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› Tongsheng TSDZ8 48V 750W Mid Drive E-Bike Conversion Kit User Manual

Varstrom TSDZ8

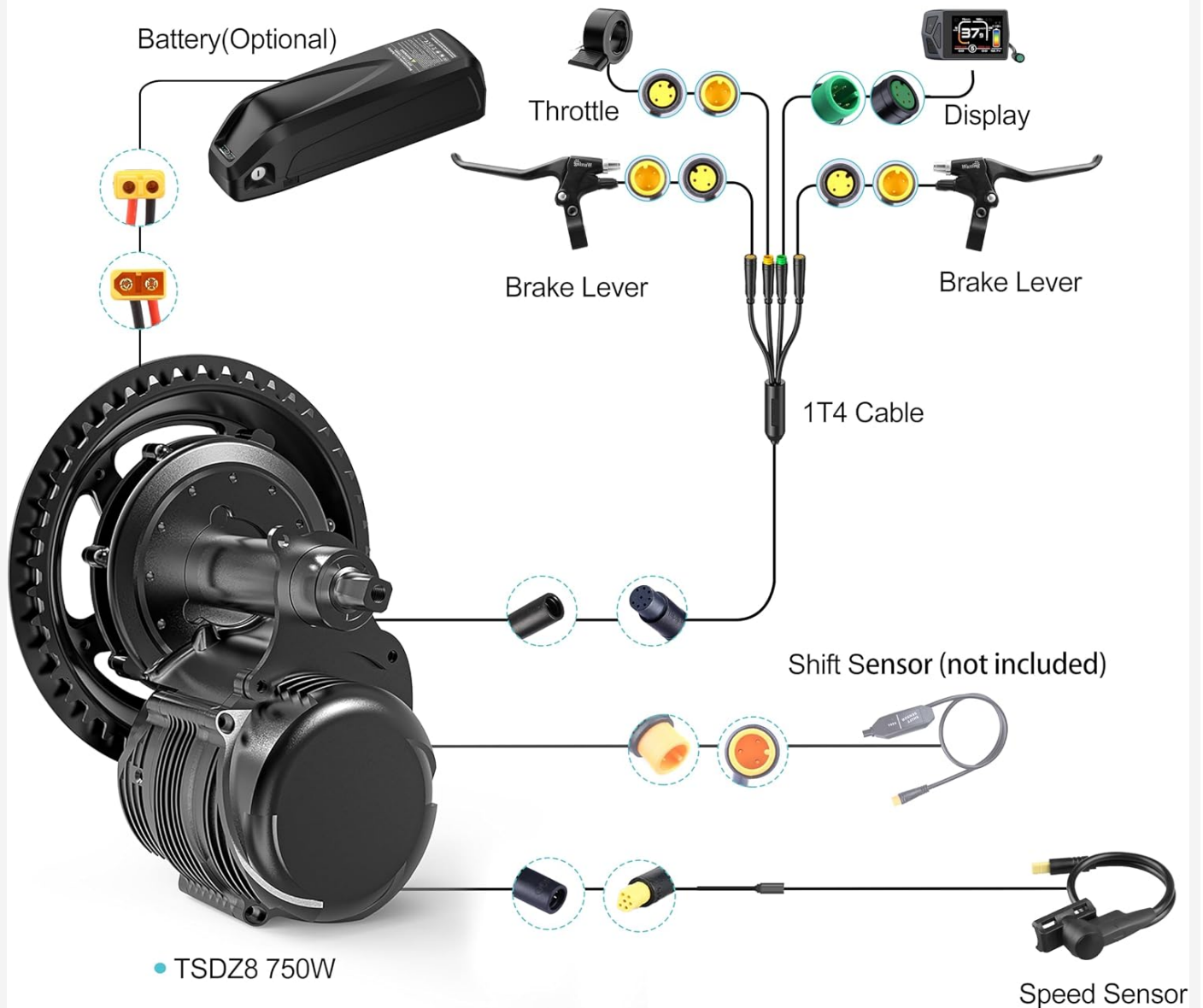
Tongsheng TSDZ8 48V 750W Mid Drive E-Bike Conversion Kit User Manual

Brand: Varstrom

INTRODUCTION

This user manual provides detailed instructions for the installation, operation, and maintenance of your Tongsheng TSDZ8 48V 750W Mid Drive E-Bike Conversion Kit. Please read this manual thoroughly before attempting any installation or operation to ensure proper function and safety. This kit is designed to transform a standard bicycle into a high-performance electric bike, suitable for various terrains including mountain, city, trails, and road.

