

APPLICATION FOR TEST REPORT

UL 2849

On Behalf of

Prepared For : Longxiang Group Limited
Address : Rooms 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok,
Kowloon, HK

Product Name : Electric bike
Model : LX-1, LX-1A, LX-1B,LX-1C,LX-1D,LX-1E,LX-1F,S103, M101,
Super Handsome S1 Electric Bike

Trade Mark : /

Manufacturer : Guangdong Handsome Technology Limited
Address : East of Haocong kou, Dongchong Town, Nansha District,
Guangzhou City

Prepared By : Shenzhen Wuxiang Testing (Group) Co., Ltd.
Building B, Xinbaosheng, No.233, Xixiang Street, Bao'an District,
Shenzhen, China

Test Date : Oct. 21, 2021 to Oct. 27, 2021
Date of Report : Oct. 27, 2021
Report No. : WUX202110215313UL





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Report No.WUX202110215313UL

UL 2849 TEST REPORT

Standard: <u>UL 2849-2016</u>			
Report No.:	WUX202110215313UL	Client:	Longxiang Group Limited
Product:	Electric bike	Rated input	100-240V~50/60Hz,2.2A(MAX.)
Project Engineer:	Tony Bi	Rated output	DC 54.6V 2.0A
Test Engineer:	Bailey Luo	Protection class	--
Application Date	Oct. 21, 2021	Protection against moisture:	Min. IP44
Requested Date	Oct. 27, 2021	Construction:	With battery
Re-test	<input type="checkbox"/>	Operation mode	Continuous
Full-test	<input checked="" type="checkbox"/>	Weight:	<25kg
Model/ type reference:	LX-1	Sample No.	1#
Should the heating test be done in heating oven?	<input type="checkbox"/> Yes °C <input checked="" type="checkbox"/> No		
Altitude during operation (m)	<input type="checkbox"/> Up to 2000 <input checked="" type="checkbox"/> No		
Altitude of test laboratory (m)	<input checked="" type="checkbox"/> below 2000 <input type="checkbox"/> No		
Other information:.....	Outdoor used, Battery, With over charge protection, Over discharge protection, over current protection and temperature protection.		

Lab Use Only

Lab Start Date	Oct. 21, 2021	Lab Finish Date	Oct. 27, 2021
Ambient Temperature, °C	24.5	Relative Humidity, %	47.8

Remarks:

Tested by: _____



Checked by: _____



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No.1	Clause(s)	Test(s)	Remark	Comment
	7	Connection to Supply Source	UL 1310	Pass
	8	Personnel Protection Systems	UL 2231-1	Pass
	9	Bonding of the Vehicle	Screw to fix.	Pass
	10	Double Insulation	UL 1310 for adaptor	Pass
	11	Safety Circuits and Safety Analysis	UL 60730-1	Pass
	12	Enclosures	Min.IPX4	Pass
	13	Materials	UL 746C RTI>80℃ V-1, UL94	Pass
	14	Flammability	V-1, UL94 Passed by UL 1310 for adaptor	Pass
	15	Electrical Spacings and Separation of Circuits	Passed by UL 1310 for adaptor	Pass
	16	Printed Wiring Boards	UL 796	Pass
	17	Wiring and Terminals	Non-replaceable batteries No Terminals outside	Pass
	18	Transformers	Passed by UL 1310 for adaptor	Pass
	19	Fuses	Passed by UL 1310 for adaptor	Pass
	20	Capacitors		N/A
	21	Strength of Enclosures		Pass
	22	Sharp Edges		Pass
	23	Battery Packs	UL 2580	Pass
	24	Operator Interface	UL62368-1	Pass
	25	Motors and Motor Controllers	UL 1004-1	Pass
	26	Mounting		Pass
	28	Input Test	See the table	Pass
	29	Leakage Current	See the table	Pass
	30	Capacitor Discharge Test	See the table	Pass
	31	Temperature Test	See the table	Pass
	32	Dielectric Strength Test	See the table	Pass



