eDASH PLUS

eDASH MINI

eDASH

OWNER'S MANUAL

DASH 500W E-BIKES

SERFAS®

www.serfas.com

SERFAS DASH 500W
OWNER'S MANUAL

Thank you for purchasing a Serfas DASH 500W e-bike!
Before riding, Please take some time to review these instructions.

If you need service or support visit our website or give us a call and we'll help find a solution. You can find more information about your new bike as well as a digital copy of the manual on the website.

DASH 500W PLUS

SPECIFICATIONS

- Battery Capacity: 48v 14Ah (672Wh)
- Motor: 500W Bafang M430 Mid Drive Motor
- Sensor: Both, rider can select torque or cadence
- Bike Class: Up to Class 3, 28mph. Can Modify before shipping
- Tire Size: 27.5 x 2.2
- Weight: 66lbs / 30kg
- Max Load Capacity: 300lbs / 136kg
- Water/Dust Resistance: Bike IPX4, Components IPX5
- Operating Temperature: -20°C to 60°C / -4°F to 140°F
- Charging Temperature: 0°C to 45°C / 32°F to 113°F
- Charger Info: Max 54.6V DC 2.0A
- Max Range: Up to 50 miles (conditions, terrain, rider weight, load and motor/throttle usage dependent)

DASH 500W MINI

SPECIFICATIONS

- Battery Capacity: 48v 14Ah (672Wh)
- Motor: 500W Bafang Hub Drive W/Internal Gears
- Sensor: Both, rider can select torque or cadence
- Bike Class: Up to Class 3, 28mph. Can Modify before shipping
- Tire Size: 20 x 4.0
- Weight: 70.5lbs / 32kg
- Max Load Capacity: 300lbs / 136kg
- Water/Dust Resistance: Bike IPX4, Components IPX5
- Operating Temperature: -20°C to 60°C / -4°F to 140°F
- Charging Temperature: 0°C to 45°C / 32°F to 113°F
- Charger Info: Max 54.6V DC 2.0A
- Max Range: Up to 50 miles (conditions, terrain, rider weight, load and motor/throttle usage dependent)

DASH 500W

SPECIFICATIONS

- Battery Capacity: 48v 14Ah (672Wh)
- Motor: 500W Bafang Hub Drive W/Internal Gears
- Sensor: Both, rider can select torque or cadence
- Bike Class: Up to Class 3, 28mph. Can Modify before shipping
- Tire Size: 27.5 x 2.2
- Weight: 68lbs / 31kg
- Max Load Capacity: 300lbs / 136kg
- Water/Dust Resistance: Bike IPX4, Components IPX5
- Operating Temperature: -20°C to 60°C / -4°F to 140°F
- Charging Temperature: 0°C to 45°C / 32°F to 113°F
- Charger Info: Max 54.6V DC 2.0A
- Max Range: Up to 50 miles (conditions, terrain, rider weight, load and motor/throttle usage dependent)

TABLE OF CONTENTS

USING THIS MANUAL

This manual contains detailed information with tips and instructions for basic operation, warranty, and battery safety. This manual also contain warnings, and cautions concerning the safe operation and use of your new bicycle.

All information in this manual should be reviewed and followed carefully, should you have any questions please contact Serfas for assistance.

Serfas bicycles are only sold in authorized Serfas bicycle retailers. All assembly and maintenance procedures should be completed by an authorized retailer or certified bicycle mechanic.

This bike has been tested and passed to the UL-2849 standard. Any unauthorized modifications and/or use of non Serfas supplied e-bike system components will result in voiding of warranty, compliance to UL-2849 and could create an unsafe riding condition that may result in damage to property or result in serious injury or death.

GENERAL SAFETY

INSTRUCTIONS PERTAINING TO RISK OF FIRE or ELECTRIC SHOCK

IMPORTANT SAFETY INSTRUCTIONS

WARNING! When using this product, basic precautions should always be followed, including the following:

a) Read all the instructions before using the product.

b) To reduce the risk of injury, close supervision is necessary when the product is used near children.

c) Do not put fingers or hands into the product.

d) Do not use this product if the flexible power cord or output cable is frayed, has broken insulation or any other signs of damage.

e) This equipment is not intended to be used at ambient temperatures less than -4°F (-20°C) or above ambient Temperatures of 113°F (45°C).

f) The battery is intended to be charged when the ambient temperature is between 32°F (0°C) and 104°F (40°C). Never charge the battery when the ambient temperatures are outside of this range.

WARNING! It is your responsibility to comply with all traffic related laws and to use proper equipment. This includes wearing appropriate cycling attire and keeping up with necessary bike maintenance.

Observe all local bicycle traffic laws and regulations.
Observe regulations about bicycle lighting, licensing, riding on pavements, sidewalks, bike paths and trail use, helmet laws, child laws relating to cycling and special bicycle traffic laws. It is your responsibility to know and obey your local laws.

- When riding a bike, always wear a properly fitted helmet that covers your forehead. Many locations require specific safety devices. It is your responsibility to familiarize yourself with the local laws, rules and regulations where you ride and to comply with all applicable laws, including equipping yourself and your bike as the law requires.
- Unless otherwise stated, a rider's weight and luggage should not exceed 300lbs/136kg.
- Before you ride your bike, always check to make sure everything is working properly and correctly aligned.
- Be familiar with the controls of your bike, such as brakes, pedals, shifting etc..
- Keep all body parts or any obtrusive objects out of the drivetrain when pedaling. Failure to wear proper attire could lead to injuries.
- While riding, remember you are sharing the road or path with others, i.e. motorists, pedestrians and other cyclists.

Always be a defensive rider. Always assume that others do not see you. Expect the unexpected while riding.
Be aware of your surroundings at all times. Be alert and responsive to:

1. Motor vehicles of all types and from all directions.
2. Unexpected movement of obstacles.
3. nearby pedestrians.
4. Children or animals in the area.
5. Imperfections of bike paths or paved roads including potholes, uneven surfaces, loose gravel and debris.
6. Warning, Hazard and Yield signs.

