CRUSSIS

Electric bicycle user manual

City line

*Enjoy your **e-ride!***

Dear user of CRUSSIS e-bike,

Congratulations on your purchase of a new electric bicycle (e-bike). It makes us proud that you have chosen our brand **CRUSSIS** and we wish you happy and safe time spend with our product.

This manual contains important safety, performance and maintenance information. Read the manual before taking your first ride on your new e-bike and keep the manual handy for future reference.

WHY YOU SHOULD READ THIS MANUAL:

This manual was written to help you get the most performance, comfort, enjoyment and safety when riding your new e-bike. The manual describes specific care and maintenance procedures that help protect your warranty and ensure years of trouble-free use. Please pay particular attention to the section on battery charging and maintenance. It is important for you to understand your new e-bike, its features and its operation, so you get maximum enjoyment with maximum safety. By reading this manual before you go out on your first ride, you will know how to get the most from your new e-bike. It is also important that your first ride on a new e-bike is taken in a controlled environment, away from cars, obstacles and other cyclists

GENERAL WARNING:

Cycling can be a hazardous activity even under the best of circumstances. Proper maintenance of your e-bike is your responsibility as it helps reduce the risk of injury. This manual contains many "Warnings" and "Cautions" concerning the consequences of failure to maintain or inspect your e-bike. Many of the Warnings and Cautions say "you may lose control and fall". Because any fall can result in serious injury or even death, we do not repeat the warning of possible injury or death whenever the risk of falling is mentioned.

FIT:

Make sure the e-bike fits. A bike that is too big or too small for the rider is harder to control and can be uncomfortable. If your e-bike does not fit properly, you may lose control and fall.

IMPORTANT SAFETY INFORMATION:

Your e-bike can provide many years of service, fun and fitness - if you take responsibility for your own safety. Understand the features of your e-bike and become aware of the challenges that you will meet on the road. There is much that you can do to protect yourself while riding. We will offer many recommendations and safety tips throughout this manual. The following are those that we feel are most important. Always wear a helmet! Helmets significantly reduce the number and severity of head injuries. Always wear a helmet that complies with your state laws when riding the e-bike. Check with your local police department for requirements in your community. Do not wear loose fitting clothing that can become tangled in the moving parts of the e-bike. Wear sturdy shoes and eye protection. Also check your state laws concerning other protective gear that may be required when riding the e-bike.

DESCRIPTION OF E-BIKE COMPONENTS

1. Battery
2. Motor
3. Control panel
4. Pedal Assist Sensor -Sensor which recognizes the pedals movement and operates the motor accordingly
5. Brake levers with system disconnector
6. Battery lock
7. Brakes
8. Shifter
9. Cranks
10. Wheel quick release
11. Derailleur
12. Tyre and rim

INSPECTION AND MAINTENANCE:

For your safety and enjoyment, and to ensure a long life for your e-bike inspect and maintain your e-bike regularly. Use the table below for guidance. It is especially important that you check certain systems and components before every ride. The proper condition and function of these systems is critically important for your safety. Your e-bike should be returned to your servicing dealer at least once a year for a complete and thorough inspection and tune up.

Component or Condition	Inspect before every ride	Inspect periodically*	Clean and or lubricate	Adjust or Tighten	Repair/Replace if necessary
Tire pressure					
Tire wear/damage					
Brake pad adjustment					
Wheel quick release adjustment					
Head/tail/brake lights					
Controls and displays					
Seat post quick release adjustment					
Brake pad wear					
Brake cable tension/wear					
Spoke tension					
Wheel true					
Hub bearings					
Chain lubrication					
Derailleur adjustment					
Battery and charger					
Headset adjustment					
Bottom bracket adjustment					
All bolts, nuts, and mounting hardware					

*Every 5 to 10 rides depending on length and conditions of the ride.

WARNING: Remove the battery pack before washing your e-bike! Keep the battery pack and charger away from water to prevent electrical shock and damage to the charger or batteries.

CARE AND CLEANING:

Clean the e-bike with a mild soap and a sponge. DO NOT use a power hose or washer. Gently rinse with water. Avoid spraying water directly onto the control switches, motor and front hub bearings. Do not spray water inside the battery compartment. Dry the frame mounted electrical connector in the battery compartment before reinstalling the battery pack. Use automotive wax to protect painted surfaces. Lubricate the chain periodically to help prevent corrosion and minimize wear.

MECHANICAL SAFETY CHECK :

The mechanical safety check is a simple, sixty-second check you should perform whenever you're about to get on the e-bike.

Nuts, bolts & straps Lift the front wheel off the ground by two or three inches, and then let it bounce on the ground. Does anything sound, feel or look loose? Do a quick visual and tactile inspection of the whole e-bike. Any loose parts or accessories? If so, secure them. If you're not sure, ask someone with experience to check these items.