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	33	Isolation Resistance Test	See the table	Pass
	34	Humidity Conditioning	See the table	Pass
	35	Abnormal Operations Tests	See the table	Pass
	36	Vibration Test	See the table	Pass
	37	Impact Test	See the table	Pass
	38	Environmental Tests	See the table	Pass
	39	Motor Assistance Control - Pedalec		Pass
	40	Startup Assistance Mode Test		Pass
	41	Maximum Assistance Speed		Pass
	42	Mold Stress	See the table	Pass
	43	Permanence of Marking	See the table	Pass
	45-46	MARKINGS		Pass
	48-52	INSTRUCTIONS		Pass

**Spacings (15)**

13	Electrical Spacings					Pass
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
opposite polarity of battery	--	54.6	2.2	>3.1	2.2	>3.1
Input to Enclosure	--	--	--	--	--	--
Primary component to accessible enclosure (RI)	--	--	--	--	--	--
Primary trace to secondary trace under transformer (T1) (RI)	--	--	--	--	--	--
Primary winding to secondary winding of transformer (T1) (RI)	--	--	--	--	--	--
Supplementary information						
Note(s): --						

Protection of Users – Accessibility of Terminals (17)

17	Accessibility probe				Pass
Location	Dimension of opening	Tester	Observations	Pass	Fail
Opening	No opening	Articulate probe	Can't touch Live parts and dangerous moving parts	√	--

**INPUT TEST (28)****Method:**

EUT is operating at: $U=U_n$, $F=F_n$.

Load of the EUT is under maximum normal load.

The input current and wattage to the EUT shall be measured.

Multiple rated voltages or rated voltage range, each rated voltage shall be measured.

The current and power shall be taken under steady state conditions.

Result:

Result:

28	TABLE: Electrical data (in normal conditions)						Pass
<input checked="" type="checkbox"/> Max. Available load <input type="checkbox"/> All interfaces and wireless max. load transmission <input type="checkbox"/> 1/8 of 100% or <input type="checkbox"/> Max. available non-clipped output power _____ <input type="checkbox"/> _____							
U (V)	F (Hz)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status
90	50	0.461	--	63.2	F1	0.461	Charge the battery
90	60	0.462	--	63.2	F1	0.462	Charge the battery
120	50	0.443	--	62.8	F1	0.443	Charge the battery
120	60	0.443	--	62.8	F1	0.443	Charge the battery
240	50	0.297	2.2A	61.7	F1	0.297	Charge the battery
240	60	0.297	2.2A	61.7	F1	0.297	Charge the battery
264	50	0.272	--	61.2	F1	0.272	Charge the battery
264	60	0.272	--	61.2	F1	0.272	Charge the battery
Voltage regulator: CTT01S ; Power meter: CTT15S; DC Electrical load: CTT48S;							

**Leakage Current (29)**

29	Leakage Current			Pass
Test voltage: 100V/ 60Hz				
Measured point:		U ₂ (mV)	(mA)	Limit (mA)
Line and output accessible terminal		--	0.12	0.5
Neutral and output accessible terminal		--	0.11	0.5
Line and accessible enclosure surface		--	0.09	0.5
Neutral and accessible enclosure surface		--	0.09	0.5
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				

Capacitor Discharge Test (30)

30	Discharge of Capacitors in Equipment				P
Test voltage: 240V/ 60Hz					
Condition	τ calculated (s)	τ measured (ms)	t u→ 0V (ms)	Comments	
L and N Positive half cycle	--	--	306	Limit: 361V _{peak} x 37% = V After 1s, 4 V	



Temperature Test (31)

Method:

EUT primary is $U=U_n$, $F=F_n$, operated under normal max. load.

Temperatures of parts are measured by thermal couplers, windings are measured by resistance change method.

Measuring place shall be a point close to the heat source.

The test is continued until thermal stable.

Voltage is changed lower or higher tolerance without rest of time.