- Ride in designated bike lanes when available and always ride in the direction of traffic.
- Acknowledge and stop at ALL stop signs and obey traffic lights.
- When coming to a complete stop, always look both ways at intersections before you continue onward.
- Use hand signals for turning and stopping to alert other path and road users of your next move.
- Do not ride with headphones.
- Never hold onto another vehicle while riding your bike.
- Do not weave through traffic or make unexpected moves or turns.
- Rules that govern the right-of-way for motorists apply to cyclists and must be followed. Be prepared to yield.
- Do not ride while under the influence of alcohol or drugs.
- Avoid riding in bad weather conditions including poor visibility for example dawn, dusk to reduce the risk of accident.

WET WEATHER

It is recommended to not ride in wet weather if avoidable. Ride in wet weather only if necessary.
Electric bikes are not meant for ruse in heavy rain, or streams. Never immerse or submerge the bike in water or liquid as the electrical system may be damaged.

- In wet weather you need to take extra care when operating this bike.
- Decrease riding speed to help you control the bike in slippery conditions.
- Apply brakes earlier since it will take longer to slow down safely and come to a stop when riding in wet conditions.
- Take care to increase your visibility to others on the road. Wear reflective clothing and use approved safety lights.
- Road hazards are more difficult to see when wet; proceed with caution.

NIGHT RIDING

Cyclists should exercise extra caution when riding at night. Cyclists are difficult for motorists and pedestrians to see in the dark. In many cases, night riding can be more dangerous than riding during the day.

Individuals of an appropriate age who are aware of the increased risks should take extra care when riding at dawn, dusk or at night. Please note the importance of choosing suitable apparel and specialized equipment when riding in unfavorable conditions to reduce your risks of injury.

Warning! Reflectors should not be used as a substitute for required lighting. Cyclists are near to invisible to other cyclists or motorists if the necessary lights and reflective gear are not used properly. If you ride at night, take all required precautions to make yourself visible by using lights, reflectors and bright colored clothing. Lack of adequate lighting may result in serious injury or death. As a moving cyclist, reflectors are designed to reflect car and street lights helping you become more visible and recognizable when riding.

Caution! Reflectors and their mounting brackets should be checked regularly to endure they are clean, straight and securely mounted. Check to be sure you comply with all local laws about night riding.
The following steps are recommended:

- Enhance your visibility by wearing light-colored and or reflective clothing and accessories. Proper reflective gear is widely available with many options to choose from: Vests, armbands, leg bands, stripes for your helmet or bike.
- Make sure your clothing or miscellaneous items do not obstruct the visibility of your reflectors and or lights.
- Make sure your bicycle is equipped with reflectors for riding at dawn, dusk or at night.
- Always ride with caution if you choose to ride at night.

Mandatory Equipment and Use Locations

Before riding, ensure you have all required and recommended safety equipment and understand all laws pertaining to the use of an electric bike in your region. For example, laws may specify the need for mandatory equipment, use of hand signals and restrictions of where you can ride.

Changing Components or Attaching Accessories

The use of non-original components or spare parts can jeopardize the safety of your e-bike, void your warranty and, in some cases, cause your e-bike to not conform with laws pertaining to your bike.

Safety Check Before Each Ride

Always check the condition of your bike before you ride in addition to having regular maintenance performed. If you're unsure how to conduct a complete check of the condition of your bike before every ride, consult with a certified bike mechanic for assistance.

Brakes

Ensure that the brakes and their system components are free from damage, properly secured and working correctly. When fully squeezed, both front and rear brake levers should not make contact with the handlebar or grips. Take your bike to a certified bike mechanic to have the brakes repaired if you find a problem.

Battery Charged, Secured and Unplugged

Ensure the battery is adequately charged and operating properly. Ensure the battery charger is unplugged from the wall outlet and your e-bike battery before storing it in a safe location before you ride. The battery MUST be locked onto the bike frames battery mount properly before use. Do not operate the electrical system if the battery is removed. When installing the battery make sure to use enough force when pushing the battery into the frame mount and hear a "CLICK" sound.

CHARGER SAFETY INFORMATION

- The charger should only be used indoors in a cool, dry, ventilated area positioned on a flat, stable, hard surface.
- Avoid charger contact with liquids, dirt, debris, or metal objects. DO NOT cover the charger while in use.
- Store and use the charger in a safe place away from children.
- Fully charging the battery before each use can help extend the life of the battery and reduce the chance of over-discharging.
- DO NOT charge the battery with any chargers other than the one originally supplied by Serfas or a charger designed for use with your specific bike purchased directly from Serfas.
- The charger works on 110/240v 50/60Hz standard home AC power outlets and automatically detects and accounts for incoming voltage. DO NOT open the charger or modify voltage input.
- DO NOT yank or pull on the cables or the charger. When unplugging carefully remove both the AC and DC cables by pulling on the plastic plugs directly.
- The charger is expected to get relatively warm while in use. If the charger gets too hot to touch, or you notice a strange smell, or any other indicator of overheating, discontinue using the charger and contact Serfas Support.

Charge the battery only with the charger originally supplied with the bike from Serfas, or a charger purchased directly from Serfas, designed for use with your specific bike serial number, as approved by Serfas. Never use an aftermarket charger, which can result in damage, serious injury, or death.

Please take special care in charging your bike from Serfas in accordance with the procedures and safety information detailed in this manual. Failure to follow proper charging procedures can result in damage to your bike, the charger, or personal property, and/or cause serious injury or death.

General Warnings
Like any sport, cycling involves risk of damage, injury, and death. By choosing to ride a bike, you assume the responsibility for that risk. You need to know and practice the rules of safe responsible riding as well as keeping up with the maintenance and proper use of this bike. Proper use and maintenance of your bike reduces risk of damage, injury, and death.

Cycling and controlled substances do not mix. Never operate a bike while under the influence of alcohol, drugs, or any substance or condition that could impair motor functions, judgment, or the ability to safely operate a bike or another vehicle.

