

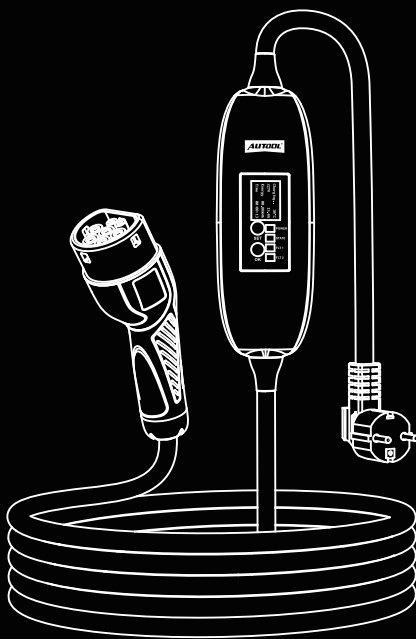
AUTOOL[®]

AUTOOL C350

Portable EV Charger

User Manual

用户手册



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执行标准 / Execution standard:

GB/T 18487.1-2023, SAE J1772, IEC 61851



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PRODUCT OVERVIEW

Technical specifications

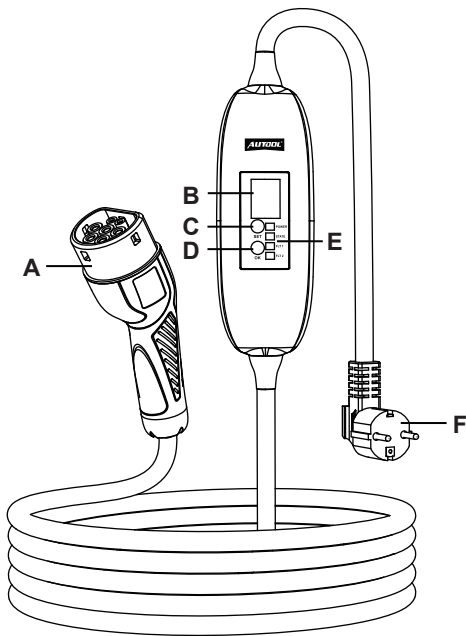
Working Voltage	AC 110V/220V ±20%
Working Current	14A
Input Frequency	50HZ/60Hz
Power Supply	AC outlet power supply
Rated Power	3.3KW
Working Temperature	-25°C~+55°C
Cable Length	5m
Installation	Take-along & plug-and-play
Protection Class	IP65
Reference Standard	SAE_J1772, IEC_61851
MTBF	8760 hours
Indicator	Power, status, fault 1, fault 2, LCD display
Protections cover leakage current, over and under voltage, over and under frequency, over current, high and low temperature, grounding protection, lightning.	

Function

- EV charging**
 It is a portable charger device with a simple structure and easy operation for plug-and-play. It supports taking power directly from the AC grid and can meet the charging needs of EV at any time.
- State of charge monitoring**
 The portable charging gun has stable performance during use, and users can intuitively understand the charging status information through the man-machine interface.
- Charging protection**
 The portable charger provides charging protection functions, such as leakage current, over-under voltage, over-under frequency, over current, high and low temperature, grounding protection and lightning protection, which can ensure charging safety.

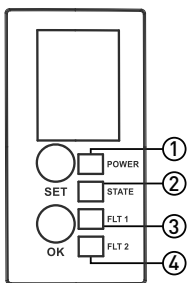
PRODUCT STRUCTURE

Structure diagram



A	Charging Gun	B	Display Screen
C	SET	D	OK
E	Indicator Lights	F	Charging Plug

DEFINITION OF INDICATOR LIGHTS



- **(1) Power Indicator**

Green light stays on indicating normal connection of input power.

- **(2) Status Indicator**

The green light flashes to indicate that the device is properly connected to the vehicle socket and is charging properly.

Green light flashes to indicate that the device is connected to the vehicle socket and charging is complete and over-temperature protection.

- **(3) Fault 1 Indicator**

Red light is on for 1S/off for 1S in cycle, which indicates overcurrent, leakage.

Red light stays on, which indicates power-on self-test failure, over-voltage and under-voltage, over-temperature protection.

- **(4) Fault 2 Indicator**

Red light stays on, which indicates power-on self-test failure, communication abnormal.

Red light is on for 1s/off for 1s in cycle, which indicates Not connected to ground wire and leakage current.