Result:

31	TABLE: Thermal requirements,						Pass
	Supply voltage (V)	AC100V	--	--	--	--	—
	Ambient Tmin (°C)	24.5	--	--	--	--	—
	Ambient Tmax (°C)	24.8	--	--	--	--	—
	Max. load	Charge battery	--	--	--	--	
	Model	--	--	--	--	--	
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
Enclosure of Adaptor		--	--	--	--	--	95
PCB near IC		40.3	--	--	--	--	130
Internal wire		41.5	--	--	--	--	75
Capacitor		61.7	--	--	--	--	105
Connector		50.4	--	--	--	--	70
Battery		41.8	--	--	--	--	60
Enclosure of battery		37.7	--	--	--	--	95
--							
Supplementary information:							
Temperature T of winding:		t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed Tmax (°C)
							Insulation class



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--	--	--	--	--	--	--	--
Supplementary information: - NF: No Fire - NE: No Explosion - NL: No Leakage - NR: No Rupture - NS: No Electric shock hazard - Fire: the emission of flames from a cell or battery. - Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled. - Leakage: visible escape of liquid electrolyte.- Others (please explain)							

Result:

31	TABLE: Thermal requirements,						Pass
	Supply voltage (V)	AC240V 60Hz	--	--	--	--	—
	Ambient Tmin (°C)	24.5	--	--	--	--	—
	Ambient Tmax (°C)	24.8	--	--	--	--	—
	Max. load	Charge battery	--	--	--	--	
	Model	--	--	--	--	--	
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
Enclosure of Adaptor		68.4	--	--	--	--	95
PCB near IC		51.4	--	--	--	--	130
Internal wire		42.5	--	--	--	--	75
Capacitor		52.5	--	--	--	--	105
Connector		44.7	--	--	--	--	70
Battery		41.7	--	--	--	--	60
Enclosure of battery		34.1	--	--	--	--	95
--							



Supplementary information:							
Temperature T of winding:	t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
Supplementary information:							
- NF: No Fire - NE: No Explosion - NL: No Leakage - NR: No Rupture - NS: No Electric shock hazard - Fire: the emission of flames from a cell or battery. - Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled. - Leakage: visible escape of liquid electrolyte.- Others (please explain)							

Result:

31	TABLE: Thermal requirements,						Pass
	Supply voltage (V)	Power by full Battery	--	--	--	--	—
	Ambient Tmin (°C)	24.5	--	--	--	--	—
	Ambient Tmax (°C)	24.8	--	--	--	--	—
	Max. load	Max. load	--	--	--	--	
	Model	--	--	--	--	--	
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
Enclosure of Adaptor		--	--	--	--	--	95
PCB near IC		50.1	--	--	--	--	130
Internal wire		44.5	--	--	--	--	75
Capacitor		56.6	--	--	--	--	105
Connector		--	--	--	--	--	70
Battery		45.6	--	--	--	--	60
Enclosure of battery		36.8	--	--	--	--	95
Winding of Motor		56.8	--	--	--	--	70
Enclosure of Motor		54.1	--	--	--	--	90
--							



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Supplementary information:							
Temperature T of winding:	t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
Supplementary information:							
- NF: No Fire - NE: No Explosion - NL: No Leakage - NR: No Rupture - NS: No Electric shock hazard - Fire: the emission of flames from a cell or battery. - Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled. - Leakage: visible escape of liquid electrolyte.- Others (please explain)							



Dielectric Voltage-Withstand Test (32)

Method:

The test is made while the EUT is still in well-heated condition

Make sure the power switch of the EUT is in ON position.

Thin material can be tested in room temperature.

The test voltage is a.c. of 50 or 60 Hz or d.c. voltage equal to peak value of the a.c. voltage.

Test voltage is applied gradually raised from zero to the specified voltage and held at that value for 60s.

Insulation breakdown is: Current flows through the insulation rapidly increases in an uncontrolled manner; that is the insulation does not restrict the flow of the current.

Corona discharge or a single momentary flashover is not regarded as insulation breakdown.