The DASH 500W is designed for use by persons 18 years old and older. Riders must have the physical condition, reaction time, and mental capacity to ride safely and manage traffic, road conditions, and sudden situations, as well as respect the laws governing electric bike use where they ride, regardless of age. If you have an impairment or disability such as a visual impairment, hearing impairment, physical impairment, cognitive/language impairment, seizure disorder, or any other physical condition that could impact your ability to safely operate a vehicle, consult your physician before riding any bike.

A Note for Parents and Guardians

As a parent or guardian, you are responsible for the activities and safety of your child. The DASH 500W is not designed for use by children under the age of 18. If you are carrying a passenger in a child safety seat, they should also be wearing a properly fitted and approved helmet.
Caution! Serfas is not responsible for accidents, injuries or product malfunctions that result from any unauthorized changes, modifications or tampering with any part of the original specifications.

BATTERY CHARGING

The DASH 500W uses a lithium-Ion battery that can be charged on or off the bike. We recommend charging the battery off the bike indoors, in moderate temperature conditions. To charge the battery, plug the charger into the charging port first, then connect the charger to a wall outlet. The LED indicator light will be RED when charging and GREEN when charging is complete. When charging is finished, unplug the charger from the wall outlet and battery.

Take care of the battery to ensure a long service life:
- Charge and store the battery indoors if possible. The battery can be removed from the bike for this purpose.
- Avoid extreme hot and cold temperatures.
- Optimize the performance of the battery by using it monthly at a minimum (discharging and charging).
- **DO NOT submerge your bike or any of the components in water. This action will void the warranty.**

If you won't be riding your DASH 500W for an extended period of time, it's best to store the battery fully charged.
EVERY 2 MONTHS: Put the battery on the charger to maintain optimum level.

After many discharge and charging cycles, runtime and range will be reduced in comparison to a new battery.
Replacement batteries are available from Serfas to extend the life of your e-bike.
The lifespan of the battery is about 500 charge/discharge cycles for properly maintained batteries.

When installing the battery on the DASH 500W properly, it will automatically engage the lock mechanism.
To unlock the battery for removal from the bike, use the supplied key.

DO NOT ride the bike if the battery rattles or moves - the battery should be firmly attached with no movement.

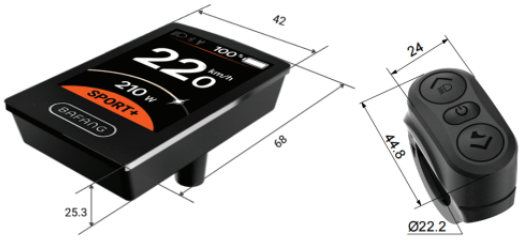
Throttle function
This bike has been programmed for continuous use of the throttle at speeds above 2mph.
The throttle will not work until the bike is moving above the 2mph threshold.
Once above 2mph throttle will work when engaged.

DISPLAY AND CONTROLS

Important Notice

- If the error information from the display cannon be corrected according to the instructions, please contact your place of purchase.
- The product is designed to be waterproof. It is highly recommended to avoid submerging the display under water.
- Do not clean the display with a steam jet, high-pressure cleaner or water hose.
- Please use this product with care.
- Do not use thinners or other solvents to clean the display. Such substances can damage the surfaces.
- Warranty is not included due to wear and normal use and aging.
- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This device complies with part 15 of the FCC Rules. Operation is subject to the Following conditions:
  - This device may not cause harmful interference.
  - This device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures.
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.

Introduction of Display



- Model: DP C400.CB
- The housing is made of PC/ABS and the TFT screen is made of aluminosilicate glass.

Specification

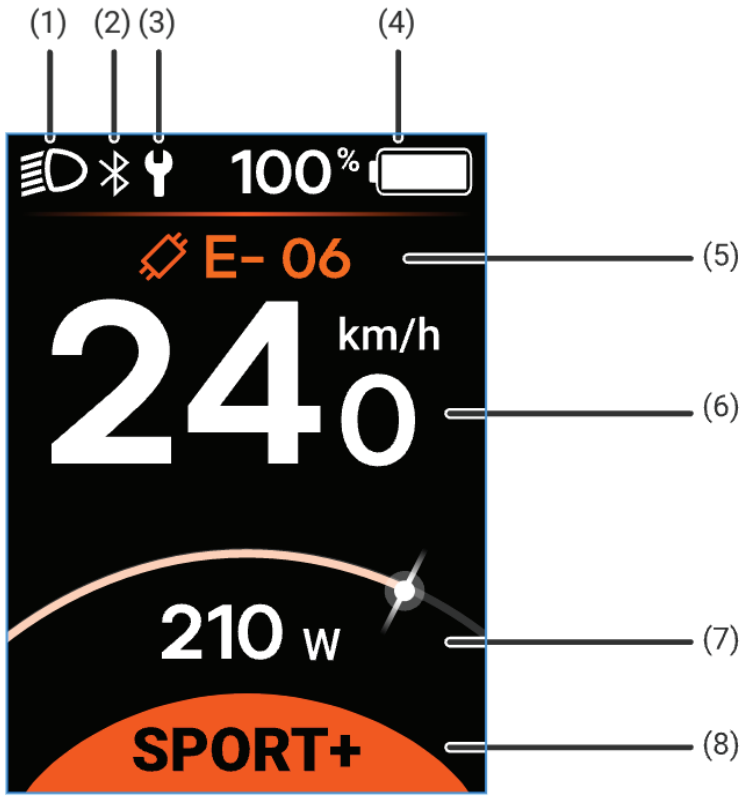
- Screen: TFT
- Power Supply: 36/43/48 Vdc
- Protection rating: IP66

Functional Overview

- CAN communication protocol; Easy and user-friendly operation with three buttons.
- Speed indication: Including real-time speed, maximum speed "MAX" and average speed "AVE".
- Km/Mile shift.
- Smart power indication: Provides stable battery percentage alerts through optimized algorithms.
- Automatic control of light-sensing headlight.
- Backlight brightness 4-level adjustment.
- Power-assisted mode adjustment and indication.
- Mileage indication: The maximum mileage can be displayed up to 99999. Single mileage can be shown as TRIP; accumulated mileage can be shown as ODO.
- Smart indication: remaining mileage can be shown as RANGE, energy consumed can be shown as Cal (calories).
- Error code indication.
- Walk assistance.
- Service tip.
- Bluetooth (if).
- 6 Languages: English, German, Dutch, French, Italian, Czech.

