

California Type Evaluation Program

Certificate of Approval

Weighing and Measuring Devices

For:

Electric Vehicle Fueling Systems (EVFS)
DC only

Models: UTxxxyyyyy

where **xxx** can be: 240, 320, and 480

where y denotes variables that do not affect
metrological parameters

Submitted By:

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Standard Features and Options

Standard Features:

- Direct Current (DC) system in kilowatt-hour (kWh)
- Accuracy Class 2.0 for DC with 1.0% accuracy tolerance or better
- Maximum Rate of Energy Transfer: 240 kW DC, 320 kW DC, 475 kW DC
- Maximum Current Deliverable: 240 kW is 300 amperes (A), 320 kW is 400 (A), 475 kW is 500 amperes (A)
- Minimum Measured Quantity (MMQ): 1 kWh
- Voltage Rating: 150-950 VDC (Volts Direct Current)
- Temperature Rating: -35C to 55C
- 0.0001 kWh registration display
- Continuous display for kWh consumption and price computing
- Software Version: V02.29
- Mobile App Software Version: V3.2
- Single port charging with North American Charging Standard (NACS) or Combined Charging System (CCS1) connector
- Non-resettable totalizer in kWh
- Electronic receipt via mobile device or e-mail

Options:

- Variable Time-based fees and Variable pricing

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.



Kevin Schnepf, Director

Effective Date: December 13, 2024

Electric Vehicle Fueling Systems (EVFS) / Model: UTxxxyyyyyy

Identification: The required EVFS identification (ID) is located on the right side of the Autel US Inc device (**Figure 1**) Autel Digital Power Co., Ltd naming may appear on the label. All ID information is provided on the EVFS station's display screen. The software version number is found by tapping on the top left corner of the "cost detail" screen two times (**Figure 6**) then selecting "Device Information". (**Figure 3**). The device totalizer information can be found in "Device Information" under the "Parameter" tab (**Figure 4**). All menus have a scroll ability to locate required information.

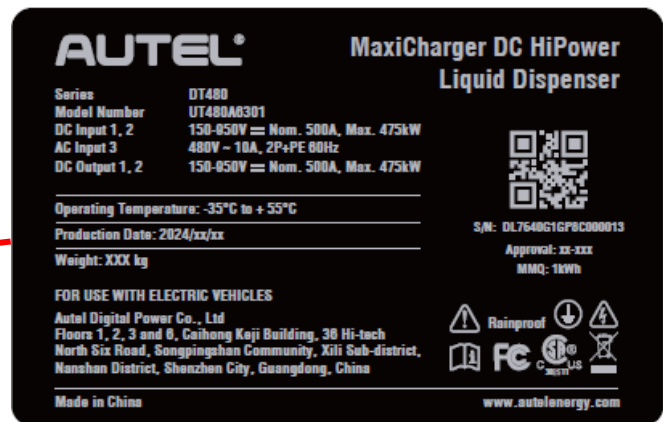
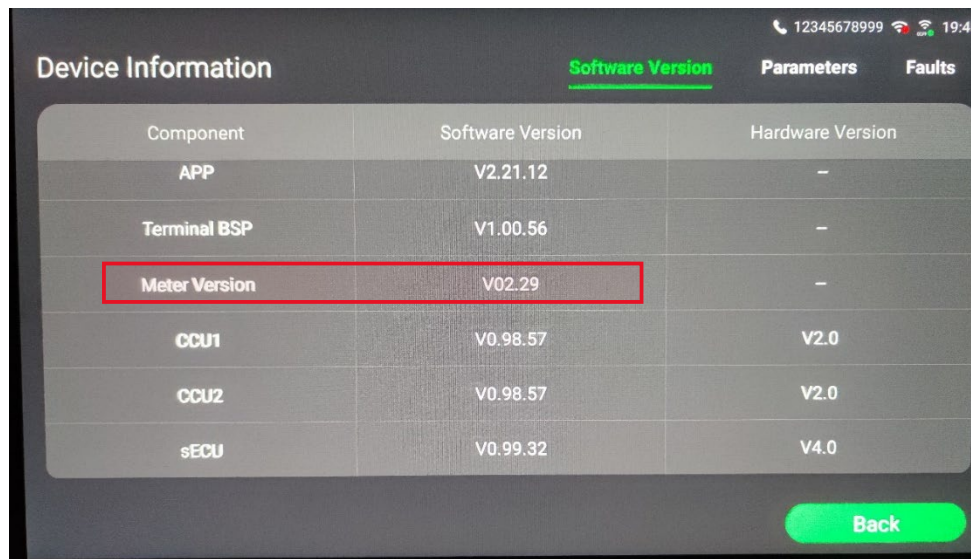


