

GENERAL INFORMATION

You can find all general information on the SHIDO LiFePO4 Lithium starter battery on www.shido-batteries.com.

WARNING

NEVER attempt to open or disassemble the battery! If accidental contact with inner content of the battery occurs, wash the affected skin area and contact a doctor for further medical assistance. When your motorcycle is equipped with a parasite power consumer like an alarm system, make sure to connect your battery with a maintenance charger when not using your motorcycle for more than one week. We recommend using a SHIDO DC1.0 or DC4.0 Lithium charger/maintainer. Always use a specific lithium charger/maintainer.

FIRST USE

ALWAYS charge the new battery before using it for the first time! (See CHARGING section)

FITTING

- Check the battery state of charge before fitting it by pressing and holding the TEST button (ON/OFF button for Connect types) on the BATTERY CAPACITY INDICATOR located in between the terminals on top of the battery.
- If the BATTERY CAPACITY INDICATOR indicates LOW (1 blue LED illuminated) or MED (2 blue LEDs illuminated) while pressing TEST (ON/OFF for Shido Connect batteries), charge the battery before fitting it (see CHARGING section).
- Giving the battery a Top-Charge (short initial charge) even if the battery indicates 3 blue LEDs (FUL) will prolong battery life.
- Always follow the vehicle manual while fitting the battery.
- Never use this battery in a vehicle where the regulator produces voltages higher than 15,0V.
- Connect the positive lead to the terminal indicated with a ⊕, and the negative lead to the terminal indicated with a ⊖.
- Use the available spacers when needed to achieve the best possible fit.

QUAD TERMINAL

- If your battery is equipped with a QUAD TERMINAL, additional steps need to be taken while fitting the battery.
- A QUAD TERMINAL can be recognised by the stand alone letter Q in the product name on the front of the battery, or by the 4 separate terminals on the battery (two ⊕ and two ⊖).
- To fit the QUAD TERMINAL battery, place the battery in its designated spot in the vehicle and check if the two closest terminals match the polarity of the positive and negative leads. If not, turn the battery 180° to use the terminals at the other side of the battery.
- In case your battery is equipped with removable terminals and they are located on the side of the battery that is not in use, unscrew them using the screws that hold them in place, and screw them on at the terminal positions that are in use. Make sure the terminals are securely fastened.

CONNECT

- When you purchased a SHIDO CONNECT type battery you can receive battery information on your smartphone via a Bluetooth connection.
- Install the SHIDO CONNECT app on your smartphone (Google Play or App Store). Activate Bluetooth in the settings of your phone. Open the app. Click on Manual to have the quick start guide on your phone.
- Activate Bluetooth on your battery by pressing the ON/OFF button for 3 seconds. You will see 3 green lights flashing when Bluetooth is turned on.
- To be connected with your smartphone to your battery you have to be into the Bluetooth range of the devices.
- There are 2 ways to connect your phone with the battery:

1. Click on search in the app and you get a list of all Bluetooth devices nearby. You can recognize your battery by its unique number (ex. MAC:58:7A:62:27:5E:DB) and select.

2. Click on Scan to scan the QR code on your battery and the unique number will appear on your phone and select.

- One smartphone can be connected to up to 7 batteries, but one battery can be connected to one phone at the same time. Only when you disconnect your phone from the battery, a different smartphone can be connected to that battery.
- When you select a connected battery, the State Of Charge (SOC) in %, the total voltage (4 cells in series), the temperature inside the battery and the voltage of each individual lithium cell appears.

- **SOC:** A fully charged SHIDO Lithium battery has more than 13,04V. Under 12,40V we consider the battery as discharged, but without risk on internal damage.

You will see 4 colors in the SOC ring:

Red : 25% - 0% // Battery Voltage < 12,40V

Yellow : 50% - 25% // Battery Voltage 12,72V - 12,40V

Blue : 75% - 50% // Battery Voltage 13,04V - 12,72V

Green : 100% - 75% // Battery Voltage >13,04V

- **Total Voltage** is the cumulated voltage of each cell and is the battery voltage. To start your engine this voltage must be not less than 12,40V.

- **Temperature inside** the battery. Your battery is designed to function best between -10°C and +60° Celsius. The functioning of the battery generates heat. Normal inside temperatures for a battery in use are around 10° to 40°. Extremely hot weather conditions, the positioning of the battery close to a heat source (engine or exhaust) can influence this inside temperature. Best for the lithium battery is a temperature below 60°C.

In extreme low temperature conditions, it can help to heat the battery before starting.

You can do this in both ways:

1. Put on your ignition and headlight for 10 seconds. The battery will warm up and give a better starting performance.

2. Attempt to start your engine during 3 seconds wait for 5 seconds and repeat. The battery temperature increases and therefor

the battery gives a higher cranking power.