Overview

Display



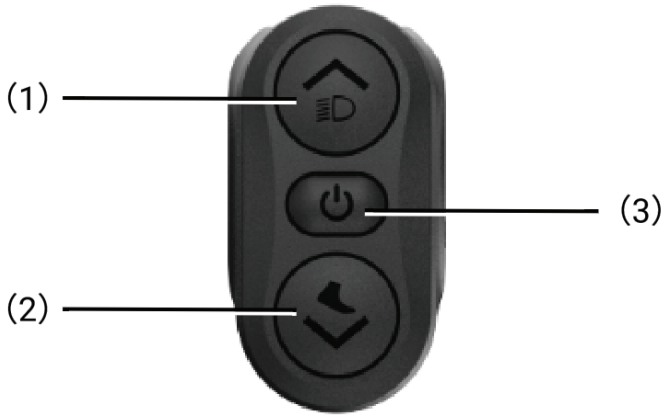
1. Headlight
2. Bluetooth (if)
3. Service tip
4. Smart SOC indication
5. Error/warning indication
6. Real-time speed indication
7. Power indication bar
8. Mode Indication

Control Unit

1. Up/Headlight.
- Press to select your desired item on menu.
- Hold to toggle headlight on/off.

2. Down/Walk Assistance
- Press to select your desired item on menu
- Hold to toggle walk assistance on/off.

3. On/Off/Confirm
- Press to power on/off the HMI
- Press to confirm your selection



Control Unit may vary in appearance

Normal Operation

Power ON/OFF

1. Press and hold ⏻ button (2+ seconds) to power on/off the HMI.

Tip:
If the drive system has not be operated for more than 5 minutes, the HMI will turn off automatically.

Select the Power-assisted Mode

1. Press ∧ or ∨ to switch the power-assisted mode and change the power of the motor.

Tip:
The lowest mode E, and the highest mode B (user selectable).
The default mode is E; 0 means the e-bike is in neutral position.

E (Eco):	Green	ECO mode
T (Tour):	Blue	TOUR mode
S (Sport):	Indigo	SPORT mode
S+ (Sport+):	Orange	SPORT+ mode
B (Boost):	Purple	BOOST mode

Walk assistance

1. Press ∨ to switch to 0/OFF, and then press the ∨ again, and the symbol will appear and be normally on.
2. Press and hold ∨, the symbol will flash, and your e-bike will go into walk assistance mode.

Tip:
If no speed signal is detected, the HMI will display a speed of 2.5 km/hr.

3. Release ∨ to exit from the walk assistance mode, and the symbol will stop flashing and will be normally on.

Tip:
If no operation within 5s, the mode will be automatically switched off 0/OFF.

View the Data

1. On the primary data screen, press the ⏻ to enter the riding data viewing screen.
2. Press the ⏻ to switch data displays.

Adjust the Headlight/backlight

1. Press and hold ∧ (2+ seconds) to turn on the headlight, the backlight luminance of the HMI decreases, and the appears.
2. Press and hold the ∧ again to turn off the headlight, the HMI backlight luminance will increase, and the will disappear.

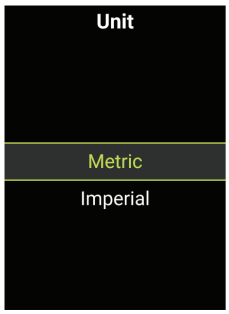
Tip:
The headlight can be automatically switched according to the ambient light, but the auto light function fails once the user manually switches the headlight on/off. After restarting the HMI, the function works again.

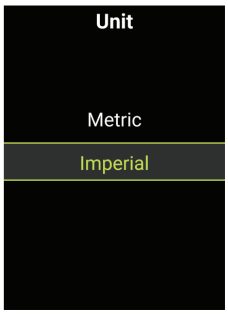
Information Viewing and settings

1. Press and hold the ∧ and ∨ at the same time to enter “Settings”.
2. Press ∧ or ∨ to select “HMI Settings”, “Information”, “Language”, “Themes” or to cycle back, and press ⏻ to

Set the Unit

1. Go to “Settings”, press ∧ or ∨ to select “Unit”.
2. Press ⏻ to go to the settings.
3. Press ∧ or ∨ to select “Metric”/”Imperial”, and press ⏻ to save and go back to “Unit”.
4. To save and go back to the primary data interface, press and hold ∧ and ∨ at the same time, or press “BACK” to “EXIT”.

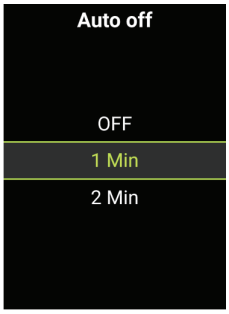




Set the Auto Off Time

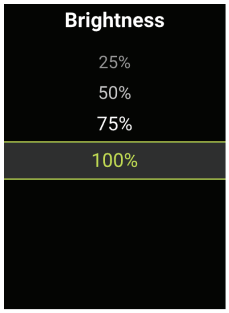
1. Go to “Settings”, press ∧ or ∨ to select “Unit”.
2. Press ⏻ to go to the settings, press ∧ or ∨ to select your desired item.
3. To save and go back to the primary data interface, press and hold ∧ and ∨ at the same time, or press “BACK” to “EXIT”.

Tip:
“OFF” means to disable the function.



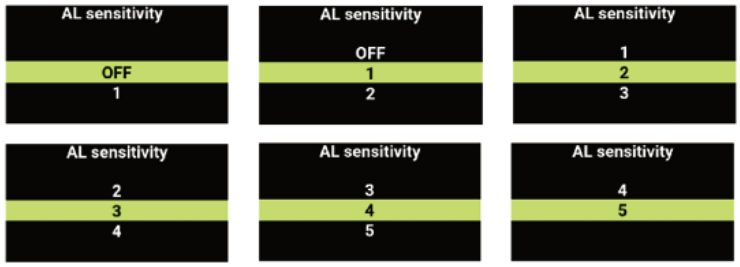
Set the Backlight

1. Go to “Settings”, press ∧ or ∨ to navigate to “Brightness”.
2. Press ⏻ to go to the settings, press ∧ or ∨ to select your desired item, and press ⏻ to save and go back to “Brightness”.
3. To save and go back to the primary data screen, press and hold ∧ and ∨ at the same time, or press “BACK” to “EXIT”.