A test incorporating reinforced insulation and lower grades insulation (BI, SI), care is taken not to overstress BI or SI.

Where capacitors (X or Y capacitors) are across the insulation, d.c. voltage is recommended for the test.

Discharge resistors shall be disconnected before testing.

Result:

32	Electric strength test		Pass
Test voltage applied between:		Test voltage (V)	Breakdown
input and enclosure		AC1480 60Hz	No
Input and output		AC1480 60Hz	No

**Isolation Resistance Test (33)****Method:**

The test is made while the EUT is still in well-heated condition

Make sure the power switch of the EUT is in ON position.

Thin material can be tested in room temperature.

The test voltage is d.c. 500 voltage

Test voltage is applied gradually raised from zero to the specified voltage and held at that value for 60s.

33	TABLE: Insulation resistance measurements		Pass
Insulation resistance R between:		R (M Ω)	Required R (Ω)
DC input and enclosure		>100 M Ω	50000 Ω
L/N and enclosure		>100 M Ω	50000 Ω
L/N and output		>100 M Ω	50000 Ω



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Humidity Conditioning (34)

34	Humidity Conditioning Test			Pass
Test voltage: 48h, 90%R.H., 34°C				
Measured point:		Test V (V)	Measured	Limit
Input and Enclosure		DC500V	>100M Ω	30000 Ω
Neutral and output accessible terminal		DC500V	>100M Ω	30000 Ω
Line and accessible enclosure surface		DC500V	>100M Ω	30000 Ω
Neutral and accessible enclosure surface		DC500V	>100M Ω	30000 Ω
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				
34	Dielectric Voltage-Withstand Test			Pass
Measured point:		Test V (V)	Breakdown	Limit
Line and output accessible terminal		AC 1480V	No	100mA
Neutral and output accessible terminal		AC 1480V	No	100mA
Line and accessible enclosure surface		AC 1480V	No	100mA
Neutral and accessible enclosure surface		AC 1480V	No	100mA
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				

**Abnormal Operation Test (35)**

35	Abnormal Operations and Fault Conditions Test		Pass
Requirement		Result	Remarks
During the test:			
Fire propagates beyond the EUT?		Yes / No	--
Molten metal emitted?		Yes / No	--
Enclosures deform to cause non-compliance with the standard?		Yes / No	--
After the test:			
Electric strength test on reinforced insulation breakdown?		Yes / No	--
Electric strength test on Basic insulation breakdown?		Yes / No	--
SC: Short-circuited; OC: Open-circuited; OL: Over-load; BK: Block; RP: Reverse-polarity; LK: Lock; DC: Disconnect; OVC: Overcharging under Max. available charging voltage or 106% rated voltage; ED: Excessive discharging			
Voltage regulator, power meter, Data Acquisition/Switch Unit , Oscilloscope, Oscilloscope Probe, Digital Micro-ohmmeter, Withstanding Voltage Tester, DC Electrical load;			
42 Abnormal Operations and Fault Conditions Test			Pass
Ambient temperature (°C)		25.0°C	
Comp./ fault		Result / Observation	
U4 Pin 1-8	Test voltage: _DC48V_ Duration: _10min_ SC No: __ I/P current (A): _1.38_ I/P power (W): __	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated ____ times. <input type="checkbox"/> Protected, can be recovered. <input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ____ <input type="checkbox"/> T.F opened after ____ <input type="checkbox"/> see raw data ____ <input checked="" type="checkbox"/> No hazards Remark: --	
U4 Pin 2-6	Test voltage: _DC48V_ Duration: _10min_ SC No: __ I/P current (A): _1.30_ I/P power (W): __	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated ____ times. <input type="checkbox"/> Protected, can be recovered. <input checked="" type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ____ <input type="checkbox"/> T.F opened after ____ <input type="checkbox"/> see raw data ____ <input checked="" type="checkbox"/> No hazards Remark: --	
U2 Pin 3-2	Test voltage: _DC48V_ Duration: _10min_ SC No: __ I/P current (A): _0.05_ I/P power (W): _0_	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated ____ times. <input checked="" type="checkbox"/> Protected, can be recovered. <input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ____ <input type="checkbox"/> T.F opened after ____ <input type="checkbox"/> see raw data ____ <input checked="" type="checkbox"/> No hazards Remark: --	



