Product Technical Sheet

MD-05

Two-Wheeler Display

Model：MD-05

Version：V1.01

Website

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Changzhou Sciwil E-Mobility Technology Co., Ltd.

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Ⅰ. Safety Notes

PLEASE TAKE CAUTION WHEN USE, DO NOT PLUG OR UNPLUG THE DISPLAY WHILE YOUR VEHICLE IS POWERED ON.

- AVOID CLASHES OR BUMPS TO THE DISPLAY.

- AVOID USING IN HEAVY RAINS, SNOWS OR LONG EXPOSURE TO STRONG SUNLIGHT. DO NOT TEAR THE WATER-PROOF FILM ON THE SURFACE OF THE SCREEN, OTHERWISE THE WATER-TIGHT PERFORMANCE OF THE PRODUCT MAY BE DEGRADED.

- DO NOT PLUG OR UNPLUG THE DISPLAY WHILE THE SYSTEM IS POWERED ON. UNAUTHORIZED ADJUSTMENT TO DEFAULT SETTINGS IS NOT SUGGESTED, OTHERWISE NORMAL USE OF YOUR Vehicle CAN NOT BE GUARANTEED.

- WHEN THE DISPLAY PRODUCT DOES NOT WORK PROPERLY, PLEASE SEND IT FOR AUTHORIZED REPAIR IN TIME.

Ⅱ. Overview

1. Product Name and Model

Product Name: Electric Vehicle Display

Product Model: MD-05

2. Product Introduction

MD-05 features high-brightness color TFT LCD and minimalist interface, working as an ideal HMI solution for electric bikes.

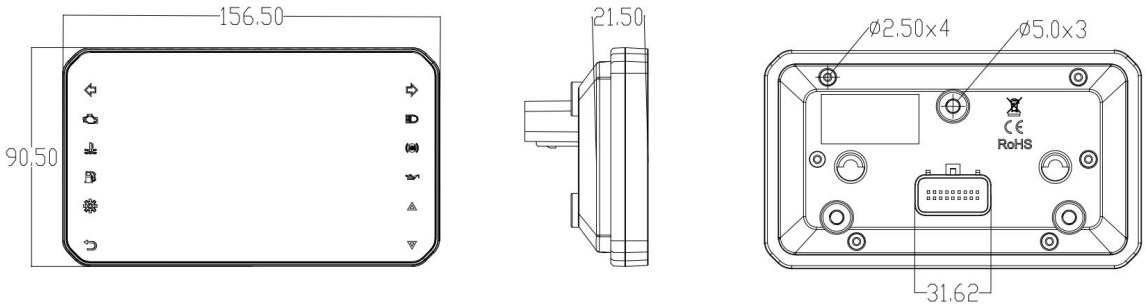
3. Specifications

Category		Specs
Size	L*W*H (mm)	156.6x90.5x21.5
	Visual Area (mm)	108.00x64.80
	Screen Size	5.0”
	Handlebar Size (mm)	22.2/25.4/31.8/Custom
Screen	Type	TFT-IPS
	Brightness	1000cd/m
	Resolution Ratio	800*480
	Viewing Direction	All O'clock
Connector	Type	Outlet Cable w/ Connector
	Specs	6-pin/9-pin/Custom
Performance	Working Voltage	12V-72V
	Working Current	60mA
	Working Temperature	5V 0.6A
	Protection Rate	-30℃ - 85℃
	Viberation	IP66
	Protocol	10G@30Hz
Certification		CAN/UART

4. Function

Category	Function
User Identification	Unlock by Bluetooth
	Unlock by Password
Display	Gear Level
	Speed
	Range/Distance
	Battery Info
	Mode
	Charge Status
	Dual Drive / Single Drive Status
	Output Power
	Temperature of Component (Motor/Controller...)
Indication	Speaker Indicator
	High Beam Light/ Low Beam Light
	Left Turn / Right Turn
	Side Positioning Light
	Error Alert
	Cruise
	Connection (USB/Bluetooth/NFC...)
	Tyre Pressure
	E-ABS
Control	Daylight Mode/ Dark Mode
	Brightness
Settings	System Unit
	Trip Clearance
	Gear Level
	Mode
Advanced	Smart App
	OTA
	Boot Logo/Animation
	Customised UI
	Customised Protocol

5. Size



6.Serial Code

Example：**111 22 333333 555 6666** **12V** ← Marked at the back of display

111: Customer Code

22: Protocol Code

333333: P.O. Date (YYMMDD)