FUNCTION

- **1)** Press and hold “SET” for 3 seconds to enter the settings menu.
- **2)** In the settings menu, press “SET” briefly to select a setting item. There are three main setting items:
 - Set Current (Current Setting)
 - Set Timer (Timer Setting for Scheduled Charging)
 - Earth (Ground) (Ground Detection Setting)
- **3)** Current Setting: Press “SET” shortly to highlight “Set Current” (the font will enlarge), then press “OK” to enter the current setting interface.

- Press “SET” shortly to select the current rating. Options include 8A, 10A, 12A, 14A, and 16A, with the default being 14A.
 - After selecting the desired current rating, press “OK” to confirm and exit the current setting interface, returning to the settings menu.
 - If there are no further actions, the settings menu will automatically exit after 5 seconds.
- **4) Timer Setting:** Press “SET” briefly to highlight “Set Timer” (the font will enlarge), then press “OK” to enter the timer setting interface.
- Press “SET” shortly to select the desired duration. There is a gear every 30 minutes, and the longest setting is 480 minutes. The default is 0min.
 - After selecting the desired duration, press “OK” to confirm and exit the timer setting interface, returning to the settings menu.
 - If there are no further actions, the settings menu will automatically exit after 5 seconds.
- **5) Ground Detection Setting:** Press “SET” briefly to highlight “Earth (Ground)” (the font will enlarge), then press “OK” to enter the ground detection setting interface.
- Press “SET” briefly to select either “Earthing” (requiring ground detection) or “NO Earthing” (disabling ground detection).
 - After selecting the desired option, press “OK” to confirm and exit the ground detection setting interface, returning to the settings menu.
 - If there are no further actions, the settings menu will automatically exit after 5 seconds.
- **6) Press and hold “SET” for 5 seconds to exit the settings menu.**

 **NOTE**

- Set the parameters before charging to avoid potential charging failures.
-

PRODUCT INSTALLATION

- Before powering on, check again whether the power cable is damaged.
- After the first step is completed, insert the power supply plug of the charging box into the power supply socket, and check whether the power indicator light stays green. If there is no light, please check whether the socket is powered on, and carefully check whether the plug is firm.
- Insert the charger into the charging stand of the electric vehicle and double check that it is inserted in place to ensure a reliable connection.
- Check to see if the status light on the portable charging case is flashing green.
- When the status indicator is flashing green, it means the charging connection is normal, and it can enter the charging state, and the charging status indicator will flash green.
- If the fault indicator red is always on during charging, please check if the power supply of the device and socket is normal.

COMMON TROUBLESHOOTING

No.	Function status	Power Indicator	Status Indicator	Fault 1 Indicator	Fault 2 Indicator	Description
1	Initial state	Stays on	Flash 1s	Flash 1s	Flash 1s	Power-on self-test or reset.
2	Pending connection	Stays on	Off	Off	Off	Pending connection.
3	Charge normally	Stays on	Flash	Off	Off	The voltage of detection point 1 is $6\pm 0.8V$, and the relay is closed.
4	Charge completed	Stays on	Stays on	Off	Off	
5	Power-on self-test failure	Stays on	Off	Stays on	Stays on	Charger failure, relay disconnected.
6	Communication abnormal	Stays on	Off	Off	Stays on	The voltage of detection point 1 is $9.8V < U < 11.2V$; $6.8V < U < 8.2V$; $12.8V < U$ or $U < 5.2V$; the relay is disconnected.
7	Over-voltage Under-voltage	Stays on	Off	Stays on	Off	If the voltage is lower or higher than the set voltage value, the relay is "divided". When the voltage re- turns to the range corresponding to Table 2, the relay is "closed" and continues charging.
8	Ground protection	Stays on	Off	Off	1s blink once	The ground wire is not connected, and the relay is disconnected. After the fault is clear, the relay is allowed to be closed after the power is turned on again.
9	Over-current protection	Stays on	Off	1s blink once	Off	When the line current is $15A < I < 17A$, the relay is disconnected, and the fault light is on; after 10S, the charging will be automatically resumed. If the over-current is still displayed after 3 times, the charging will be terminated. When the line current is $> 17A$, the charging ends immediately.
10	Leakage Protection	Stays on	Off	1s blink once	1s blink once	The relay is disconnected. After the fault is clear, it needs to be powered on again before the relay is allowed to close.

MAINTENANCE SERVICE

Our products are made of long-lasting and durable materials, and we insist on perfect production process. Each product leaves the factory after 35 procedures and 12 times of testing and inspection work, which ensures that each product has excellent quality and performance.