WIRING SCHEMATIC



The TSDZ8 kit is versatile, performing well on mountain trails, city streets, paved paths, and open roads.

PRODUCT FEATURES

- **Peak Performance Powerhouse:** Experience the Tongsheng TSDZ8 750W mid-drive motor, designed for mountain biking adventures, delivering the muscle to conquer steep climbs and challenging terrains with ease. Max Torque: >120N.m, Top Speed: about 50km/h.
- **Seamless Torque Sensor Integration:** The advanced torque sensor provides an intuitive and responsive ride, adjusting motor assistance to your pedaling force for a natural and engaging cycling experience.
- **Robust and Durable Design:** Engineered with a double clutch system and upgraded internal components, the TSDZ8 ensures a smooth ride and a longer motor lifespan, even when the motor isn't engaged.
- **Universal Compatibility & Easy Installation:** Compatible with most standard bikes with a 68-73mm bottom bracket and 34-36mm inner diameter, the TSDZ8 is designed for effortless installation in about an hour with common tools.
- **DIY Friendly Installation:** Convert your bike to an e-bike with ease using our comprehensive DIY kit, complete with clear instructions and all necessary components.

TSDZ8 MID-DRIVE CONVERSION KIT

Integrated Speed and Torque Sensor for
Enhanced Performance



50KM/H
Max Speed



120N.M
Max Torque

**SPEED & TORQUE
SENSOR INTEGRATED**

The TSDZ8 motor features an integrated speed and torque sensor for enhanced performance.

PACKAGE CONTENTS

Your Tongsheng TSDZ8 48V 750W Mid Drive E-Bike Conversion Kit includes the following components:

- TSDZ8 48V 750W Mid Drive Motor
- EKD01 Display
- 1T4 Main Wiring Harness
- Thumb Throttle
- 44T Chainring
- Speed Sensor
- Wrench
- Pair of Brake Levers (Optional, type may vary)
- Crank Arms

- Washers and mounting hardware
- Battery (Optional, specific type depends on purchase)



All components of the TSDZ8 conversion kit are shown, including the motor, display, battery, and accessories.

TSDZ8 48V 750W Min Drive Kit



✓ Mountain



✓ City



✓ Trails



✓ Road

A detailed visual representation of the packing list for the TSDZ8 kit.

SETUP AND INSTALLATION

Compatibility

The TSDZ8 motor is designed for universal compatibility with most standard bicycles. Ensure your bike's bottom bracket meets the following specifications:

- Bottom Bracket Shell Width: 68-73mm
- Bottom Bracket Inner Diameter: 34-36mm

MOTOR COMPATIBILITY AND SPECIFICATIONS



● Rated Voltage :	48V	● Size (L*W*H) :	126*170*204mm 4.96*6.69*8.03inch
● Rated Power :	750W	● Weight :	4.8kg
● Max Torque :	>120N.m	● n0(Rpm) :	125
● Max Speed :	50km/h	● Efficiency :	>80%
● Pedal Sensor :	Speed and Torque Integrated	● Noise Grade :	<55dB
● Shaft Standard :	JIS	● Bike Recommendation :	E-Trekking/E-city / E-tour

Detailed dimensions and compatibility requirements for the TSDZ8 motor installation.

Wiring Schematic

Follow the wiring diagram carefully to connect all components correctly. Ensure all connections are secure before operating the system.

PACKING LIST



Motor



EKD01 Display



Brake Type (Optional)



1T4 cable



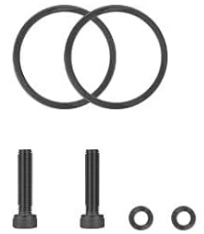
Speed Sensor



Thumb Throttle



Crank Arms



Washers

The wiring schematic illustrates how to connect the motor, display, battery, throttle, brake levers, and speed sensor.

Battery Installation

If your kit includes a battery, install it securely according to its specific mounting instructions. Ensure the battery is fully charged before first use. Refer to the battery specifications for details on charging and care.

DISCOVER MORE ABOUT THE EKD01 DISPLAY



Screen :	2.4-inch TFT	Operating Voltages :	24V, 36V, 48V, 60V
Dimensions (L*W*H) :	86.8mm x 50.5mm x 12.5mm	Speed Limit Setting :	0 to 99km/h
USB for Charging :	Type-C	Handlebar Mounting Diameter :	22.2mm
Unit of Speed :	KMH/MPH	Assist Levels :	3,5,9

Specifications for various battery types compatible with the TSDZ8 kit, including capacity, dimensions, and protection functions.

