



Report No.: STL2022S1116099C-Y1

TEST REPORT

For

Yongkang Sumeide Industry And Trade Co., Ltd.

Electric Scooter

Model Number : H5, H3, H7, H9, H11, H15

Prepared for : Yongkang Sumeide Industry And Trade Co., Ltd.
The first floor of No. 5 Workshop, No. 661, Jiuzhou West Road,
Yongkang Economic Development Zone, Jinhua, Zhejiang China

Prepared By : Shenzhen STL Testing Technology Co., Ltd.
Unit C, 4F, Building A, ShengHengji Industrial Park, No. 137 FuYuan 1
Road, Heping Community, Fuyong Street, Baoan District, Shenzhen,
China

Tel : (86) 755-82593673
Fax : (86) 755-82593673

Report No. : STL2022S1116099C-Y1

Date of Test : Nov .09-16,2022

Date of Rep. : Nov .16,2022



Report No.: STL2022S1116099C-Y1

TEST REPORT
BS EN 17128:2017

Non-approved light motorized vehicles for the transportation of persons and goods and related facilities -Personal light electric vehicles (PLEV) - Safety requirements and test methods

Report reference No: STL2022S1116099C-Y1

Tested by (+ signature): Sunny

Approved by (+signature): Barry

Date of issue: Nov .16,2022

Contents: 17 pages



Testing Laboratory

Name: Shenzhen STL Testing Technology Co., Ltd.

Address: Unit C, 4F, Building A, ShengHengji Industrial Park, No. 137 FuYuan 1 Road, Heping Community, Fuyong Street, Baoan District, Shenzhen, China

Testing location: Same as above

Applicant

Name: Yongkang Sumeide Industry And Trade Co., Ltd.

Address: The first floor of No. 5 Workshop, No. 661, Jiuzhou West Road, Yongkang Economic Development Zone, Jinhua, Zhejiang China

Test specification

Standard.....: BS EN 17128:2017

Test procedure: Compliance with the standard

Procedure deviation: N/A

Non-standard test method: N/A

Test item

description: Electric Scooter

Trademark: N/A

Model and/or type reference: H5, H3, H7, H9, H11, H15

Manufacture.....: Yongkang Sumeide Industry And Trade Co., Ltd.

Address.....: The first floor of No. 5 Workshop, No. 661, Jiuzhou West Road, Yongkang Economic Development Zone, Jinhua, Zhejiang China

Rating(s).....: Battery Charger

Input:100-240V~ 50/60Hz,2.5A

Output: 54.6V---2.0A

Batteries rating: 48V--- 10Ah,480Wh



Test case verdicts

Test case does not apply to the test object ... : N/A

Test item does meet the requirement : P(ass)

Test item does not meet the requirement : F(ail)

Testing

Date of receipt of test item : Nov .09,2022

Date(s) of performance of test : Nov .09-16,2022

General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

Throughout this report a comma is used as the decimal separator.

Copy of marking plate(s):**Electric Scooter****Model: H5****Battery Charger****Input: 100-240V~ 50/60Hz, 2.5A****Output: 54.6V---2.0A****Batteries rating: 48V--- 10Ah, 480Wh****Yongkang Sumeide Industry And Trade Co., Ltd.****Summary of testing:**