Maintenance To maintain the performance and appearance of the product, it is recommended that the following product care guidelines be read carefully:

- Be careful not to rub the product against rough surfaces or wear the product, especially the sheet metal housing.
- Please regularly check the product parts that need to be tightened and connected. If found loose, please tighten it in time to ensure the safe operation of the equipment. The external and internal parts of the equipment in contact with various chemical media should be frequently treated with anti-corrosion treatment such as rust removal and painting to improve the corrosion resistance of the equipment and extend its service life.
- Comply with the safe operating procedures and do not overload the equipment. The safety guards of the products are complete and reliable.
- Unsafe factors are to be eliminated in time. The circuit part should be checked thoroughly and the aging wires should be replaced in time.
- Adjust the clearance of various parts and replace worn (broken) parts. Avoid contact with corrosive liquids.
- When not in use, please store the product in a dry place. Do not store the product in hot, humid, or non-ventilated places.

WARRANTY

From the date of receipt, we provide a three-year warranty for the main unit and all the accessories included are covered by a one-year warranty.

Warranty access

- The repair or replacement of products is determined by the actual breakdown situation of product.
- It is guaranteed that AUTOOL will use brand new component, accessory or device in terms of repair or replacement.
- If the product fails within 90 days after the customer receives it, the buyer should provide both video and picture, and we will bear the shipping cost and provide the accessories for the customer to replace it free of charge. While the product is received for more than 90 days, the customer will bear the appropriate cost and we will provide the parts to the customer for replacement free of charge.

These conditions below shall not be in warranty range

- The product is not purchased through official or authorized channels.
- The product breakdown because the user does not follow product instructions to use or maintain the product.

We AUTOOL pride ourselves on superb design and excellent service. It would be our pleasure to provide you with any further support or services.

Disclaimer

All information, illustrations, and specifications contained in this manual, AUTOOL reserves the right of modify this manual and the machine itself with no prior notice. The physical appearance and color may differ from what is shown in the manual, please refer to the actual product. Every effort has been made to make all descriptions in the book accurate, but inevitably there are still inaccuracies, if in doubt, please contact your dealer or AUTOOL after-service centre, we are not responsible for any consequences arising from misunderstandings.

RETURN & EXCHANGE SERVICE

Return & Exchange

- If you are an AUTOOL user and are not satisfied with the AUTOOL products purchased from the online authorized shopping platform and offline authorized dealers, you can return the products within seven days from the date of receipt; or you may exchange it for another product of the same value within 30 days from the date of delivery.
- Returned and exchanged products must be in fully saleable condition with documentation of the relevant bill of sale, all relevant accessories and original packaging.
- AUTOOL will inspect the returned items to ensure that they are in good condition and eligible. Any item that does not pass inspection will be returned to you and you will not receive a refund for the item.
- You can exchange the product through the customer service center or AUTOOL authorized distributors; the policy of return and exchange is to return the product from where it was purchased. If there are difficulties or problems with your return or exchange, please contact AUTOOL Customer Service.

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产品概述

技术参数

工作电压	AC 110V/220V ±20%
工作电流	14A
输入频率	50HZ/60Hz
供电方式	交流插座供电
额定功率	3.3KW
工作温度	-25°C~+55°C
线缆长度	5m
安装方式	随车携带，即插即用
防护等级	IP65
参照标准	SAE_J1772, IEC_61851
MTBF	8760 小时
指示灯	电源、状态、故障1、故障2、液晶显示
安全保护	漏电流、过欠压、过欠频、过电流、 高低温、接地保护、防雷保护