Tires & Wheels Tires correctly inflated? Check by putting one hand on the saddle, one on the intersection of the handlebars and stem, then bouncing your weight on the e-bike while looking at tire deflection. Compare what you see with how it looks when you know the tires are correctly inflated. Adjust the tire pressure if necessary.

Tires in good shape? Spin each wheel slowly and look for cuts in the tread and sidewall. Replace damaged tires before riding the e-bike.

Wheels true? Spin each wheel and check for brake clearance and side-to-side wobble. If a wheel wobbles from side to side or hits the brake pads, take the e-bike to a qualified bike shop to have the wheel trued.

CAUTION: Wheels must be true for the brakes to work effectively. Wheel truing is a skill which requires special tools and experience. Do not attempt to true a wheel unless you have the knowledge and tools needed to do the job correctly.

Brakes Squeeze the brake levers. Does the cable guide on the brake cable securely engage the quick release bracket on the left calliper arm? Are the brake pads contacting the wheel rim within an inch of brake lever movement? Can you apply full braking force at the levers without having them touch the handlebar? If not, your brakes need adjustment. Do not ride the e-bike until the brakes are properly adjusted.

WARNING: Riding with improperly adjusted brakes or worn brake pads is dangerous and can result in serious injury or death.

Quick Releases Are the front wheel and seat post quick releases properly adjusted and in the locked position? Adjust the quick release mechanism as necessary.

WARNING: Riding with an improperly adjusted wheel quick release can cause the wheel to wobble or disengage from the e-bike, which can cause damage to the e-bike and serious injury or death.

Handlebar and saddle alignment Are the saddle and handlebar stem correctly parallel to the top tube of the e-bike. Are the binder bolts tight enough so that you cannot twist them out of alignment?

Handlebar ends Are the handlebar grips secure and in good condition? If not, replace them. Are the handlebar ends and extensions plugged? If not, plug them before you ride.

WARNING: Loose or damaged handlebar grips or extensions can cause you to lose control and fall. Unplugged handlebars or extensions can act like a cookie cutter on your body and can cause serious injury in an otherwise minor accident.

OPERATIONAL INSTRUCTIONS:

Please read and understand these instructions completely before operating your e-bike to prevent serious injury to yourself and others, and to prevent damage to the e-bike.

Operating the e-bike's electric system: Pressing on the central **ON/Off - MODE** button of the display for approximately 2 seconds will start the e-bike's electric system (the bicycle are ready to be driven in electric mode). To switch the electric system off use the same method.

In case the e-bike is not in use for longer than 10 minutes, the electric system of the e-bike will switch off automatically.

Walk assist: To activate the walk assist mode press and hold the ■ **(-)** button, to deactivate the walk assist mode simply release the ■ **(-)** button.

Operating the motor by using the PAS system: There is a sensor located in the bottom bracket area. As the pedals are rotated, the sensor recognizes the motion and turns on the motor. This model has 5 different speeds of PAS, which can be controlled from the bicycle's display.

Definitions: PAS - Pedal Assist Sensor - Sensor which is located near the bottom bracket axis, recognizes the pedals movement and operates the motor accordingly.

Assist modes:

0 No assist mode

1-2 Low assist mode

3 Medium assist mode

4-5 High assist mode

Do not use assist mode **4** and **5** on a long or extremely steep climbs! Combination of heavy load and low speed cause overheating of the motor which may lead to malfunction or damage of the motor.

The e-bike can be used as a regular bicycle while the electric system is off.

Once you are done using the e-bike, it is important to turn off the electric system.

OPERATING THE E-BIKE'S CONTROL PANEL:

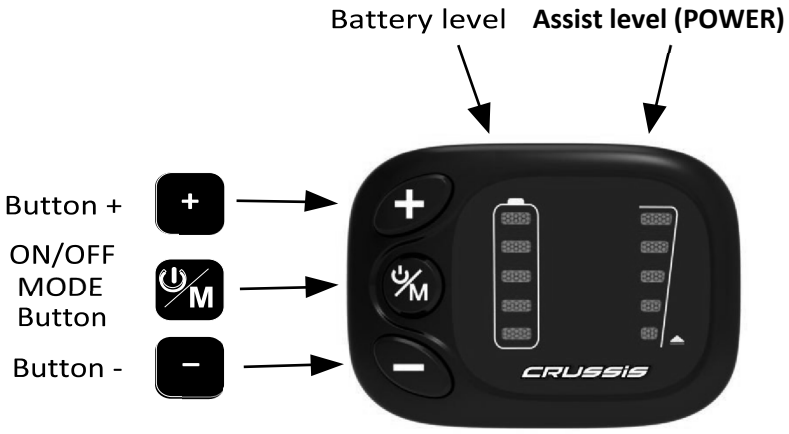
Type: KD59E Display: LED

Dimensions: 65x46x45mm

Handlebar bracket diameter: 22,2mm

Voltage: 24/36/48V

Degree of protection: IP54



Display: LED

Dimensions: 65x46x45mm

Handlebar bracket diameter: 22,2mm

Voltage: 24/36/48V

Degree of protection: IP54

THE BATTERY:

This battery model is a chargeable Lithium ion battery.

