

For the common SOFAR HYD 3000-6000-EP family, the inverter supports lithium-ion and lead-acid batteries, a battery voltage range of 42-58 Vdc, and BMS communication over CAN or RS485. Its COM port assigns pin 1 = CANH and pin 2 = CANL for lithium-battery BMS communications.

Practical generic guide: Deligreen/JK-style battery to SOFAR

1) Confirm the basics before wiring

Check all three of these first:

the SOFAR inverter is a battery-capable hybrid and supports 48 V class lithium
the battery's nominal/working voltage fits the inverter's battery range
the BMS has a selectable SOFAR CAN profile, not just "Solis" or "generic" only

For HYD 3000-6000-EP, SOFAR lists 42-58 Vdc battery range and lithium support.

2) Put the battery BMS into the SOFAR protocol

On the Deligreen/JK side, select:

Inverter brand / protocol: SOFAR

Communication mode: CAN

Baud rate: 500K

That matches the protocol list shown in your screenshot.

Do not choose the Solis profile when connecting to a SOFAR inverter, even though both are shown. Same battery, wrong protocol profile = likely no comms or incorrect comms.

3) Use the correct comms cable, not just any RJ45 lead

This is the part that catches people out.

On the SOFAR side, the COM connector uses:

Pin 1 = CANH

Pin 2 = CANL

But the battery-side RJ45 pinout may not be the same physical pin numbers even if it also uses an RJ45 socket. So you need the battery maker's SOFAR cable pinout or a supplied cable made for SOFAR CAN.

That means:

do not assume a normal straight Ethernet patch lead is correct

do not assume "RJ45 to RJ45" means network wiring

use the Deligreen/JK diagram for the SOFAR protocol cable

Without the battery pinout, I cannot honestly tell you "wire pin X to pin Y" on the battery end from this screenshot alone.

4) Connect power cables first, comms cable second

General safe order:

battery DC isolator/breaker off
inverter battery isolator / DC switch off as required by the inverter manual
connect battery positive and negative
verify polarity with a meter
then connect the CAN comms cable
then power up in the recommended order

SOFAR states installation/operation should be performed by a qualified electrical engineer and its manuals include battery and COM wiring as commissioning work.

5) On the SOFAR inverter, set battery mode to lithium/BMS

On the HYD 3-6K-EP menu, SOFAR shows:

Advanced Settings → password 0001
Battery Parameter
inside that menu there is Battery Type and battery-related settings

So the usual flow is:

go to Advanced Settings
enter 0001
open Battery Parameter
set Battery Type to the lithium/BMS-managed option available on your inverter
save settings

I am phrasing that slightly cautiously because the parsed manual text shows the menu names clearly, but not every selectable battery-type label on every firmware revision.

6) Power-up sequence

A sensible sequence is:

power on the battery/BMS
wait for the battery to fully boot
then power on the inverter
give it a minute or two to establish comms

If you have multiple battery modules in parallel, the battery vendor's instructions matter even more: there is usually a master battery and then link/parallel comms between packs before the inverter talks to the master. SOFAR's own battery manuals use a master/slave arrangement for parallel batteries and connect the inverter comms to the master pack.

7) Check whether comms is actually working

On the SOFAR side, signs of successful BMS comms are usually:

- battery SOC appears correctly
- charge/discharge current limits populate automatically
- no battery comms faults
- battery information pages show live data

SOFAR's manual includes Battery Info pages and battery parameters like max charge/discharge and discharge depth.

8) If comms fails, these are the likely causes

Most common causes:

- wrong BMS protocol selected on the battery
- wrong cable/pinout
- CANH/CANL swapped
- inverter firmware too old for that BMS protocol version
- battery powered up too late / not fully booted
- trying to use a Solis cable/profile on a SOFAR inverter

SOFAR specifically lists faults such as BMS CAN version inconsistent and BMS CAN version too low.

My recommended setup path for you

Because this is a third-party battery, I would do it in this order:

- Set the Deligreen/JK BMS to SOFAR / CAN / 500K.
- Use the battery maker's SOFAR cable pinout, not a guessed RJ45 cable.
- On the inverter, go to Advanced Settings → Battery Parameter and select the lithium/BMS battery mode.
- Power up battery first, inverter second.
- Confirm SOC and battery limits appear.
- If not, stop and check protocol/cable/firmware before trying random settings.