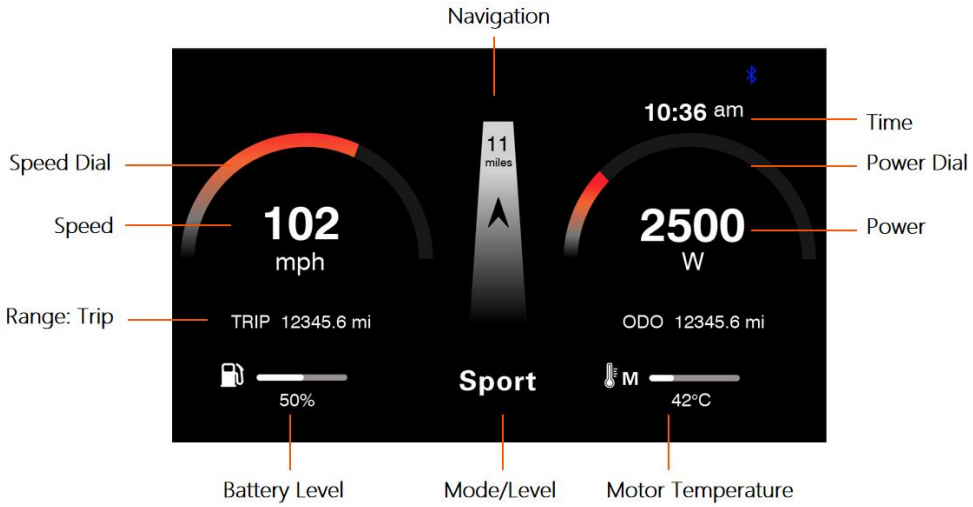
555: Order Receiving Number

6666: Production Date (YYMM)

Ⅲ. Operation

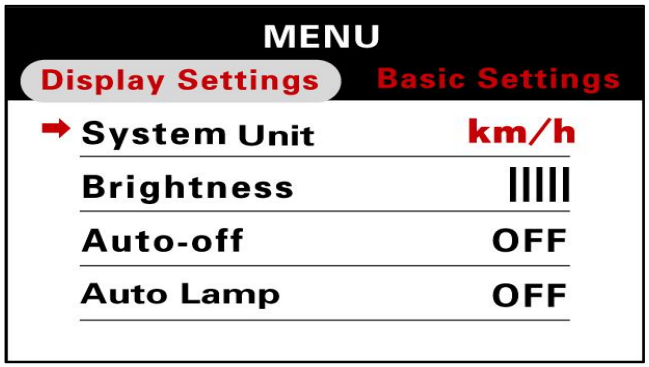
1. Display Interface

1.1 Riding Interface



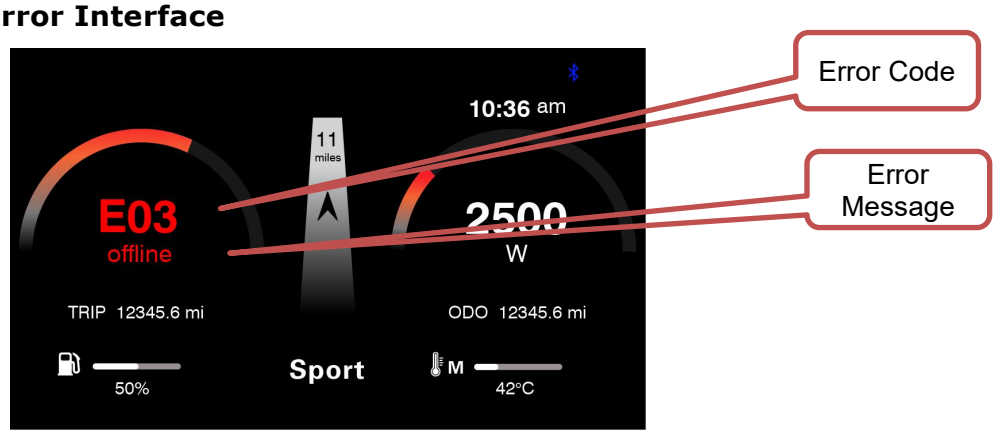
- Status: Real-time Riding Status: Bluetooth, Front Light, Brake, Low Voltage, Turning, Cruise, Drive Status, etc.
- Battery Status: Residual Battery Percentage
- Multi-Function Section: ODO (total range), TRIP (single ride range), MAX (max. speed), AVG (average speed), TIME (riding time), VOL (battery voltage), Wh (motor power), CUR (current), etc.
- Assist Level Mode: 3/5/9 Levels available.