Figure 1. Example of the ID badge and location

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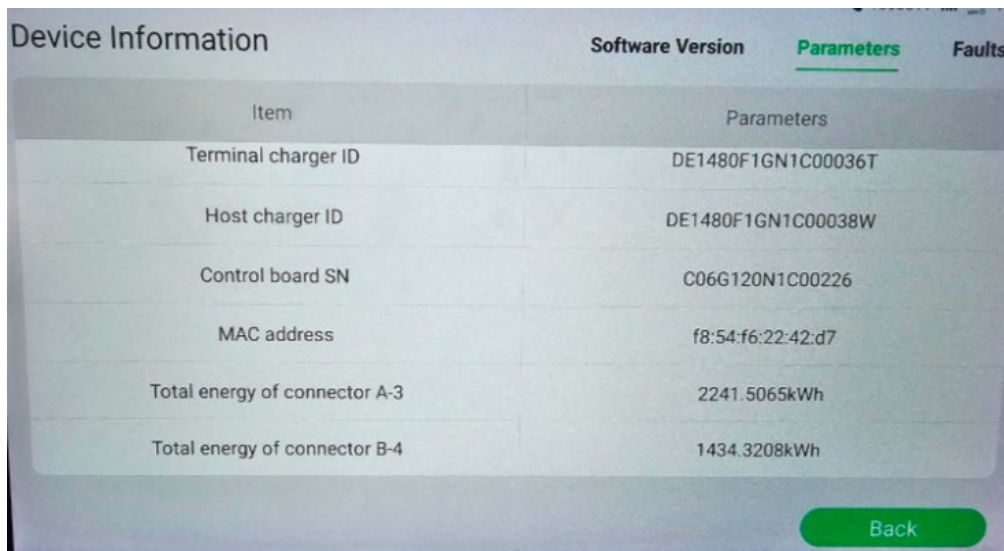
The screenshot shows a mobile application interface with a status bar at the top displaying '12345678999', signal strength, and the time '19:45'. The main header is 'Device Information' with three tabs: 'Software Version' (selected), 'Parameters', and 'Faults'. Below the header is a table with three columns: 'Component', 'Software Version', and 'Hardware Version'.

Component	Software Version	Hardware Version
APP	V2.21.12	—
Terminal BSP	V1.00.56	—
Meter Version	V02.29	—
CCU1	V0.98.57	V2.0
CCU2	V0.98.57	V2.0
sECU	V0.99.32	V4.0

A red rectangular box highlights the 'Meter Version' row. At the bottom right, there is a green 'Back' button.

Figure 3. Meter version number example

Software versions other than “Meter Version” included in **Figure 3** have no effect on metrological function.



The screenshot shows a mobile application interface with a status bar at the top displaying '12345678999', signal strength, and the time '19:45'. The main header is 'Device Information' with three tabs: 'Software Version', 'Parameters' (selected), and 'Faults'. Below the header is a table with two columns: 'Item' and 'Parameters'.

Item	Parameters
Terminal charger ID	DE1480F1GN1C00036T
Host charger ID	DE1480F1GN1C00038W
Control board SN	C06G120N1C00226
MAC address	f8:54:f6:22:42:d7
Total energy of connector A-3	2241.5065kWh
Total energy of connector B-4	1434.3208kWh

At the bottom right, there is a green 'Back' button.

Figure 4. Totalizer Example

Sealing: The Autel Maxi DT Series has a Category 3 sealing provision. While in calibration/configuration mode, the device will not operate. To access the device’s event logger, select the “Pricing” tab in the bottom right-hand corner of the charger’s display (**Figure 5**). Double tap the top left corner of the “Pricing Details” page (**Figure 6**). Select device maintenance (**Figure 7**), enter the password for the device which will be the last six digits of the charger’s serial number and choose the “Configuration Event Logger” (**Figure 8**). Functionality is in place to send a copy of the log to an email by selecting “Send to email” (**Figure 9**) and inputting a valid email address.