▪ **Cell voltage:**

Red : $\leq 3,10V$

Yellow : 3,18V - 3,10V

Blue : 3,26V - 3,18V

Green : $\geq 3,26V$

Normally all cells must have +/- the same voltage. At the end of life, it can happen that one cell has lower voltage. This can indicate that the battery is nearly at the end of its life.

- Swipe to the right to see the technical specifications and basic info of your battery. There is also the sleep mode button for the Bluetooth function (see further).
 - Swipe to the left to get an overview of your alarm codes.
 - The following notifications can come up on phone's screen:
 - **Over-charge alarm:** the charging voltage is over 15,6V. Your battery continues to supply power but will stop charging. As soon as the charging voltage is lower than 15,6V, the battery will automatically take charge again. The battery stops charging to save your battery as the cells are irreparably damaged with a charging voltage over 15,6V. This alarm can occur when the regulator of your engine gives more than 15,6V. The battery has detected a peak voltage and gives you a warning. Depending on the engine rpm, the regulator voltage changes. Best is to have your motorcycle charging system checked. Be aware when you continue to drive without charging the battery, your vehicle will drain your battery until its completely empty. Riding at low rpm can be a temporary solution. You will get a low voltage alarm at 9,6V. It is recommended not to drain your battery under 9,6V.
- This over-charge alarm can occur also when charging your battery with a non-adapted external charger giving more than 15,6V.
- **Low voltage alarm:** Your battery voltage is lower than 9,6V. Stop using the battery and charge your battery immediately.
 - This can happen when parasite consumers like alarm systems drain your battery.
 - When something is wrong with your battery charging system.
 - Your battery is not charged in time after a long time of not using your vehicle.
 - **Over temperature alarm:** The inner battery temperature is over 60°C. Your battery continues to give power, but will stop charging. Cool down the battery and your battery will recharge automatically as soon as the inside battery temperature is below 60° C. Extremely hot weather condition, the positioning of the battery close to a heat source (engine or exhaust) can influence this inside temperature. Riding wind will cool down the battery or put your vehicle in the shadow when parking.
- Your battery is equipped with a Bluetooth sleep mode. Because the Bluetooth consumes power (0,7 mA) it will drain your battery. The time to drain your battery depends on the capacity of your Shido battery. Only the Bluetooth has a sleep mode, your battery always supply power and is never in sleep mode. There are 3 ways to activate the Bluetooth sleep mode:
 - Manually by pressing the ON/OFF button of your battery for 3 seconds. You will see 1 red led flashing.
 - Go to the basic information screen on your phone and press Bluetooth Sleep Mode.
 - Automatically when the Bluetooth connection is not used for 15 days.

There are 3 ways to reactivate the Bluetooth connection:

- Manually by pressing the ON/OFF button of your battery for 3 seconds. You will see 3 green leds flashing.
 - Charge the battery with an external charger and the sleep mode will switch off automatically.
 - Charging the battery by starting the engine will reactivate the Bluetooth function automatically.
- General menu in the app:
 - **Device:** These are the batteries connected with your smart phone (maximum 7 Shido Connect batteries). Swipe to the left on a selected battery and you can choose Edit or Delete. Press Edit and make your choice for the vehicle type with the arrows and fill in the name you want to give to your battery. Press Delete if you want to disconnect this battery from your phone.
 - **Notice:**
 - Alarm vibration: Choose on or off to get an alarm vibration on your phone.
 - Alarm sound: Choose on or off to get an alarm sound on your phone.
 - Push message: to receive push messages: Switch off "No Need Message"
 - **Language:** Make a choice for your preferred app language English, Français, Deutsch or Nederlands.
 - **About:** contact and privacy agreement.
 - **Website:** Shido Connect on the AFAM website.

CHARGING

- Always use a smart, specific Lithium battery charger to charge the battery, they have an adapted algorithm for lithium batteries which is different from lead/acid chargers.
- Below 12,80V your battery needs charging. Your fully charged Shido battery should show around 13,04V.
- To prevent damage to the battery, the charging voltage should NEVER be higher than 15,0V.
- Do NOT charge the battery with a charger with automatic DESULFATION MODE using higher voltage than 15,0V.
- Always remove the battery from the vehicle before connecting it to the charger.
- It is preferable to charge the battery with the STD charging current found in the SHIDO catalogue.
- Charging current should never exceed the MAX charging current found in the BATTERY DATA chart in the SHIDO catalogue.
- If the battery seems hot when touching, stop charging. Allow battery to cool down before resuming.
- After charging, allow the battery to rest for 1 hour before pressing the TEST button (ON/OFF button for Shido Connect) on the BATTERY CAPACITY INDICATOR. If the indicator indicates LOW (1 blue LED illuminated) or MED (2 blue LEDs illuminated), the battery needs additional charging. At one blue LED the battery has less than 12,8V and at 2 blue LEDs the battery is between 12,8V and 13V and needs to be charged. At 3 illuminated LEDs the battery is ready for use.