The sample(s) tested complies with the requirements of BS EN 17128:2017



BS EN 17128																							
Clause	Requirement – Test	Result – Remark	Verdict																				
4	Classes of vehicles		P																				
	Various personal light electric vehicles (PLEV) exist covering as many different uses offered to different users based on their age, mass, size and driving experience	Class 2	P																				
Table 1 — Types of PLEV (Design elements) <table border="1"> <thead> <tr> <th>Types</th><th>Maximum design speed (km/h)</th><th>Seating position</th><th>With self-balanced system</th></tr> </thead> <tbody> <tr> <td>Class 1</td><td>Up to 6 km/h</td><td>No</td><td>No</td></tr> <tr> <td>Class 2</td><td>Up to 25 km/h</td><td>No</td><td>No</td></tr> <tr> <td>Class 3</td><td>Up to 6 km/h</td><td>Optional</td><td>Yes</td></tr> <tr> <td>Class 4</td><td>Up to 25 km/h</td><td>Optional</td><td>Yes</td></tr> </tbody> </table>			Types	Maximum design speed (km/h)	Seating position	With self-balanced system	Class 1	Up to 6 km/h	No	No	Class 2	Up to 25 km/h	No	No	Class 3	Up to 6 km/h	Optional	Yes	Class 4	Up to 25 km/h	Optional	Yes	--
Types	Maximum design speed (km/h)	Seating position	With self-balanced system																				
Class 1	Up to 6 km/h	No	No																				
Class 2	Up to 25 km/h	No	No																				
Class 3	Up to 6 km/h	Optional	Yes																				
Class 4	Up to 25 km/h	Optional	Yes																				
	Vehicle shall comply with the specific requirements of all clauses of this standard.		P																				
	In addition, the machine shall be designed according to EN ISO 12100 for relevant hazards which are not dealt with by this document.	Comply with EN ISO 12100	P																				
6	Hazards due to electrical components		P																				
6.1	General mechanical strength		P																				
6.2	Electrical shut-off control		P																				
	A master control device shall be fitted to switch on the driving power and shut-off shall be apparent, easy to reach and unmistakable. This master control device shall be activated only by voluntary action to enable the driving power.		P																				
6.3	Electrical cables and connections		P																				
6.3.1	General		P																				
	All connectors for cable and wire shall be selected to prevent corrosion of electrical contact conductance.		P																				
6.3.2	Cable and plugs		P																				
6.3.2.1	Requirements	Maximum cable and plug temperature in use shall be $5 \pm 2^{\circ}\text{C}$ lower than that specified by the manufacturer of the cables and plugs.	P																				



BS EN 17128			
Clause	Requirement – Test	Result – Remark	Verdict
6.3.2.2	Test method		P
	At an ambient room temperature (20 ± 5)°C, discharge the fully charged vehicle battery to the discharging limit specified by the vehicles.		P
	— Measure the cable and plug temperatures		P
	— ensure, by visual examination, that there is no deterioration of the insulation on either assembly.		P
6.3.3	Wiring		P
6.3.4	Wiring harness		P
	When a wiring harness is installed, it shall be positioned to avoid any damage related to contact with moving parts or sharp edges. All connections shall withstand a tensile force of 10 N in any direction.		N
6.3.5	Power cables and conduits		N
	Conduit entries, cable entries and knockouts shall be constructed or located so that the introduction of the conduit or cable does not reduce the protection measures adopted by the manufacturer.		P
6.3.6	External and internal electrical connections		P
	Electrical connection shall comply with HD 60364-5-52:2011, 526.1 and tested in accordance with HD 60364-5-52:2011, 526.2.		P
6.4	Moisture resistance		N
	The electrical components of a fully assembled vehicles shall comply and tested in accordance with IPX4 apparatus as described in EN 60529:1991, 14.2.4 a).	accordance with EN 60529 described as IPX4	N
7	Hazards due to driving power management		P
7.1	Driving power activation		P
7.1.1	Requirements		P
7.1.2	Test method		P
7.1.2.1	Test conditions		P
	a) The test may be carried out on a test track, a test bench or on a support that prevents the driving wheel of the motor from touching the ground.		P
	b) The test track shall comply with 7.1.2.2.		P
	c) The speedometer shall be accurate to ± 2 %.		P
	d) The ambient temperature should be between 5 °C and 35 °C.		P
	e) The maximum wind speed shall not exceed 3 m/s.	<3 m/s	P
	f) The battery should be fully charged in accordance with the manufacturer's instructions.		P
7.1.2.2	Test procedure		P
7.2	Power failure of control system		P