功能特性

- **电动汽车充电**

便携式充电枪作为即插即用型充电设备，结构简洁、操作简单，支持直接从交流电网取电，满足电动车主随时充电的应用诉求。

- **充电状态监测**

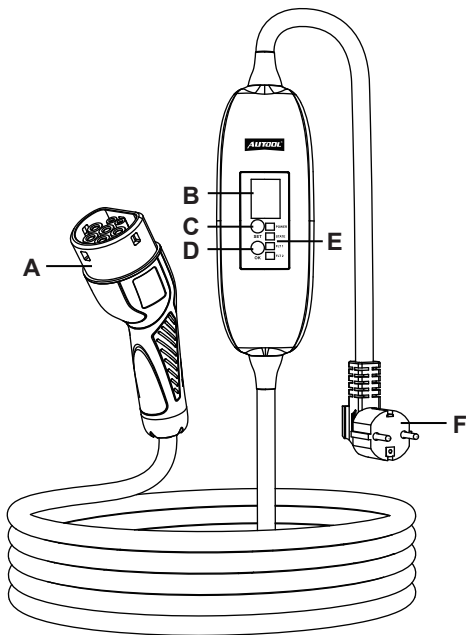
便携式充电枪在使用过程中性能稳定，用户可通过人机界面直观的了解到充电状态信息。

- **充电保护**

便携式充电枪具有充电保护功能，可实现漏电流、过欠压、过欠频、过电流、高低温、接地保护、防雷保护等功能，保证充电安全。

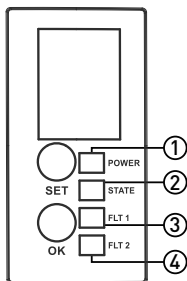
产品结构

结构图



A	充电枪	B	显示屏
C	SET键	D	OK键
E	指示灯	F	充电插头

指示灯定义



- **(1) 电源指示灯**
绿灯常亮 — 进线电源连接正常
- **(2) 状态指示灯**
绿灯闪亮 — 设备与车辆插座连接正常充电
绿灯常亮 — 设备与车辆插座连接充电完成、过温保护
- **(3) 故障1指示灯**
红灯亮1S/灭1S循环 — 过流、漏电
红灯常亮 — 上电自检失败、过压欠压、过温保护
- **(4) 故障2指示灯**
红灯常亮 — 上电自检失败、通讯异常
红灯亮1S/灭1S循环 — 未接接地线、漏电

功能设置

- **1) 进入/退出设置选项界面**
 - 在主界面长按“SET”键3秒进入设置选项界面。
 - 在设置选项界面点按“SET”键，选择设置选项，有以下3部分：
Set Current (电流设置)
Set Timer (定时设置，实现预约充电)
Earth(ground) (接地检测设置)
- **2) 电流设置**
 - 选择Set Current (选中字体会变大)，点按“OK”键进入。
 - 点按“SET”键，可选择电流档，有8A、10A、12A、14A、16A，默认是14A。

- 选择好电流档后，点按“OK”键确认会退出电流设置界面，并返回到设置选项界面。
- **3) 定时设置**
 - 选择Set Timer (选中字体会变大)，点按“OK”键进入。
 - 点按“SET”键，可以选择定时时长。每30分钟一个档位，最长可设置480分钟，默认是0min。
 - 选择好定时时长后，点按“OK”键确认会退出定时设置界面，并返回到设置选项界面。
- **4) 接地检测设置**
 - 选择Earth(ground) (选中字体会变大)，点按“OK”键进入。
 - 点按“SET”键，可以选择Earthing (需要接地检测) 或者NO Earthing (屏蔽接地检测)。
 - 选择好后，点按“OK”键确认会退出接地检测设置界面，并返回到设置选项界面。

注意

- ▶ 需要在充电前进行功能设置，如果在充电途中设置可能导致充电失败。

设备上电检查

- 1) 上电前再次检查配电线缆是否破损。
- 2) 第一步骤执行完成，将充电盒供电插头插入供电插座中，查看电源指示灯是否为绿色常亮。如有不亮的情况，请检查插座是否通电，仔细检查插接是否牢固。
- 3) 步骤1、2均为正常后，将充电枪插入电动汽车充电座，并仔细检查是否插到位，确保连接可靠。
- 4) 查看便携式充电盒状态指示灯是否为绿色闪亮。
- 5) 连接状态指示灯为绿色闪亮时，表示充电连接正常，即可进入充电状态，充电状态指示灯将绿色闪亮显示。
- 6) 充电过程中如故障指示灯红色常亮，请检查设备和插座电源是否正常。

常见故障处理

序号	功能状态	电源指示灯绿色	状态指示灯绿色	故障指示灯1红色	故障指示灯2红色	定义说明
1	初始状态	常亮	闪烁1s	闪烁1s	闪烁1s	上电自检或复位。
2	待连接	常亮	灭	灭	灭	待连接。
3	正常充电	常亮	闪烁	灭	灭	
4	充电完成	常亮	常亮	灭	灭	检测点1电压为 $6\pm 0.8V$ ，继电器闭合。
5	上电自检失败	常亮	灭	常亮	常亮	充电器故障，继电器断开。
6	通讯异常	常亮	灭	灭	常亮	检测点1电压为 $9.8V < U < 11.2V$ ； $6.8V < U < 8.2V$ ； $12.8V < U$ or $U < 5.2V$ ；继电器断开。
7	过压、欠压	常亮	灭	常亮	灭	电压低于或高于设定的电压值则继电器“分”。电压恢复到表2对应的范围内，继电器“合”，继续充电。
8	接地保护	常亮	灭	灭	闪烁 (亮1S/ 灭1S循环)	地线未接，继电器断开，故障排除后，重新上电继电器才允许闭合。
9	过流保护	常亮	灭	闪烁 (亮1S/ 灭1S循环)	灭	线路电流在 $15A < I < 17A$ ，继电器断开，故障灯亮；10S后自动恢复充电，如果3次仍然过流，结束此次充电。 线路电流 $> 17A$ 时，立即结束充电。
10	漏电保护	常亮	灭	闪烁 (亮1S/ 灭1S循环)	闪烁 (亮1S/ 灭1S循环)	继电器断开，故障排除后需重新上电，继电器才允许闭合。