U2 pin 3-4	Test voltage: _DC48V_ Duration: _10min_ SC No: __ I/P current (A): _0.09_ I/P power (W): _0_	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated _____ times. <input checked="" type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ____ <input type="checkbox"/> T.F opened after ____ <input type="checkbox"/> see raw data ____ <input checked="" type="checkbox"/> No hazards Remark: --
Battery	Test voltage: _DC48V_ Duration: _5min_ SC No: __ I/P current (A): _0_ I/P power (W): _0_	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated _____ times. <input checked="" type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ____ <input type="checkbox"/> T.F opened after ____ <input type="checkbox"/> see raw data ____ <input checked="" type="checkbox"/> No hazards Remark:
Adaptor output	Test voltage: AC48V_ Duration: _10min_ SC No: __ I/P current (A): __ I/P power (W): _0.01_	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated _____ times. <input type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ____ <input type="checkbox"/> T.F opened after ____ <input type="checkbox"/> see raw data ____ <input checked="" type="checkbox"/> No hazards Remark: --
Locked Motor	Test voltage: _48V_ Duration: _1h_ Fuse or Fuse resistor No: __ I/P current (A): _Max. 2.9A_ I/P power (W): _0_	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated _____ times. <input checked="" type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ____ <input type="checkbox"/> T.F opened after ____ <input type="checkbox"/> see raw data ____ <input checked="" type="checkbox"/> No hazards Winding of motor: 74.9°C Remark: --

**Vibration Test (36)**

30	TABLE: Vibration tests				P
Model	OCV at start of test, (Vdc) for battery	Test frequency (Hz)	Vibration time (h)	Results	
ELECTRIC BIKE	Fully	10Hz~55Hz~10Hz	1h	P	
ELECTRIC BIKE	Fully	10Hz~55Hz~10Hz	1h	P	
ELECTRIC BIKE	Fully	10Hz~55Hz~10Hz	1h	P	
Supplementary information:					
- NF: No Fire					
- NE: No Explosion					
- NL: No Leakage					
- NR: No Rupture					
- NS: No Electric shock hazard					
- No loosening of parts					
- Operate normally.					

**Impact Test (37)**

37	TABLE: Strain relief test			Pass
Test part	Temperature (°C)	Duration (h)	Result	
Enclosure	70	1h	Pass electrical strength	
Notes:				
Oven temperature shall be 10 K higher than the maximum temperature on the enclosure but not less than 70°C.				
supplementary information:				
- NF: No Fire				
- NE: No Explosion				
- NL: No Leakage				
- Fire: the emission of flames from a cell or battery.				
- Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled.				
- Leakage: visible escape of liquid electrolyte.- Others (please explain)				
37	TABLE: Impact test Vertically			Pass
Model	weighing	Test temperature (°C)	Impact energy (J)	Results
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
No damage.				
37	TABLE: Impact test Horizontally			Pass
Model	weighing	Test temperature (°C)	Impact energy (J)	Results
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
No damage.				



Water Exposure Tests (38.1)

Test procedure

For IPX4, the sample is positioned under oscillating spray tubes rotating at nearly $\pm 180^\circ$ from the vertical for 10 minutes. The oscillation rate is two cycles of about 360° in 12 seconds. Each surface of the enclosure within the spray arch is to be tested for 1 min/m², with no less than 5 minutes of total test time. The flow rate again depends upon the tube size, Withstand voltage test is pass, No harmful effects