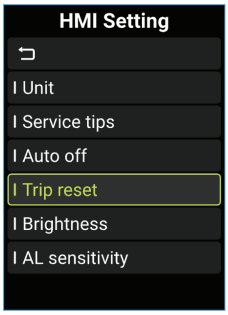
Set the Light Sensitivity

1. Go to “Settings”, press ^ or v to navigate to “Brightness”.
2. Press ⏻ to go to the settings, press ^ or v to adjust the light sensitivity.
3. Press ⏻ to save and go back to “AL sensitivity”.
4. To save and go back to the primary data screen, press and hold ^ and v at the same time, or press “BACK” to “EXIT”.



Reset the Trip

1. Go to “Settings”, press ^ or v to select “Trip reset”.
2. Press ⏻ to go to the settings, press ^ or v to select “NO”/”YES”, and press ⏻ to save & go back to “Trip Reset”.
3. To save and go back to the primary data screen, press and hold ^ and v at the same time, or press “BACK” to “EXIT”.



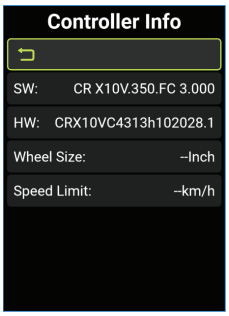
Service Tips

1. Go to “Settings”, press ^ or v to select “Service tips”.
2. Press ⏻ to go to the settings, press ^ or v to select “OFF”/”ON”
3. Press ⏻ to save and return to “Service tips”.
4. To save and go back to the primary data screen, press and hold ^ and v at the same time, or press “BACK” to “EXIT”.

Tip:
The “Service tips” function is turned off by default. When it is turned on and the ODO of the e-Bike exceeds 5,000 km, a wrench icon will appear on the HMI.

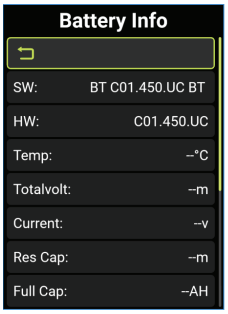
View the Wheel Size & Speed Limit

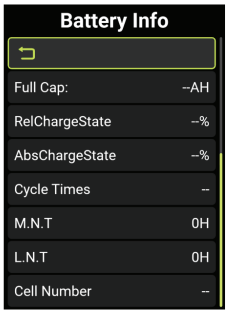
1. Go to “Information”, press ^ or v to select “Controller Info”.
2. Press ⏻ to go to the settings.
3. Press ⮌ , and press ⏻ to view the “Wheel Size” and “Speed Limit”.
4. To save and go back to the primary data screen, press and hold ^ and v at the same time, or press “BACK” to “EXIT”.



View the Battery Info

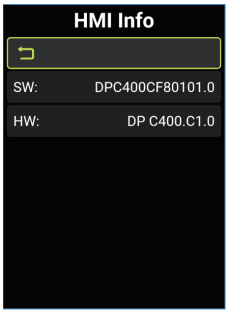
1. Go to “Information”, press ^ or v to select “Battery Info”.
2. Press ⏻ to go to the settings.
3. Press ⏻ to view the battery information.
4. Select ⮌ , and press ⏻ to go back to “Battery Info”.
5. To go back to the primary data screen, press and hold ^ and v at the same time, or press “BACK” to “EXIT”.





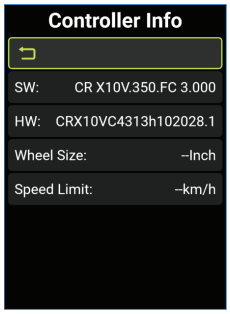
View the HMI Info

1. Go to “Information”, press ^ or v to select “HMI Info”.
2. Press ⏻ to enter.
3. Press ⏻ to go back to “HMI Info”.
4. To go back to the primary data screen, press and hold ^ and v at the same time, or press “BACK” to “EXIT”.



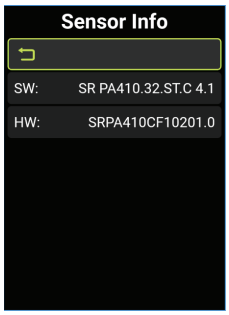
View the Controller info

1. Go to “Information”, press ^ or v to select “Controller Info”.
2. Press ⏻ to enter and press ^ .
3. Press ⏻ to go back to “Controller Info”.
4. To go back to the primary data screen, press and hold ^ and v at the same time, or press “BACK” to “EXIT”.



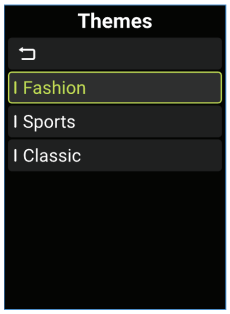
View the Sensor Info

1. Go to “Information”, press ^ or v to select “Sensor Info”.
2. Press ⏻ to enter.
3. Press ⏻ to go back to “Sensor Info”.
4. To go back to the primary data screen, press and hold ^ and v at the same time, or press “BACK” to “EXIT”.



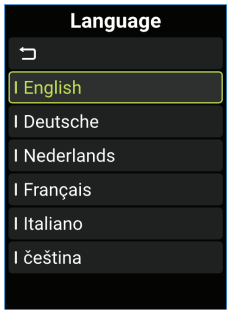
Set the Theme

1. Go to “Settings”, press ^ or v to select “Themes”.
2. Press ⏻ to enter.
3. Press ^ or v to select your desired UI theme.
4. Press ⏻ to save and the HMI will be reset and restarted.
5. If you do not want to change the theme, press and hold ^ and v at the same time to go back to the primary data screen.