维修保养服务

您所拥有的AUTOOL产品选用持久耐用的材料，AUTOOL坚持精益求精的生产工艺，每一件产品出厂都经过35道工序及12次质检工作，从而确保每一件产品都拥有卓越的品质及性能。所以您的AUTOOL产品值得您定期维护保养，使其产品将能够长期稳定地工作。

维修保养

维护保养是为了保持产品性能和外观，我们建议您仔细阅读以下产品保养指南：

- 注意不要将产品与粗糙表面摩擦或揉搓产品，特别是钣金外壳。
- 对产品中需要紧固和连接的部位经常进行检查，如发现松动应及时紧固，以保证产品的安全运行。对与各种化学介质接触的产品外部和内部零件要经常进行除锈、喷漆等防腐处理，以提高产品的抗腐蚀能力，延长产品的使用寿命。
- 遵守安全操作规程，不超负荷使用产品。产品的安全防护装置齐全可靠，及时消除不安全因素。电路部分彻底检查，老化电线要及时更换。
- 定期清洗和更换易耗部件；调整各部位配合间隙和更换磨损（已坏）部件清洁时，避免产品接触带腐蚀性的液态物品。
- 不使用时，请将产品存放于干燥的位置。不要将产品存放在高温、潮湿或不通风的地方。

保修服务

AUTOOL主机自客户签收日起享有3年保修期。其所含附件自客户签收日起享有1年保修期。

保修方式

- 根据具体的故障情况对产品进行免费修理或更换；
- 我方保证所有更换的部件、附件或产品都是全新；
- 在客户收到产品90天内出现故障同时提供视频和图片，我方承担运费并免费提供相应配件给客户更换。收到产品超过90天，客户承担相应的费用，我方免费提供配件给客户更换；

以下情况不在免费保修范围：

- 非正规渠道购买AUTOOL的产品；
- 未按产品说明书要求使用和维护造成的损坏；

在AUTOOL，我们为精湛的设计和卓越的服务感到自豪。我们很乐意为您提供更多的支持或服务。

声明

偶然公司保留更改产品设计与规格的权利，届时恕不另行通知。实物外观与颜色可能与说明书中显示的有差别，请以实物为准。我们已尽最大努力力求使书中所有描述准确，但仍难免有不妥之处。如有疑问，请联系经销商或偶然售后服务中心。本公司对产品拥有最终解释权，不承担任何因误解而产生的后果。

退换货服务

退换货

- 如果您对从线上授权购物平台和线下授权经销商所购买的 AUTOOL 产品不满意, 根据《AUTOOL 全球销售条款》, 您可以自收到产品之日起七日内退货; 或者在产品交付之日起的30日内调换等值的其他产品。
- 退回及调换的产品必须处于完全可销售状态, 并附上相关销售单单据, 所有相关配件、纸质发票 (如有)。
- AUTOOL 将会对寄回退货的商品进行检查, 以确保其处于完好无损的状态并且符合条件, 相关条件详情请参阅《AUTOOL 全球销售条款》。任何未通过检查的商品将退还给您, 您将不会获得商品退款。
- 您可以通过客户服务中心或AUTOOL授权经销商调换产品; 退换货原则为从哪里购买, 就从哪里退换货。如果您退换货遇见困难或者阻碍, 请联系AUTOOL客户服务中心。通过客户服务中心退换货时, 我们建议您通过下面的方式进行:

中国区域致电	400-032-0988 / 18929303778
售后微信号	18929303778
海外区域致电	+86 0755 23304822
E-mail	aftersale@autooltech.com
Facebook	https://www.facebook.com/autool.vip
YouTube	https://www.youtube.com/c/autooltech

- 如您的退换货得到确认, 您将收到确认信息和邮件。