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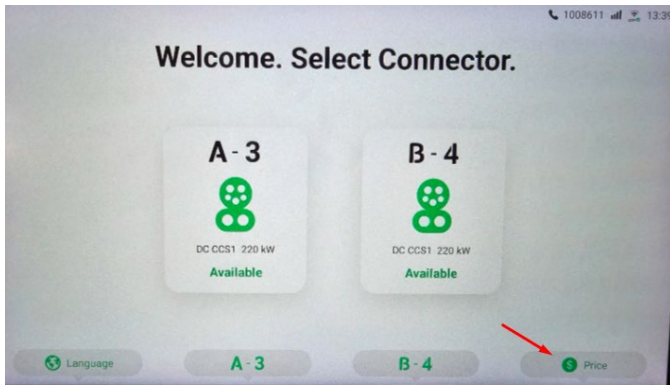


Figure 5. Pricing tab location example

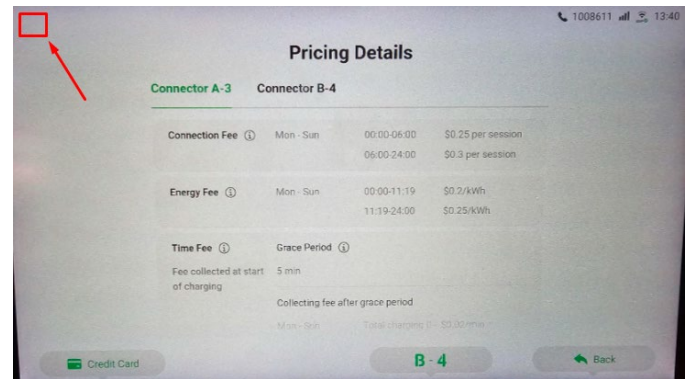


Figure 6. Pricing details page example with touch location

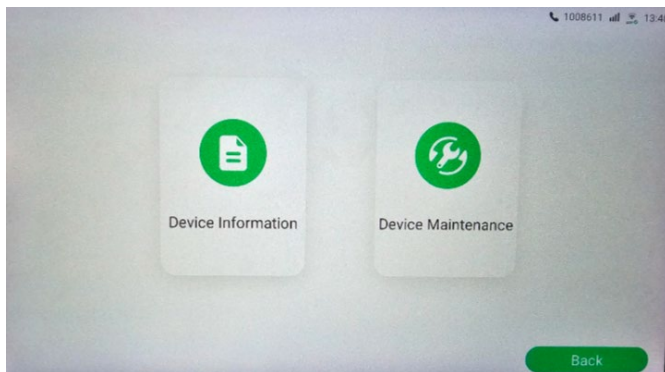


Figure 7. Device maintenance selection screen example

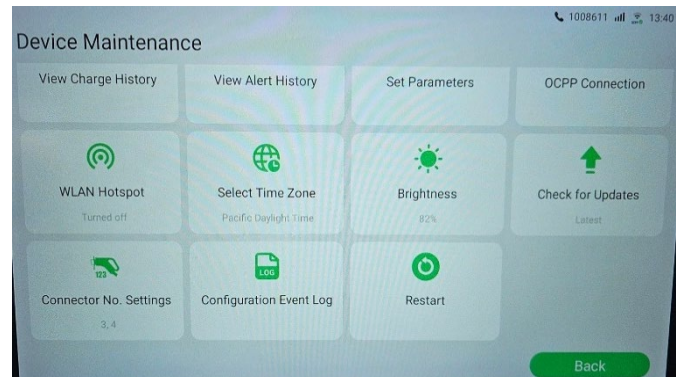


Figure 8. Event Log example location

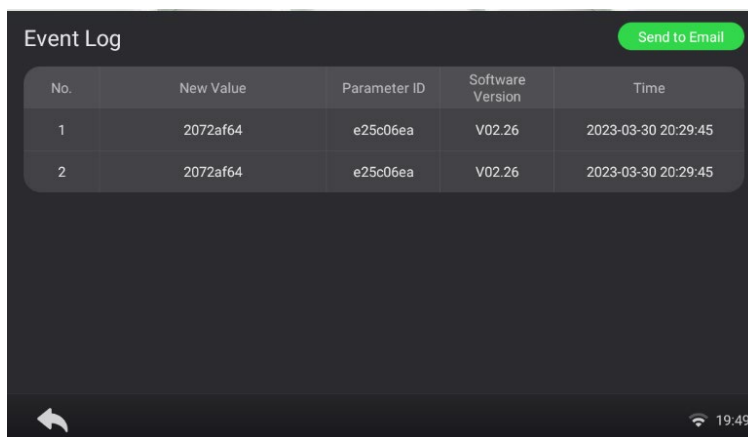


Figure 9. Event Log example with send email function

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Operation: The Autel EVFS is activated through RFID, payment card, or the Autel Charge mobile app.

RFID: Once the charger is connected to the vehicle, hold the RFID card in front of the RFID scan symbol on the charger screen. The active session information is displayed on the screen of the charger and in the Autel Charge App. An RFID session can be terminated by holding the RFID card in front of the RFID scan symbol or by pressing the "Stop" button on the charger's display. Receipts are available via email that are associated with the RFID card.

Credit Card: The charger must be equipped with a Point of Sale (POS) machine for users to use credit card payment methods. Ensure the connector is properly connected and secured to the vehicle. Select "Credit Card" on the charging method