1.2 Setting Interface



In the above interface: Setting Item: System Unit, Parameter Value: km/h

1.3 Error Interface

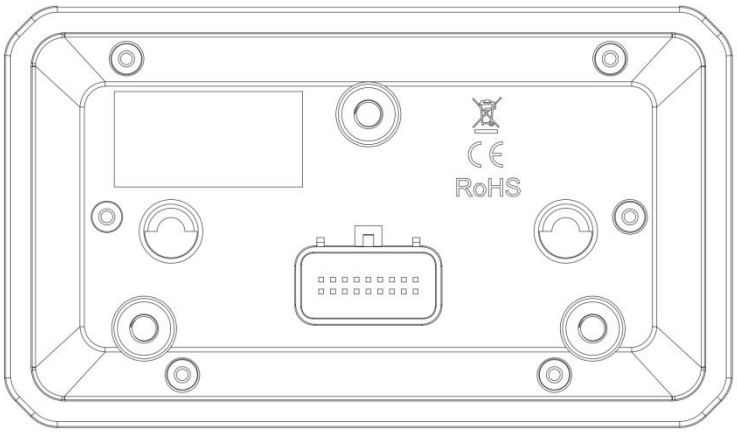


In the above interface: Error Indicator: ERROR, Error Note: Offline

2. Error Code (Sciwil CAN Default)

Error Code (decimal)	Status	Ref. Solutions
E2	Throttle Error	Check Throttle
E3	Communications Error	Check Connection
E4	Hardware Over-Current	Check Connection
E5	Low Battery	Check/Charge Battery
E6	Over-Voltage	Check Battery
E7	Motor Sensor Error	Check Motor

3.Connection



Pin No.	Functions
1	Display Power Wire
2	Electric Lock Wire/Empty
3	Display Ground Wire
4	High-Volt Signal of CAN Bus
5	Low-Volt Signal of CAN Bus
6-18	Customise

IV. Reliability Test

No.	Test Item	Standard	Equipment	Result
1	Waterproof Test	Product should comply with IPX6: protected against high pressure stream from any angle	High Pressure Water Blast Gun	Pass

2	Viberation Test	Fix the product on the rack on the test stand. The product should be able to withstand sweep-frequency vibration tests in the X, Y, and Z directions. Vibration frequency range: 20~30 Hz, Amplitude: 1.5 mm Test duration: 48 minutes per cycle.	Viberation Test Stand	Pass
3	High Temperature Test	Power on the product and test in high temperature chamber Test temperature: 85℃ Test Duration: 3hrs	High and Low Temperature Test Chamber	Pass
4	Low Temperature Test	Power on the product and test in high temperature chamber Test temperature: -30℃ Test Duration: 6hrs	High and Low Temperature Test Chamber	Pass
5	Salt Spray Test	Power on the product and test in salt spray chamber Test temperature: 35°C+2°C Test Duration: 72hrs or as per customer requirements Concentration of sodium chloride solution: 5% ± 1%. PH of the solution: 6.5~7.2.	Salt Spray Test Chamber	Pass
6	Drop Test	Drop the product in X/Y/Z direction from a height of 1m. After each test turn on the		Pass

		display to confirm normal function.		
7	Function Test	All the indicators on the test box signs correctly. Function of keys comply with drawing and customer requirement. No visual variation of brightness or missing patterns.	System Test Box	Pass
8	Burn-in Test	Test Voltage: 90V Power-on Duration: 60s Power-off Break: 5s Test Duration: 48h	Burn-in Rack	Pass

V. Warranty

In compliance with local laws, Sciwil provides limited warranty period covering **24 months** after the date of manufacturing (as indicated by the serial number), applies to quality issues during normal operations.
The limited warranty shall not be transferred to a third party other than as specified in the agreement with Sciwil.

Warranty Exclusions:

- Sciwil products that have been opened, modified or repaired without authorization.
- Damage on the connectors.
- Damage to the surface after leaving factory, including shell, screen, buttons, or other appearance parts.
- Damage to wiring and cables after leaving factory, including breaks and exterior scratch.
- Damage or loss due to force majeure (e.g. fire or earthquake) or natural disaster (e.g. lightening).
- Out of the warranty period.

VI. Version

This display user manual is in compliance with the general software version (A/0) of Changzhou Sciwil E-Mobility Technology Co., Ltd. There are chances that display products on some Vehicles may have a different software version, which is subject to the actual version in use.