IPX4	-For IPX4, the sample is positioned under oscillating spray tubes rotating at nearly $\pm 180^\circ$ from the vertical for 10 minutes. The oscillation rate is two cycles of about 360° in 12 seconds. Each surface of the enclosure within the spray arch is to be tested for 1 min/m ² , with no less than 5 minutes of total test time. The flow rate again depends upon the tube size, Withstand voltage test is pass, No harmful effects	No harmful effects	Pass
supplementary information: <ul style="list-style-type: none">- NF: No Fire- NE: No Explosion- NL: No Leakage- Fire: the emission of flames from a cell or battery.- Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled.- Leakage: visible escape of liquid electrolyte.- Others (please explain)			

**Thermal Cycling Test (38.2)**

39	TABLE: Heating Test					P
Sample		OCV at start of test, (Vdc)	Temperature raise rated(° C/min)	Test temperature (° C)	Duration (h)	Results
1#		Full battery	5°C/min ± 2 °C/min	50 to -300	6h	P
Supplementary information: supplementary information: - NF: No Fire - NE: No Explosion - NL: No Leakage - Fire: the emission of flames from a cell or battery. - Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled. - Leakage: visible escape of liquid electrolyte.- Others (please explain)						
Measured point:			Test V (V)	Measured	Limit	
Input and Enclosure			DC500V	>100M Ω	30000 Ω	
Neutral and output accessible terminal			DC500V	>100M Ω	30000 Ω	
Line and accessible enclosure surface			DC500V	>100M Ω	30000 Ω	
Neutral and accessible enclosure surface			DC500V	>100M Ω	30000 Ω	
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester						
34	Dielectric Voltage-Withstand Test					Pass
Measured point:			Test V (V)	Breakdown	Limit	
Line and output accessible terminal			AC 1480V	No	100mA	
Neutral and output accessible terminal			AC 1480V	No	100mA	
Line and accessible enclosure surface			AC 1480V	No	100mA	
Neutral and accessible enclosure surface			AC 1480V	No	100mA	
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester						

**Mold Stress (42)**

37	TABLE: Strain relief test			Pass
Test part	Temperature (°C)	Duration (h)	Result	
Enclosure	70	1h	Pass electrical strength	
Notes:				
Oven temperature shall be 10 K higher than the maximum temperature on the enclosure but not less than 70°C.				
supplementary information:				
- NF: No Fire				
- NE: No Explosion				
- NL: No Leakage				
- Fire: the emission of flames from a cell or battery.				
- Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled.				
- Leakage: visible escape of liquid electrolyte.- Others (please explain)				

42	TABLE: Insulation resistance measurements			Pass
Measured point:		Test V (V)	Measured	Limit
Input and Enclosure		DC500V	>100M Ω	30000 Ω
Neutral and output accessible terminal		DC500V	>100M Ω	30000 Ω
Line and accessible enclosure surface		DC500V	>100M Ω	30000 Ω
Neutral and accessible enclosure surface		DC500V	>100M Ω	30000 Ω
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				
42	Dielectric Voltage-Withstand Test			Pass
Measured point:		Test V (V)	Breakdown	Limit
Line and output accessible terminal		AC 1480V	No	100mA
Neutral and output accessible terminal		AC 1480V	No	100mA
Line and accessible enclosure surface		AC 1480V	No	100mA
Neutral and accessible enclosure surface		AC 1480V	No	100mA
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				

***Permanence of Marking (43)***

43	MARKING DURABILITY		Durable and legible	
Type of marking	15 seconds of water	15 seconds of petroleum	Pass	Fail
Rating label	--	--	√	--
Stop watch				



Photo documentation

Photo 1 Over view



Photo 2 Over view





WUXIANG

Shenzhen Wuxiang Testing (Group) Co., Ltd.