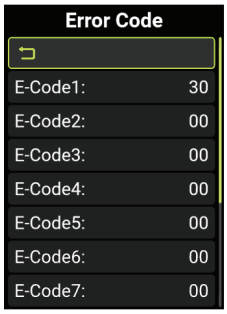
Set the Language

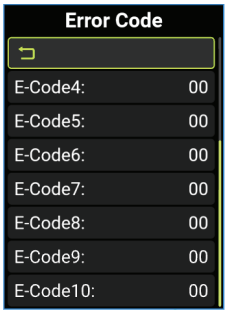
1. Go to “Settings”, press ^ or v to select “Language”.
2. Press ⏻ to go to the settings.
3. Press ^ or v to select your desired “Language”, and press ⏻ to save and go back to the primary data screen.



View Historical Error Codes

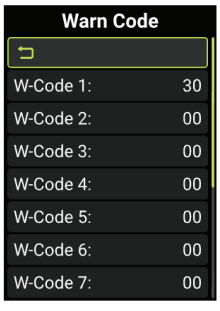
1. Go to “Information”, press ^ or v to select “Error Code”.
2. Press ⏻ to enter and press ^ to view the last 10 error messages.
3. Press ^ or v to select your desired UI theme.
4. Press ⏻ to save and the HMI will be reset and restarted.
5. If you do not want to change the theme, press and hold ^ and v at the same time to go back to the primary data screen.

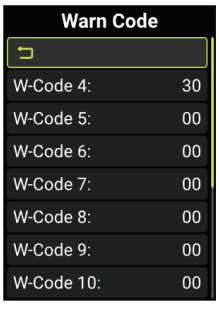




View Historical Warn Codes

1. Go to “Information”, press ^ or v to select “Warn Code”.
2. Press ⏻ to enter and press ^ to view the last 10 warn messages.
3. Press ⏻ to go back to “Information”, or press and hold ^ and v at the same time to go back to the primary data screen.





Error Code

The HMI can show the faults of Pedelec. When a fault is detected, one of the following error codes will be indicated too.

Note: Please read carefully the description of the error code. When the error code appears, please first restart the system. If the problem is not eliminated, please contact your dealer or Serfas.

NOTES ON BELT USAGE

When operated properly, belts are highly durable and have a long service life, however, careful handling is required before and during installation to avoid damaging the carbon fiber cords, which are crucial to the belt's strength. Excessive bending and twisting can cause curling, leading to belt failure under high loads.

Do Not Twist

Do Not Bend Backward

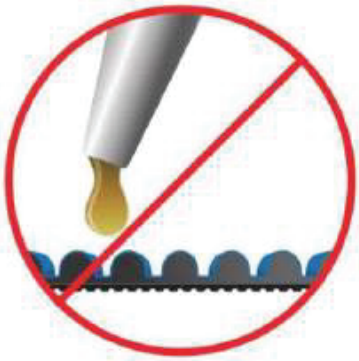
Do Not Curl

Do Not Use As A Belt Wrench Or Chain Whip

Do Not Reverse

Do Not Pry Open

Do Not Bind



Do Not Lubricate

Do Not Break Apart

REMOVAL AND INSTALLATION OF REAR WHEEL

Recommendation:
Loosen the belt, then remove the bracket shaft from the hook.

ERRORS AND WARNINGS

Error Code	Measures	
	Hub Motor System	Mid Motor System
E-09 Motor phase cable abnormal	1. Check the motor for damage and correct assembly (e.g. cables, connectors). 2. If the problem persists in step 1, see dealer to replace the controller. 3. If the problem persists in step 2, see dealer to replace the motor.	1. See dealer to replace the drive unit.
E-10 Motor Overheating protection	1. Turn the power OFF, leave your e-bike in a cool location without direct sunlight until the internal temperature has decreased sufficiently, and turn the power ON again. 2. If the problem persists in step 1, see dealer to replace the controller 3. If the problem persists in step 2, see dealer to replace the motor.	1. Turn the power OFF, leave your e-bike in a cool location without direct sunlight until the internal temperature has decreased sufficiently, and turn the power ON again. 2. If the problem persists, see dealer to replace the drive unit.
E-11 Motor temperature sensor abnormality detected	1. Turn the power OFF, leave your e-bike in a cool location without direct sunlight until the internal temperature has decreased sufficiently, and turn the power ON again. 2. Check the motor for damage and correct assembly (e.g. cables, connectors). 3. If the problem persists in step 2, see dealer to replace the controller. 4. If the problem persists in step 3, see dealer to replace the motor.	1. See dealer to replace the drive unit.
E-12 Controller abnormal	1. See dealer to replace the controller.	1. See dealer to replace the drive unit.
E-13 Controller abnormal	1. See dealer to replace the controller.	1. See dealer to replace the drive unit.
E-14 Controller temperature overheating protection activated	1. Turn the power OFF, leave your e-bike in a cool location without direct sunlight until the internal temperature has decreased sufficiently, and turn the power ON again. 2. If the problem persists, see dealer to replace the controller.	1. Turn the power OFF, leave your e-bike in a cool location without direct sunlight until the internal temperature has decreased sufficiently, and turn the power ON again. 2. If the problem persists, see dealer to replace the drive unit.
E-15 Controller temperature sensor abnormal	1. See dealer to replace the controller.	1. See dealer to replace the the drive unit.
E-18 Motor overload	1. Remove the load, and restart the system. 2. If the problem persists in step 1, see dealer to replace the controller. 3. If the problem persists in step 2, see dealer to replace the motor.	1. Remove the load, and restart the system. 2. If the problem persists, see dealer to replace the drive unit.
E-21 Speed signal abnormal	1. Check the motor for damage and correct assembly (e.g. cables, connectors). 2. If the problem persists in step 1, see dealer to replace the controller. 3. If the problem persists in step 2, see dealer to replace the motor.	1. Check magnet unit installation. Make sure speed sensor is within the correct limit. 2. Check sensor for damage. 3. If the problem persists, see dealer to replace speed sensor. 4. If the problem persists, see dealer to replace the drive unit.