It is highly recommended that the battery will be charged in full, prior to use.

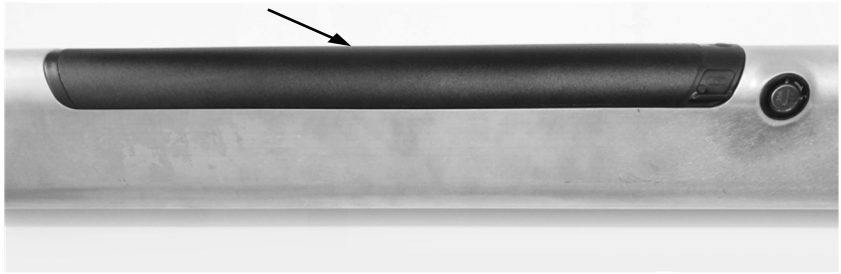
WARNING! Storing battery in extreme hot/cold temperature must be avoided. As this will bring about a decrease in battery quality. Extremely low temperature may cause corrosion and shortening of the battery lifespan. Extremely high temperature may cause battery inflation and making it dangerous, and in most extreme cases cause battery explosion! Do not expose the battery to temperatures under 10°C and over 40°C.

DISMOUNTING / MOUNTING OF BATTERY FROM THE E-BIKE:

In order to place the battery into its location on frame's rack, locate the battery in its rail and slide it in. (a click sound should be heard).

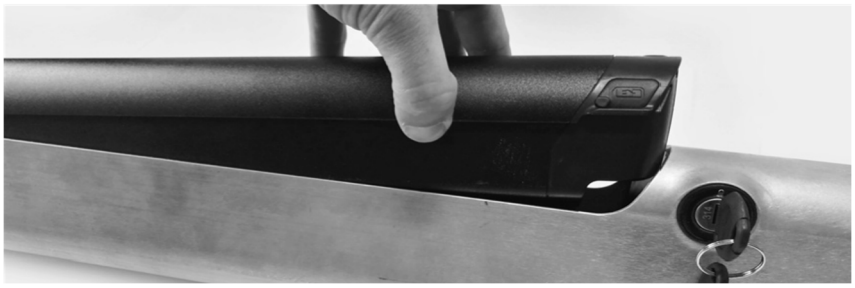
Battery level indication

In frame integrated battery



Battery indication

In order to dismount the battery from the frame, turn its key clockwise and pull it out.



Charger

EMPHASIS FOR BATTERY CHARGING:

The battery must be charged with the provided charger only, any other form of charger is forbidden and dangerous!

The battery must be charged only when it is in off mode (and not emitting voltage).

The battery may be charged while assembled to the e-bike as well as when it is unassembled.

While the battery is in charging, the charger red indicator light is turned on, as the light turns into green the battery is fully charged.

Before the charging, in order to avoid circuit shortening, the charger should be first connected to the electrical socket and then to the battery.

In order to finish the charging process, the charger should first be disconnected from the electrical socket and then disconnected from the battery.

Do not cover the battery and the charger during charging process.

In case in which the battery overheats during the charging process, the charging should be stopped immediately!

It is normal for the charger to become somewhat hotter during the charging process.

Do not place the battery and / or the charger near flammable substances during charging.

The battery works better when it is fully charged, it is recommended to begin riding when battery is fully charged.

WARNING! The charger should be checked for physical damage. Before every charging, make sure that the charger wiring is not torn or exposed and whether its electrical plug is damaged! In case you notice a problem with the charger, the battery must not be charged until the charger is fixed / replaced! In case of a defective charger contact your bicycle provider!

WARNING! Never charge the battery without supervision! Do not charge the battery overnight while all people are sleeping in the house!

PRESERVING OF BATTERY'S LIFESPAN:

It is highly recommended to charge the battery in full immediately after purchasing your e-bike.

The charger must be disconnected from the electricity and the battery after the charging process is completed.

The battery must not be left empty for more than 24 hours, if the battery is left uncharged for too long it may reach a state in which it is no longer chargeable.

If you know that the bicycle will not be in use for a long period of time, the battery should be charged in full, separated from

Average battery lifespan depends on its use and on its conditions. Even with proper care, rechargeable batteries do not last forever. This battery model will last between 700-1000 charging cycles. A partial charge/discharge counts fractionally against those numbers. Running the battery down halfway and then recharging it completely, uses up to one half of a charge cycle.

IMPORTANT! The battery cells are discharged autonomously, once the battery is left unused for a prolonged period. In cases battery cells are left low charged for a long period of time, their charge cycles and capacity will diminish, and the quality of the battery will be damaged. The battery should be left fully charged if it is not to be used for a prolonged period.

FACTORS INFLUENCING THE E-BIKE RANGE:

1. Rolling resistance of the tyres. CRUSSIS e-bikes are fitted with low rolling resistance tyres, however it is crucial to keep the tyres inflated properly according to manufacturer pressure charts.

2.Weight of the e-bike. The lower weight of the e-bike, the rider and the load carried, the greater the range.

3.Battery status. It depends on whether the battery was fully charged before your trip. It is also to be expected that the higher the number of discharge cycles the battery has undergone, the smaller capacity it has. the surface, the shorter the range.

4. Profile and surface of the track. The higher the elevation difference and the steeper hills you negotiate and the worse the surface, the shorter the range will be.

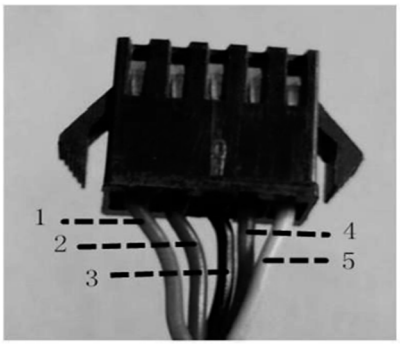
5.Riding mode. It depends on which of the three riding modes you have set.

6.Continuity of riding. The more braking and acceleration, the shorter the range.

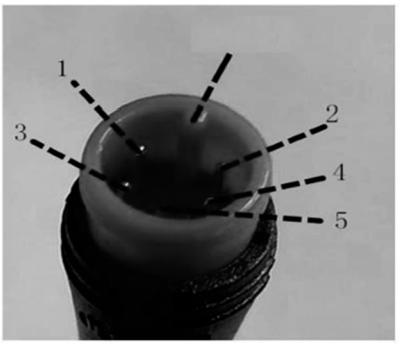
7.Air resistance. For example, it depends on whether we ride a bicycle with a low frame and sitting upright or whether we ride a sporty bicycle with the seat set to the same height as the handlebars.

8.Wind strength. The stronger the wind we have in the back, the longer the range and vice versa.

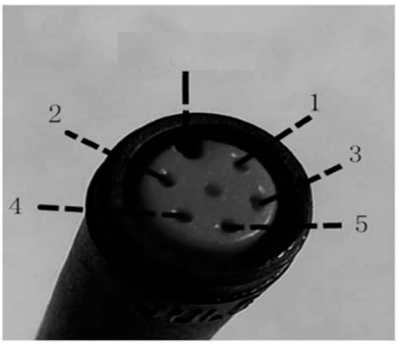
9.Weight of the rider and load. The greater the weight, the shorter the range. 10.External temperature. The lower the temperature, the less battery capacity can be used while riding.



Display wiring



Connector wiring



Electric swich wiring

1 –Red wire: Anode (24V/36V)

2 –Blue wire: Power cord to the controller

3 –Black wire: GND

4 –Green wire: RxD (controller -display)

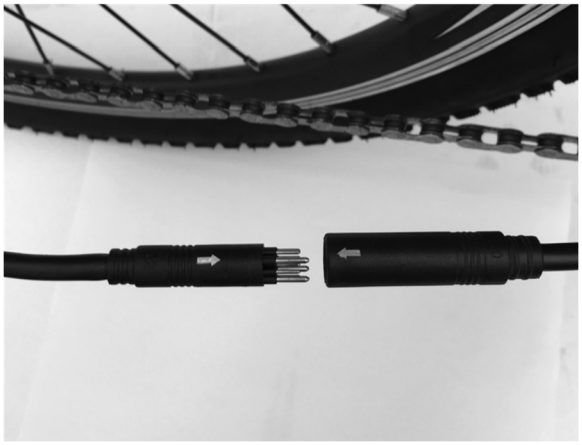
5 –Yellow wire: DxD (display -controller)

Error code meaning

Error code	Error description
21	Communication error
22	Regulator protection
23	Motor error
24	Hall probe error
25	Brake error
26	Abnormal communication

CHANGE OF E-BIKE INNER TUBE:

Before you start changing an electric bicycle inner tube, switch off the drive unit / battery and disconnect the motor lead-in cable connector. After the connector has been disconnected by pulling it slightly, remove the rubber covers from the wheel nuts. Loosen the nuts using a spanner of a size of 18 mm. Take the wheel out and change the inner tube in the same way as with a standard bike. After the change is completed, tighten the wheel nuts and connect the connector. To connect the connector properly, the arrows on the connector must face each other. Switch on the drive unit and test its functioning.



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