Report No.WUX202110215313UL

Photo 3 Over view

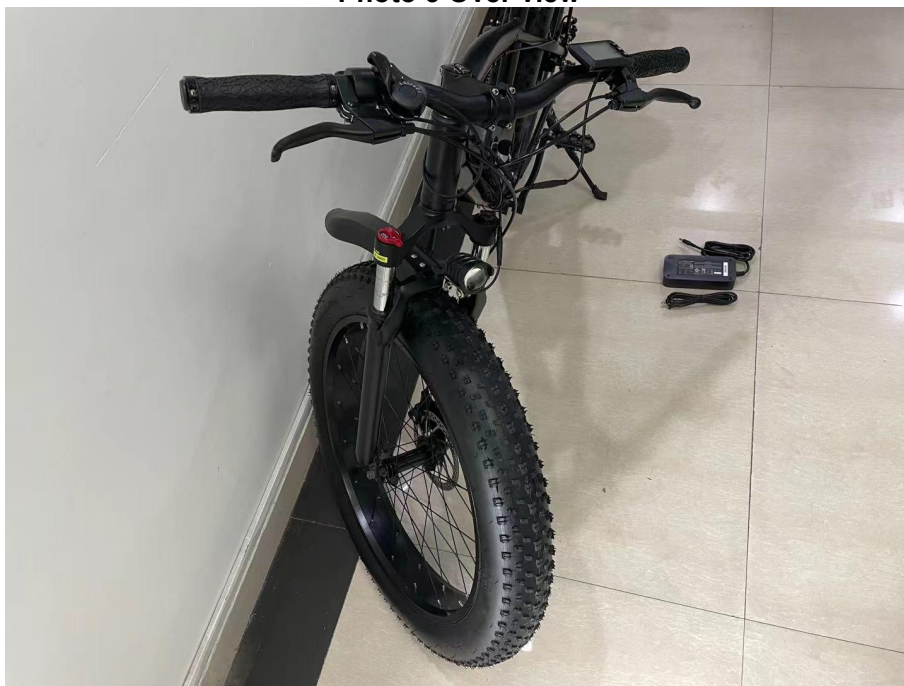


Photo 4 Over view

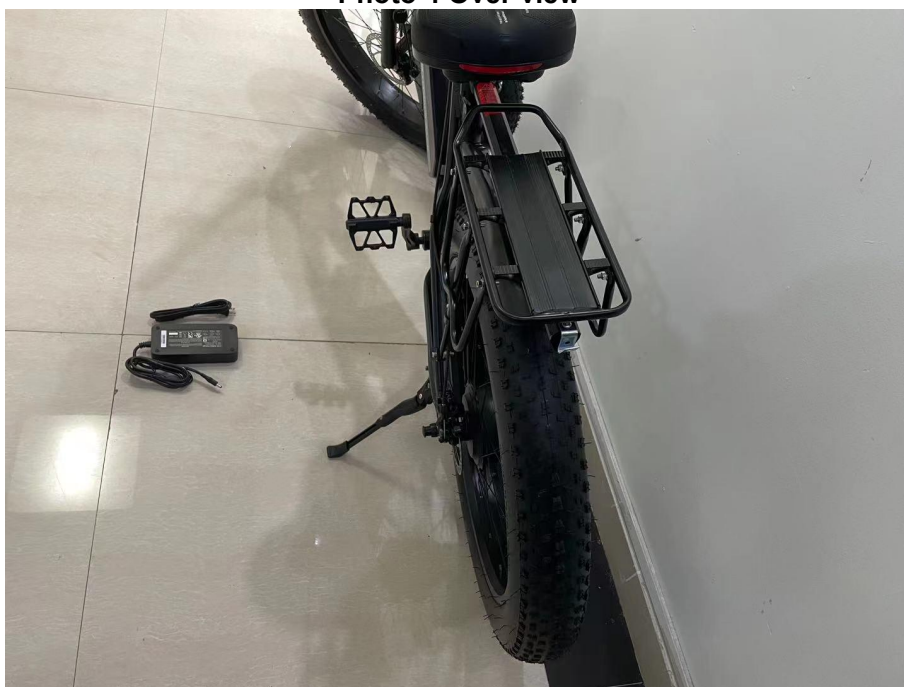




Photo 5 Over view



Photo 6 Over view