BS EN 17128			
Clause	Requirement – Test	Result – Remark	Verdict
	In the event of an electric power failure the vehicle shall be able to brake normally or, shall come to a standstill with a deceleration between of (1,5 – 2) m/s ² .		P
7.3	Unintentional use of PLEV		P
8	Hazards due to speed to which the electric motor provides assistance		P
8.1	Vehicle with speed limited up to 6 km/h		P
8.1.1	Requirements		P
	All PLEVs class 2 and 4 shall be equipped with a pedestrian mode for limiting the speed to 6 km/h at the maximum.		P
8.1.2	Test method		P
8.1.2.1	Test conditions		P
	a) The test may be carried out on a test track, a test bench or on a support that prevents the driving wheel of the motor from touching the ground.		P
	b) The speed measuring apparatus shall have the following characteristics:		P
	1) accuracy: $\pm 2\%$;		P
	2) resolution: 0,1 km/h.		P
	c) The ambient temperature should be between 5 °C and 35 °C.		P
	d) Maximum wind speed: 3 m/s.		P
	e) The battery should be fully charged in accordance with the manufacturer's instructions.		P
8.1.3	Characteristic of the test track		P
	The gradient of the track shall not exceed 0,5 %. If the gradient is less than 0,2 % carry out all runs in the same direction. If the gradient lies between 0,2 % and 0,5 % carry out alternate runs in opposite directions;		P
8.1.4	Characteristic of the test bench		P
8.1.4.1	General		P
	The test bench should simulate the normal road conditions.		P
8.1.4.2	Test procedure		P
8.2	Vehicle with speed limited up to 25 Km/h	speed limited up to 25 Km/h	P
8.2.1	Requirements		P
	The maximum speed for which the electric motor gives assistance may differ by $\pm 5\%$ of the speed indicated on the label described within 19.2 when determined according to the test method described in 8.2.2, from 25 km/h or lower values as specified by the manufacturer.		P



BS EN 17128			
Clause	Requirement – Test	Result – Remark	Verdict
8.2.2	Test method		P
8.2.2.1	Test conditions		P
	The test shall be performed in accordance with 8.1.2.1		P
8.2.2.2	Test procedure		P
8.2.2.2.1	Test for vehicle with power management giving 100 % electric propulsion		P
8.2.2.2.2	Test for vehicle with a hybrid propulsion system		P
9	Electromagnetic compatibility		P
9.1	Emission		P
	PLEV class 1 and 2 shall conform to Annex B.	Class 2	P
	PLEV class 3 and 4 shall conform to EN 61000-6-3.		N
9.2	Immunity	Class 2	P
	PLEV class 1 and 2 shall conform to Annex B.		N
	PLEV class 3 and 4 shall conform to EN 61000-6-1.		P
10	Hazards related to charging battery		P
10.1	General		P
10.2	Safeguarding and complementary protective measures		P
11	Hazard due to energy storage within the vehicle		P
11.1	Requirements		P
11.2	Test method		P
12	Hazards due to vibration		P
12.1	Vibration test on a fully-assembled PLEV class 1 and 2		P
12.1.1	Requirements		P
12.2	Shock test (bump test) on a fully-assembled vehicle		P
13	Hazard due to structural integrity		P
13.1	General		P
13.1.1	Numbers and conditioning of samples		P
13.2	Static load test		P
13.2.1	Deck/frame		P
13.2.1.1	General		P
13.2.2	Handle bar		P
13.2.2.1	Bending test		P
13.2.2.1.1	Requirements		P



BS EN 17128			
Clause	Requirement – Test	Result – Remark	Verdict
	When tested according to the method described in 13.2.2.1.2, there shall be no cracks or fractures, or deterioration of the operation of the handlebar or steering column.		P
13.2.2.3	Torque test		P
13.2.2.4	Handlebar grips and plugs		P
13.3	Drop test		P
	A cylindrical mass is dropped on the centre of the deck.		P
	The test apparatus shall consist of:		P
	a) a cylindrical solid mass of 20 kg and a diameter of 100 mm;		P
	b) a sheet of rubber, fitted to the mass, with 17 mm thickness and 70 shore A;		P
	c) a guide tube.		P
13.4	Impact test		P
13.4.1	Impact against front wheel		P
13.5	Endurance test (fatigue)		P
13.5.1	Frames/deck		P
13.5.1.1	General		P
13.5.2	Handle-bar		P
13.5.2.1	General		P
13.5.3	Fatigue test for the whole vehicle (durability test)		P
13.5.3.1	Vibration test on a fully assembled Class 1 and 2 PLEV		P
14	Hazardous edges		P
14.1	General		P
14.2	Sharp edges		P
14.3	Crack detection		P
	Standardized methods may be used to highlight the presence of cracks when visible cracks are specified as criteria of failure in the tests described in this standard.		P
15	Hazards due to moving parts		P
15.1	Clearance between moving parts		P