Error Code	Measures	
	Hub Motor System	Mid Motor System
E-27 System operating current higher than the set current	1. Check the motor and controller for damage and correct assembly (e.g. cables, connectors). 2. Check whether the controller is compatible with the motor. 3. If the problem persists in step 2, see dealer to replace the controller. 4. If the problem persists in step 3, see dealer to replace the motor.	1. See dealer to calibrate the motor position sensor with BESST or BESST Pro. 2. If the problem persists, see dealer to replace the drive unit.
E-30 Communication abnormal	1. Check the HMI for damage and correct assembly (e.g. cables, connectors). 2. If the HMI is OFF automatically after reporting an error for 20 seconds, see dealer to replace the controller. 3. If the HMI is not OFF automatically after reporting an error for 20 seconds, see dealer to replace the HMI. 4. If BESST Tool is available, see dealer to read the HMI and controller information with BESST Tool, and replace the component that cannot be read.	1. Check the HMI for damage and correct assembly (e.g. cables, connectors). 2. If the HMI is OFF automatically after reporting an error for 20 seconds see dealer to replace the controller. 3. If the HMI is not OFF automatically after reporting an error for 20 seconds, see dealer to replace the HMI. 4. If BESST Tool is available, see dealer to read the HMI and controller information with BESST Tool, and replace the component that cannot be read.
E-35 Controller voltage module abnormal	1. Check whether the battery voltage is normal. 2. If the problem persists, see dealer to replace the controller.	1. Check whether the battery voltage is normal. 2. If the problem persists, see dealer to replace the drive unit.
E-42 Battery voltage lower than the system's operating voltage	1. Connect the charger and check whether the charger works properly. 2. Charge the battery to 30% or for 2 hours. 3. Install the battery onto the e-bike and power the system ON. 4. If the problem persists, see dealer to replace the battery.	1. Connect the charger and check whether the charger works properly. 2. Charge the battery to 30% or for 2 hours. 3. Install the battery onto the e-bike and power the system ON. 4. If the problem persists, see dealer to replace the battery.
E-45 Battery temperature too high	1. Stop use, turn power OFF, leave your e-bike in a cool location without direct sunlight until the internal temperature has decreased sufficiently, and turn the power ON again. 2. If the problem persists, stop use, and contact your place of purchase for assistance.	1. Stop use, turn the power OFF, leave your e-bike in a cool location without direct sunlight until the internal temperature has decreased sufficiently, and turn the power ON again. 2. If the problem persists, stop use, and contact your place of purchase for assistance.
E-46 Battery temperature too low	1. Stop use, turn the power OFF, leave your e-bike in a warmer environment, and turn the power ON again after the temperature returns normal. 2. If the problem persists, stop use, and contact your place of purchase for assistance.	1. Stop use, turn the power OFF, leave your e-bike in a warmer environment, and turn the power ON again after the temperature returns normal. 2. If the problem persists, stop use, and contact your lace of purchase for assistance.

Error Code	Measures	
	Hub Motor System	Mid Motor System
E-48 Remaining battery too low	1. Connect the charger and check whether the charger works properly. 2. Charge the battery to 30% or for 2 hours. 3. Install the battery onto the e-bike and power the system ON. 4. If the problem persists, stop use, and contact your place of purchase for assistance.	1. Connect the charger and check whether the charger works properly. 2. Charge the battery to 30% or for 2 hours. 3. Install the battery onto the e-bike and power the system ON. 4. If the problem persists, stop use, and contact your place of purchase for assistance.
E-49 Battery voltage too low	1. Stop use, and see dealer to replace the battery.	1. Stop use, and see dealer to replace the battery.
E-50 Temperature difference between individual cells too large	1. Stop use, turn the power OFF, leave your e-bike in a warmer environment, and turn the power ON again after the temperature returns normal. 2. If the problem persists, stop use, and contact your place of purchase for assistance.	1. Stop use, turn the power OFF, leave your e-bike in a warmer environment, and turn the power ON again after the temperature returns normal. 2. If the problem persists, stop use, and contact your place of purchase for assistance.
E-59 The charger not compatible with the battery.	1. Make sure that the compatible charger is used. 2. If the problem persists, stop use, and contact your place of purchase for assistance.	1. Make sure that the compatible charger is used. 2. If the problem persists, stop use, and contact your place of purchase for assistance.
E-71 E-lock abnormal	1. Restart the system 2. If the problem persists, see dealer to replace the e-lock.	1. Restart the system. 2. If the problem persists, see dealer to replace the e-lock.
E-89 Communication between IoT and controller abnormal	1. Check the IoT for damage and correct assembly (e.g. cables, connectors), and restart the system. 2. If the problem persists in stop 1, see dealer to replace the IoT.	1. Check the IoT for damage and correct assembly (e.g. cables, connectors), and restart the system 2. If the problem persists in step 1, see dealer to replace the IoT.
E-97 E-Bike falling down alarm	1. Right your e-bike, and the problem will disappear.	1. Right your e-bike, and the problem will disappear.
E-98 Disturbance alarm	1. Stop your e-bike, and the problem will disappear.	1. Stop your e-bike, and the problem will disappear.
E-99 IoT low battery alarm	1. Charge the battery, and the problem will disappear.	1. Charge the battery, and the problem will disappear.