- Inside your motorcycle your Shido Lithium battery will charge rather quickly through the alternator. After a short run your battery is fully charged again.
- Drained batteries under 9,6V are difficult or impossible to recover. Charge immediately with a specific lithium charger and NEVER with a lead/acid charger.
- When you store your bike equipped with an alarm system for more than one week, use a specific lithium charger with maintaining mode to keep your battery healthy.

WELL USING YOUR SHIDO LITHIUM BATTERY

- Enjoy the advantages from your Shido Lithium battery by using your battery well. More starting power for a better start, very low self-discharge which allows you to start without extra charge even after 1 and up to 2 years, 3 to 4 times longer lifetime compared to your lead-acid battery etc.
- If you are not sure your regulator remains under 15,0V, check the voltage at different RPM from your engine. Especially for older bikes the charge voltage from the regulator is not so stable.
- Your fully charged Shido battery should show around 13,04V. Below 12,80V your battery needs charging.
- Avoid to drain your battery under 9,6V. Be aware that some power consumers like alarm systems or parking lights when not using the bike drain your battery. Aftermarket heated grips, GPS systems, heated gloves and jackets or extra accessories using power while riding can drain your battery as the power supply from the original alternator is not foreseen for these extra consumers. New bikes with originally mounted accessories have an originally adapted alternator supplying more power.
- We recommend NOT using your parking light. Although the start capacity of your Shido battery is higher than a lead-acid battery, the reserve capacity is only 1/3. Power consumers on your bike while not riding will drain your battery 3 times quicker than a lead-acid battery.
- Voltages
 - > 13,04V - Fully charged battery
 - 12,80V - Your battery needs charging
 - 12,40V - Minimum voltage to start your engine
 - 9,6V - Charge your battery immediately with a specific lithium charger only to avoid damaging the lithium cells

STORAGE

- Store in a clean, dry, and ventilated environment.
- Avoid contact with any corrosive substance.
- Keep away from heat and fire.

TRANSPORTATION

- Do not strike, throw, or subject the battery to severe physical shock.
- Do not transport the batteries together with flammable, explosive or sharp objects.
- The plus terminal has to be isolated.

MAINTENANCE

- NEVER attempt to open the battery.
- Always keep the connecting poles clean and securely fastened.
- Every 180 days, check the state of charge of the battery by pressing the TEST button (ON/OFF for Connect types) on the BATTERY CAPACITY INDICATOR. If the indicator indicates a LOW or MED charge (only 1 or 2 blue LED illuminated), do a refresh charge (see CHARGING section).

OTHER

- Your battery is IP65 protected against dust and water spray. Do not immerse the battery in water.
- Do not connect the battery directly to wall outlets.
- Do not short-circuit the battery by connecting wires or other metal objects to the positive ⊕ and negative ⊖ terminals.
- Do not pierce the battery casing with a nail or any other sharp objects, do not attempt to break it open, or step on it.
- Do not directly solder the battery terminals.
- Do not use the battery in combination with primary batteries (such as dry cell batteries) or batteries of different capacity, type or brand.
- Do not use the battery if it spreads a strange odour, generates heat, becomes discoloured or deformed, or appears abnormal in any way. If the battery is in use or being recharged, remove it from the device or charger immediately and discontinue use.
- Optimal temperature range for the battery is -10°C to 60°C.
- SHIDO will bear no liabilities for problems that occur when the above instructions are not followed.

ADVANTAGES

- Up to 65% lighter than lead-acid batteries.
- Super cranking power - cranking current 30% to 50% higher than equivalent lead-acid batteries.
- Excellent cycle life - more than 3 times longer under JISD standard in comparison with lead-acid batteries.
- Longer shelf life due to low self-discharge - more than one year (lead-acid batteries: 6 months).
- Environment friendly - Does not contain any harmful pollutants, corrosive acids or toxic heavy metals.
- No spills - No acid inside, no leakage problems.
- 1 on 1 drop-in replacement for similar lead-acid type batteries.
- Quick recharge with big currents possible.
- Stable discharge voltage and lower internal resistance.
- Safe - non-explosive and non-combustible.

We will not bear any responsibility or compensate any loss as a result of incorrect usage of the battery.

ALL POWER SPORTS APPLICATIONS

- Scooters
- Motorcycles
- Quads
- Jet-skis
- Lawn mowers
- Generators
- Boats

CERTIFICATES

- Certificate ISO-9001
- Certificate ISO-14001
- Certificate TS-16949

MORE INFO

- For more info about SHIDO Lithium batteries, please visit www.shido-batteries.com

SHIDO batteries are exclusively distributed by **DC AFAM NV**, Belgium.