BS EN 17128			
Clause	Requirement – Test	Result – Remark	Verdict
15.2	Folding mechanism		P
15.2.1	General requirement		P
15.2.1.1	General		P
16	Hazards from inadequate stability		P
16.1	Footrest		P
	In case the user is standing permanently, each footrest shall be equipped with an anti-slide surface with an area of at least 150 cm ² .		P
16.2	Handle-bar adjustment		P
	The Handle-bar height adjustment system shall be fitted with devices to avoid inadvertent separation or detachment during use.		P
16.3	Wheel adhesion test		P
16.4	Parking and braking devices		P
16.4.1	General		P
17	Hazards due to inadequate visibility— Lighting and reflectors		P
17.1	General		P
	Each vehicle shall be fitted with front, side and rear retro-reflector according to ISO 6742-2. The rear reflector shall be red in colour. The front reflector shall be white (clear) in colour. All side reflectors shall be of the same colour, either white (clear) or yellow.		P
17.2	Audible warning device		P
	Audible warning is optional for:		--
	— PLEV Class 1 and 3.	Class 2	P
	Audible warning is mandatory:		N
	— PLEV for Class 2 and 4.		N
17.3	Warning signal		P
	On a PLEV without a handle bar a warning device shall be carried by the driver of a PLEV to make audible warnings to pedestrians/ third party. It shall be designed in the following manner:		P
	— the PLEV shall only be started if the device is connected either physically and/or via wireless, or		P
	— the audible warning device shall be in a working condition all the time;		P
	— in a driving condition the loss of connection to the warning device shall result in a speed reduction to a 6 km/h Class PLEV 2 and 4; the speed reduction shall happen in safe manner with corresponding audio notification and tilt back of pedals on self-balancing vehicles.		P
18	Hot surfaces		P



BS EN 17128			
Clause	Requirement – Test	Result – Remark	Verdict
18.1	Requirements		P
	Hot surfaces of the vehicle (temperatures above 58°C) which are not in continuous contact with the user shall be protected to prevent inadvertent contact.		P
19	Product information and marking		P
19.1	General		P
19.2	Marking		P
	— “WARNING! This product is not suitable for child”	WARNING! This product is not suitable for child	P
	— “WARNING! Never use the product close to a water source”	WARNING! Never use the product close to a water source	P
	— “WARNING! Stop using the product when damaged”	WARNING! Stop using the product when damaged	P
19.3	Durability of marking		P
	Any permanent labels shall be rubbed with a cotton cloth moistened with water for 20 s	rubbed with a cotton cloth moistened with water for 20 s	P
19.4	Product information		P
19.5	Warning devices		P
	Where machinery is equipped with warning devices these shall be unambiguous and easily perceived. The operator shall have facilities to check the operation of such warning devices at all times.		P
19.6	Information on the battery		P
19.7	Information on the packaging	WARNING ! This product is not suitable for child	P
19.8	Instructions for use		P
19.9	Instructions on servicing and maintenance		P
	It shall be clearly explained that regular maintenance of the vehicle is a factor of safety. These explanations include the following points:		P
	— list regarding the maintenance that can be performed by the user himself;		P
	— cleaning recommendations;		P
	— recommendations on charging the battery and use of the charger;		P
	— description regarding the maintenance and replacement of wear parts;	wheels, brake pads, cables	P



Report No.: STL2022S1116099C-Y1

BS EN 17128			
Clause	Requirement – Test	Result – Remark	Verdict
	— a note specifying that the self-tightening nuts as well as the other self-tightening fastenings may lose their efficiency and that they may need to be retightened;		P
	— lubrication recommendations — locations and frequency of lubrication, recommended lubricant;		P
	— the method for adjusting the brakes and recommendations concerning the replacement of friction components;		P
	— method for adjusting or setting all of the components that would need to be adjusted regularly or after replacement of a part;		P
	— recommendation not make any modifications that are not noted in the manufacturer's instructions;		P
	— information on where the user can find a qualified maintenance shop for items he cannot do by himself		P

ANNEX A:

Photo-documentatio

Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



End of Report