Warning Code	Measures	
	Hub Motor System	Mid Motor System
W-22 Battery SOC calculation abnormal	1. Check the battery for damage and correct assembly (e.g. cables, connectors). 2. If the problem persists in step 1, see dealer to replace the controller. 3. If the problem persists in step 2, see dealer to replace the battery.	1. Check the battery for damage and correct assembly (e.g. cables, connectors). 2. If the problem persists in step 1, see dealer to replace the battery. 3. If the problem persists in step 2, see dealer to replace the drive unit.
W-25 Torque sensor signal abnormal	1. Check the torque sensor for damage and correct assembly (e.g. cables, connectors). 2. If the problem persists in step 1, see dealer to replace the torque sensor. 3. If the problem persists in step 2, see dealer to replace the controller.	1. See dealer to replace the drive unit.
W-26 Torque sensor signal abnormal	1. Check the torque sensor for damage and correct assembly (e.g. cables, connectors). 2. If the problem persists in step 1, see dealer to replace the torque sensor. 3. If the problem persists in step 2, see dealer to replace the controller.	1. See dealer to replace the drive unit.
W-33 Brake abnormal	1. Check the brake for damage and correct assembly (e.g. cables, connectors). 2. Disconnect the brake from the system, and restart the system. 3. If the problem persists in step 2, see dealer to replace the brake. 4. If the problem persists in step 3, see dealer to replace the controller.	1. Check the brake for damage and correct assembly (e.g. cables, connectors). 2. Disconnect the brake from the system, and restart the system. 3. If the problem persists in step 2, see dealer to replace the brake. 4. If the problem persists in step 3, see dealer to replace the drive unit.
W-36 ON/OFF button abnormal	1. Pressing ON/OFF button too long at startup will trigger the problem. It will disappear, if you release the button. 2. If the problem persists in step 1, see dealer to replace the HMI. 3. If the problem persists in step 2, see dealer to replace the controller.	1. Pressing ON/OFF button too long at startup will trigger the problem. It will disappear, if you release the button. 2. If the problem persists in step 1, see dealer to replace the HMI. 3. If the problem persists in step 2, see dealer to replace the drive unit.
W-41 Overvoltage in Charging	1. Disconnect the battery charger to stop charging.	1. Disconnect the battery charger to stop charging.

ISSUES AND SOLUTIONS

Assistance is not being provided.

• Are you pedaling?	If your e-bike drive system is torque assist type, you need to apply enough force on the pedals to activate the power assistance.
• Is the system power ON?	Turn the power ON by the ON/OFF button on the HMI or battery. If the problem persists, stop use, and contact your place of purchase for assistance.
• Did you turn on the power with your foot placed on the pedal?	Turn on the power again without putting pressure on the pedal. If you still do not feel that assistance is being given, contact your place of purchase for assistance.
• Is the power assistance mode set to 0/OFF?	Set the power assistance mode to other modes. If you still do not feel that assistance is being given, contact your place of purchase for assistance.
• Is the battery sufficiently charged?	Check the battery charge. If the battery is nearly spent, charge it.
• Are you riding on long slopes in summer weather or riding for a long time carrying a heavy load	Turn OFF the power, wait for a while, and ride your e-bike again.
• Is the speed over the speed limit?	Power assistance is not provided at speeds beyond speeds set by the manufacture or more.
• Does an error or warning appear on the HMI?	Try to solve the problem according to the list of errors and warnings.

Power assistance traveling distance is too short.

• The traveling distance may become shorter depending on road conditions, the assistance mode set, usage time and the load.	Check the battery charge. If the battery is nearly spent, charge it.
• The battery characteristics will drip during winter weather.	This is not a sign of a problem.
• The battery is a consumable part. Repeated recharging and long periods of use will cause the battery to deteriorate (lose its performance).	If the distance that can be traveled when the battery is fully charged is too short, replace the battery with a new one.
• Is the battery sufficiently charged?	If the distance that can be traveled when the battery is fully charged is too short, the battery may have degraded. Replace the battery with a new one.

The battery quickly loses its charge.

• The battery may be at the end of its service life.	Replace the battery with a new one.

The battery and charger are becoming hot.

• The temperature of the battery or charger may have exceeded the operating temperature range.	Stop charging, wait for a while and then charge again. If the battery is too hot to touch, it may indicate a problem with the battery. Contact your place of purchase for assistance.

The LED on the charger does not illuminate.

• Is the power plug of the charger securely inserted into the electrical outlet.	Disconnect and reconnect the plug, and repeat the charging operation again. If the battery still cannot be charged, contact your place of purchase for assistance.

MAINTENANCE AND SERVICE

- When cleaning your bike, use a damp cloth and gentle dish soap. NOTE: DO NOT use a pressure washer or sprayer.

- If you ride in wet / humid environments, clean and dry electric connections and apply an anti-corrosive.

All bicycles will need a periodic tune-up or adjustments by a professional. An annual "check-up" is beneficial and recommended. Your bike's service schedule will depend on the frequency of use. In-between services at a bike shop we suggest: Keeping tires inflated to their recommended pressure, check them weekly.

STORING YOUR BIKE

You may wish to store your bike for an extended period without riding. Proper storage can help prolong the life of your e-bike components and battery.

To prepare your bike for storage, fully charge the battery. Then remove the battery from the bike and store it separately. Removing the battery from the bike puts it into a low-voltage state designed for long term storage.

Keep both the bike and the battery in a cool, dry place. Avoid storing in extreme heat or extreme cold temperatures. Generally if the environment is comfortable for humans, it's a good place to store your bike.

Store your bike away from sources of heat, UV light, and ozone - all of which can prematurely age rubber tires and tubes.

All bicycle tubes slowly lose air over time and need to be regularly topped off to maintain proper pressure. This does not mean that your bicycle has a flat tire. Avoid allowing the tires to deflate completely during storage.

LIMITED LIFETIME WARRANTY

The specific warranty covering your Serfas bicycle is governed by the law of the state or country in which it was purchased, and applies only to bicycles purchased from Authorized Serfas Retailers.

FRAMES AND FORKS:
Serfas frames made from steel or aluminum (DASH e-bikes) are warranted by Serfas Bikes, 2333 W. Utopia Rd., Phoenix, AZ 85027 against manufacturing defects in materials and/or workmanship for 2 years to the original owner.

COMPONENTS:
All other components, frame fixtures, and finishes (paint and decals) are warranted against manufacturing defects in materials and/or workmanship for a period of one year from the date of original retail purchase.
Forks (other than those Made by Serfas - for example, a Suntour suspension fork) are not covered by this limited warranty, but are separately covered by the stated warranty of their manufacturer. Stripped threads due to user error are not covered by this warranty.

To qualify for warranty coverage, bike must be registered within 1 month of purchase at below web address.

Register at: www.serfas.com/warranty-form