on the charger screen and Click on the POS machine logo (**Figure 10**). The charge session will begin after the user swipes or taps their payment card (**Figure 11**). By clicking the "Stop" button on the screen, the credit card-initiated session can be terminated (**Figure 12**). After the charging process is completed, the user may input their email on the chargers display to receive their receipt.

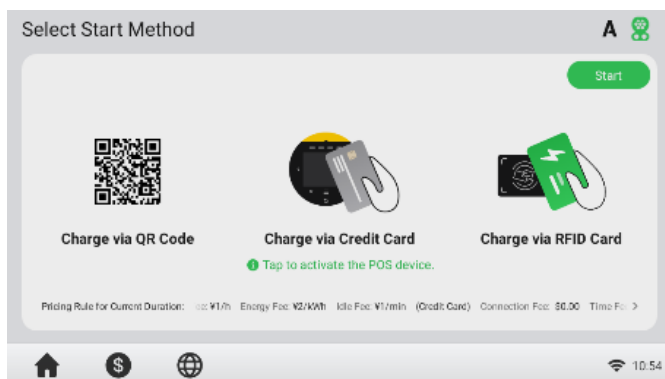


Figure 10. Example of different start methods.

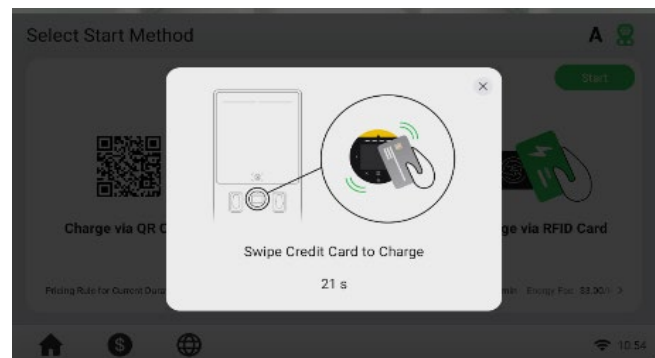


Figure 11. Pop-up window prompt based on the selected start method

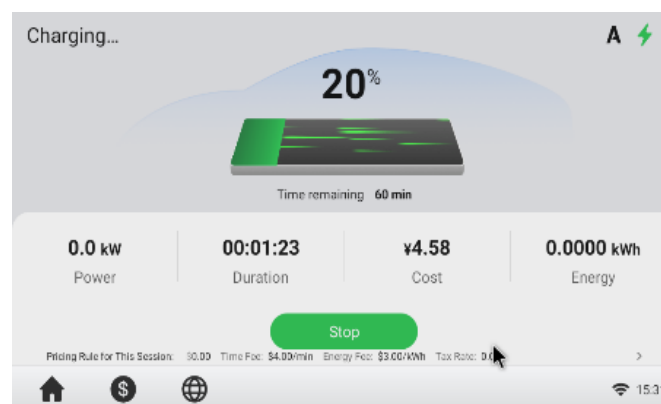


Figure 12. Example display screen for active session

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Mobile App: The Autel Charge app may be used to activate the Autel EVFS. The user must have an Autel App account with an associated email to provide a receipt if desired. The user must navigate to the “Select or Scan” feature on the devices map (**Figure 13**). Users may scan the QR code located on the chargers display or locate the charger via the map function. Applicable fees will appear prior to starting a session (**Figure 14**). Receipts are available through the app after completion of a charging session and can be requested in PDF format in addition to being provided through the app.