OPERATION

EKD01 Display

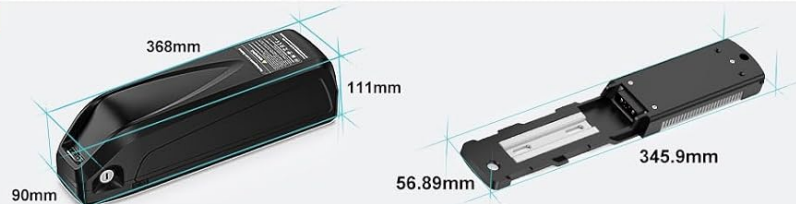
The EKD01 display provides essential information about your e-bike's status and allows you to control assistance levels. Familiarize yourself with its functions:

- Screen: 2.4-inch TFT
- Dimensions (L*W*H): 86.8mm x 50.5mm x 12.5mm
- USB for Charging: Type-C
- Unit of Speed: KMH/MPH
- Operating Voltages: 24V, 36V, 48V, 60V
- Speed Limit Setting: 0 to 99km/h
- Handlebar Mounting Diameter: 22.2mm
- Assist Levels: 3, 5, 9 (selectable)

BATTERY SPECIFICATION

• 48V 13Ah
• 48V 17.5Ah
• 48V 17.5Ah

Shark Battery



Battery	48V 13Ah	48V 17.5Ah	48V 17.5Ah
Energy	624Wh	840Wh	840Wh
Cell	Grade A 18650 2600mAh	L*-G / Sam*-sung 18650 3500mAh	Grade A 18650 3500mAh
BMS Protection	30A	30A	30A
USB Port	5V 1A	5V 1A	5V 1A
Charging Temperature	0-45°C	0-45°C	0-45°C
Discharge Temperature	-15-65°C	-15-65°C	-15-65°C
Size	368*90*111mm	368*90*111mm	368*90*111mm
Weight	About 4.25kg	About 4.04kg	About 4kg
Cycle Life		> 1000 times	
Compatible Motor Power	250W 350W 500W 750W 1000W 1200W 1500W		
Protection Function	Overcurrent Protection, Overvoltage Protection, Overload Protection, Overcharge Protection, Overdischarge Protection, Temperature Protection, Short Circuit Protection, Cell Voltage Balancing		

• 48V 19.2Ah **Shark Battery**



• 48V 20Ah **Shark Battery**



• 48V 20Ah **VoltzX Battery**



• 52V 20Ah **Shark Battery**



Battery	48V 19.2Ah	48V 20Ah	48V 20Ah	52V 20Ah
Energy	921.6Wh	960Wh	960Wh	1040Wh
Cell	Samsung 21700 4800mAh	Samsung 21700 5000mAh	Samsung 21700 5000mAh	Samsung 21700 5000mAh
BMS Protection	30A	30A	30A	30A
USB Port	No	5V 1A	5V 2A USB 20V 3A Type-C	No
Charging Temperature	0-45°C	0-45°C	0-45°C	0-45°C
Discharge Temperature	-15-65°C	-15-65°C	-15-65°C	-15-65°C
Size	362*90*109mm	367*90*127mm	365*109*140mm	368*95*125mm
Weight	About 4.8kg	About 4.7kg	About 5.2kg	About 5kg
Cycle Life			> 1000 times	
Compatible Motor Power	250W 350W 500W 750W 1000W 1200W 1500W			
Protection Function	Overcurrent Protection, Overvoltage Protection, Overload Protection, Overcharge Protection, Overdischarge Protection, Temperature Protection, Short Circuit Protection, Cell Voltage Balancing			

The EKD01 display provides key metrics and control over your e-bike's performance.

Torque Sensor Operation

The integrated torque sensor detects your pedaling force and provides assistance proportionally. This results in a natural riding feel. The motor will engage when you pedal and disengage when you stop pedaling or apply the brakes.

MAINTENANCE

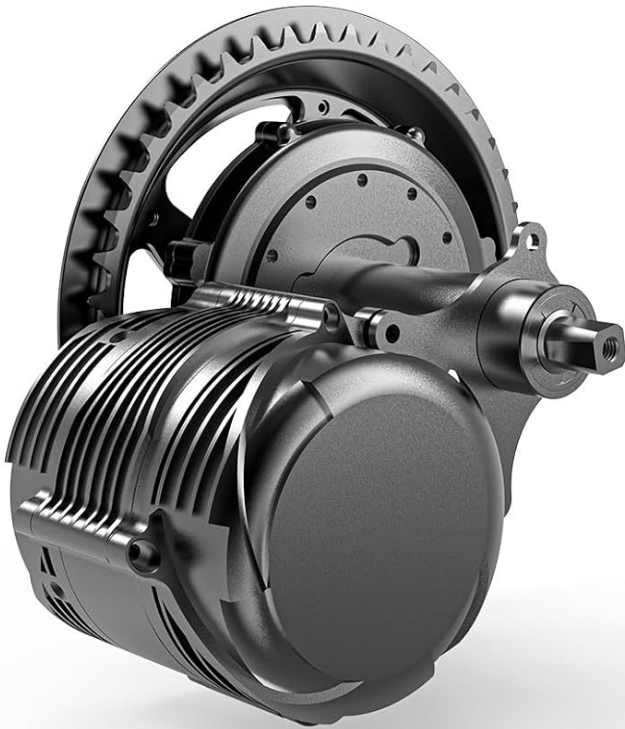
General Care

Regularly inspect all connections and mounting bolts to ensure they are tight and secure. Keep the motor and electrical components clean and dry. Avoid high-pressure washing directly on electrical parts.

Component Longevity

The TSDZ8 features a robust design with upgraded internal components, including a double clutch system and redesigned nylon gear, to enhance durability and extend motor lifespan. These improvements help reduce motor drag when not engaged and support higher torque.

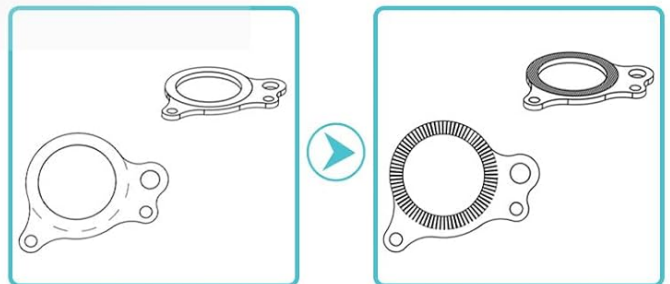
ENHANCEMENTS FROM TSDZ2 TO TSDZ8 MODEL



E-bike converts to manual mode seamlessly with the new bidirectional clutch, reducing motor drag when power is low.



The redesigned all-in-one nylon gear, sans one-way bearing, now supports higher torque with an external clutch.



Embossing has been applied to the plate's surface to enhance friction, preventing the motor from being overtuned.

Internal enhancements of the TSDZ8 model, including the new bidirectional clutch and redesigned all-in-one nylon gear, contribute to improved durability and performance.

TROUBLESHOOTING

If you encounter issues with your TSDZ8 kit, please refer to the following common troubleshooting steps:

- **No Power to Display:** Check battery connection and ensure the battery is charged. Verify all wiring harness connections are secure.
- **Motor Not Assisting:** Ensure the display is on and an assist level is selected. Check the speed sensor connection and magnet alignment. Verify brake levers are not engaged (some levers have cut-off switches).
- **Unusual Noises:** Inspect the motor mounting for looseness. Check for any foreign objects near the chainring or motor.
- **Error Codes on Display:** Consult the EKD01 display manual (if provided separately) for specific error code meanings and solutions.

For persistent issues, please contact customer support.

SPECIFICATIONS

Specification	Value
Brand Name	Varstrom
Color	Black
Manufacturer	Suzhou Tongsheng Electric Co., Ltd.
Included Components	TSDZ8 48V 750W Mid Drive Kit
Rated Voltage	48V
Rated Power	750W
Max Torque	>120N.m
Max Speed	50km/h
Pedal Sensor	Speed and Torque Integrated
Shaft Standard	JIS
Size (L*W*H)	126*170*204mm (4.96*6.69*8.03inch)
Weight	4.8kg
Efficiency	>80%
Noise Grade	<55dB
Bike Recommendation	E-Trekking/E-city / E-tour

WARRANTY AND SUPPORT

Varstrom is committed to providing reliable after-sales service. Benefit from US-based technical support for any inquiries or assistance you may need regarding your Tongsheng TSDZ8 kit. Our online assistance is readily available to help you with installation, troubleshooting, or general product questions.

For support, please refer to the contact information provided with your purchase or visit the official Varstrom website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question