshold	does not recover
3	**Bus low voltage**	Bus voltage below the protection threshold	does not recover

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4	**Battery overcurrent**	Battery current momentarily exceeded the threshold	does not recover
5	**Overheating**	PFC temperature above the protection threshold or fan not turning for more than 5 min	six restart attempts; if they fail, no recovery
6	**High battery voltage**	Battery voltage above the set value	when voltage is below the set value
7	**Bus soft-start failure**	Start in progress, bus voltage not yet reached	does not recover
8	**Bus short circuit**	With the inverter or PFC on, bus voltage is below the threshold	does not recover
9	**Inverter soft-start failure**	The inverter does not reach rated output voltage	does not recover
10	**High inverter voltage**	In battery mode the output voltage is above the set value	does not recover
11	**Low inverter voltage**	In battery mode the output voltage is below the set value	does not recover
12	**Output short circuit**	Output voltage below or current above the set values	six restart attempts; if they fail, no recovery
13	**Reverse power protection**	Inverter power below the set value for some time	does not recover
14	**Overload**	Overload above the specified limit	six restart attempts; if they fail, no recovery
15	**Model error**	The inverter did not recognise the model	does not recover
16	**No boot loader**	No program boot loader	does not recover
17	**Firmware writing**	The inverter firmware is being written	after writing finishes
26	**BMS fault**	The BMS message contains an error code	after the BMS link is switched off or the BMS fault is cleared
28	**Temperature sensor fault**	NTC sensor open circuit	does not recover
29	**Inverter overcurrent**	Instantaneous inverter current above the set value	six restart attempts; if they fail, no recovery

Warnings: the red FAULT indicator flashes

The inverter does not enter fault mode: the red indicator flashes, the display shows **ALA** and a code (e.g. ALA 51). The buzzer sounds every second for 1 minute.

Code	Meaning	When it occurs	When it clears
50	**Battery disconnected**	Battery voltage below the set value; battery not charging	when battery voltage recovers
51	**Shutdown due to low battery voltage**	Battery voltage below the set value: shutdown or cannot switch on	when battery voltage recovers
52	**Low battery voltage**	Battery voltage below item 18	when battery voltage recovers
55	**Battery overcharge**	Battery voltage above the set value; battery not charging	recovers
56	**No BMS link**	BMS link lost (BMS function on); the inverter locks in standby	after the link is restored
57	**Overheating**	PFC or inverter temperature above the set value; battery not charging	when the temperature drops
58	**Fan fault**	No speed signal: one fan stopped, the other runs at full speed	recovers
59	**EEPROM memory error**	Memory read or write error	does not recover
60	**Overload**	Load above 102 %; battery not charging	when the load returns to normal
61	**Wrong generator voltage waveform**	The generator waveform check gave an abnormal result; the inverter keeps running on battery	recovers
62	**Weak solar**	Battery not connected, bus voltage below the set value: solar output and charging switch off	after 10 min
68	**Low-SOC cut-off**	Lithium battery SOC below the setting (item 39); the inverter goes to standby	after item 39 or the BMS link is switched off, or when SOC = setting + 5 %

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+38 093 293 93 93 · +38 099 054 40 38 · Specialist Pavlo Leonidovych · strooks@gmail.com

69	**Low SOC**	SOC below setting + 5 % (grid or battery) or + 10 % (standby); in standby the inverter stays off	after item 39 or the BMS link is switched off, or when SOC = setting + 10 %
70	**No source at the battery terminals**	Battery not connected and voltage at the battery terminals below the set value; inverter in standby	when a battery is detected or terminal voltage is above the set value for 1 min

TROUBLESHOOTING · WI-FI

What to check if something is wrong

Per section 8 “Trouble Shooting” of the manufacturer’s manual

On the display	What to check	What to do
Fault 2 high bus voltage	Whether total panel string voltage exceeds the inverter’s maximum open-circuit voltage (500 V)	If it does, use fewer panels per string.
Fault 3 low bus voltage	Disconnect the loads and restart the inverter	If it works, too many loads with high inrush current are connected; switch some off.
Fault 5 overheating	Does the fan turn after cooling; is the dust filter clogged; is there 30 cm of free space around; is ambient temperature above 45 °C; has the air duct paper come unstuck	Check for a fan or wiring fault; clean the filter; provide space; protect from direct sun; fix the air duct with the plastic clip supplied.
Fault 8 bus short circuit	Disconnect the loads and restart the inverter	If it works, too many loads with high inrush current; switch some off.
Fault 26 BMS	Fault information in the battery management software	Fix the battery fault using this information.
Warning 56 no BMS link	Is the comms cable in the correct battery port; does the battery DIP switch match the protocol; do the cable pins match the inverter; does the inverter support the BMS protocol	Move the cable to the right port; set the protocol with the switch on the battery; replace the cable; choose a compatible protocol. To test, swap the battery or inverter.

Wi-Fi monitoring

Per the manufacturer’s manual the Wi-Fi module (stick) plugs directly into the **Wi-Fi** port on the bottom panel (on the POWGROW photo this port is labelled COM). Per the datasheet the Wi-Fi module is optional. Through it, system status can be viewed from a phone or website.

The inverter manual gives no app name or setup steps, so they are not given here: use the leaflet supplied with the Wi-Fi module.

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