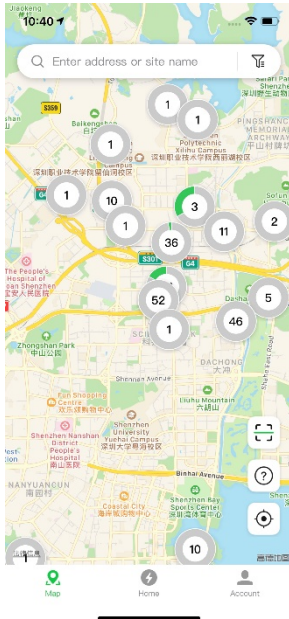


Figure 13. Example of the mobile app charger location map and “Scan” function

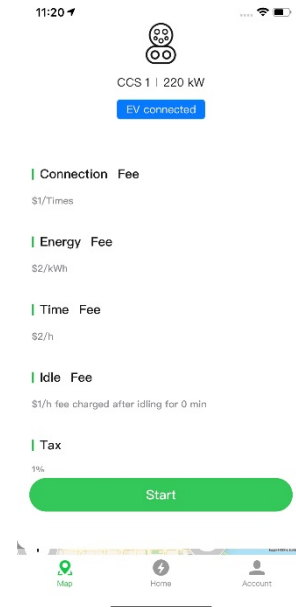


Figure 14. Mobile app pricing example page

For units equipped with a Variable pricing structure, a pop up will appear prompting the user to accept the pricing structure prior to charging (**Figure 15**).

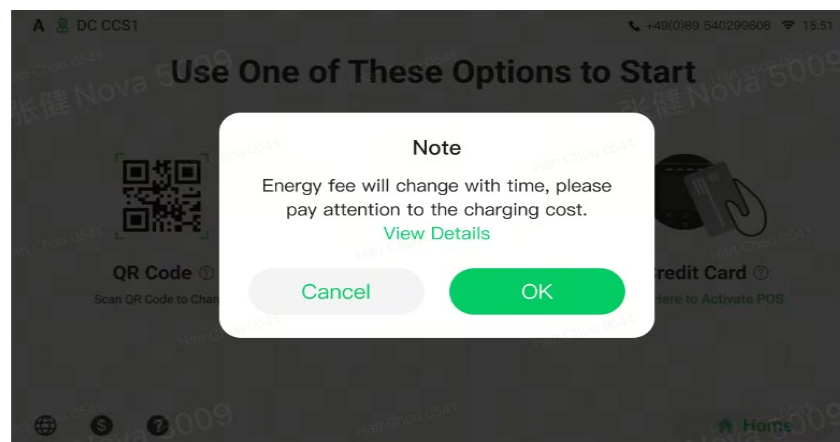


Figure 15. Variable Pricing pop up example

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Test Conditions: The emphasis of the evaluation for the Autel EVSE system was on device design, performance, markings, sealing, measurement accuracy at 10% and 85% power levels, repeatability, permanence, and receipt requirements. Measurements were performed on a model UT480A6301 & UT240A6301 at (1) kWh (per the marked MMQ) at 10% of the maximum current deliverable (MCD) and 2x MMQ tests (2 kWh) at 85% MCD. Permanence testing was performed after 200 kWh of throughput usage. Time based fees were evaluated for function and accuracy.

Evaluated By: J. Witt (CA)

Type Evaluation Criteria Used: *California Code of Regulations, Title 4, Division 9, Chapter 1, Article 1. General Code 1.10. Section 3.40. Electric Vehicle Fueling Systems, and Section 5.55 Timing Devices, 2024 edition.*

Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

Example(s) of the Device: