



PROCEDURE

Reference:	PR20210714-03		
Version:	01.0	Category:	E

MODEL(S)	GOAL	
ALL EVOLUTION ELECTRIC MODELS	Quality improvement	
	Performance	√
	Upgrade	√
PARTS INFO	Down time	√
EV48-400 CONTROLLER	Maintenance	√
	Work around	√
	<u>Others:</u>	

VERSION CONTROL:			
Author:	Version:	Date:	Change/update:
Lance Lian	01.0	2021/07/14	

TITLE
How to use controller interface software ?

DESCRIPTION /PURPOSE OF THIS PROCEDURE
Steps to install /Use controller interface software . Basics of interface software operations .

TOOLS REQUIRED
<div data-bbox="319 1406 917 1738" data-label="Image"> </div> <div data-bbox="1005 1411 1348 1742" data-label="Image"> </div> <ul style="list-style-type: none"> • “EV programming tool” interface software • Data transfer cable for EV48-400 controller



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OVERVIEW OF CONTROLLER



EV48-400 Controller



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HOW TO INSTALL INTERFACE SOFTWARE ?

-Step 1. Unzip software package .



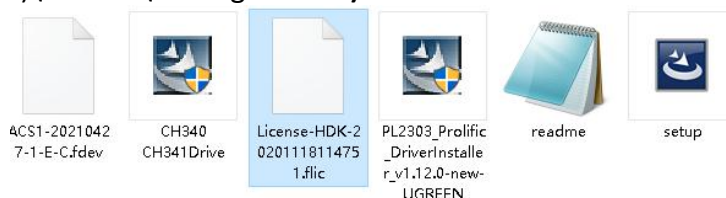
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-Step 2. Install the interface software . Make sure not to double click the set up icon to run it but to click on the icon then use the menu to “run as administrator” ,select the route for installation , recommend to use the default route C:\Program Files (x86)\EVCTRL\EVProgrammer) .



-Step 3.Copy the License file (License-XXXXXX.flic)from software package to installation file (C:\Program Files (x86)\EVCTRL\EVProgrammer) .



电脑 > 本地磁盘 (C:) > Program Files (x86) > EVCTRL > EVProgrammer

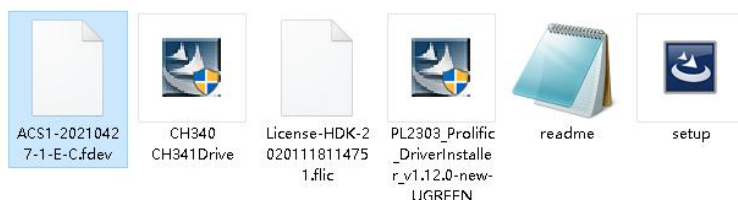
名称	修改日期	类型
ACS1-20210427-1-E-C.fdev	2021-04-27 11:12	FDEV 文
DevComponents.DotNetBar.Charts.dll	2017-06-30 19:57	应用程序
DevComponents.DotNetBar2.dll	2019-03-25 13:54	应用程序
DevComponents.Instrumentation.Des...	2019-03-25 13:54	应用程序
DevComponents.Instrumentation.dll	2019-03-25 13:54	应用程序
EVOLUTION	2021-05-27 19:50	应用程序
FJUtils.dll	2020-09-04 15:35	应用程序
ICSharpCode.SharpZipLib.dll	2019-03-25 13:54	应用程序
License-HDK-20201118114751.flic	2020-12-17 9:40	FLIC 文
NeoUtils.dll	2019-03-25 13:54	应用程序
Newtonsoft.Json.dll	2017-06-09 14:55	应用程序
NPOI.dll	2019-03-25 13:54	应用程序
NPOI.OOXML.dll	2019-03-25 13:54	应用程序
NPOI.OpenXml4Net.dll	2019-03-25 13:54	应用程序
NPOI.OpenXmlFormats.dll	2019-03-25 13:54	应用程序
PCANBasic.dll	2016-06-20 13:02	应用程序
temp	2021-07-14 16:25	DAT 文



PROCEDURE

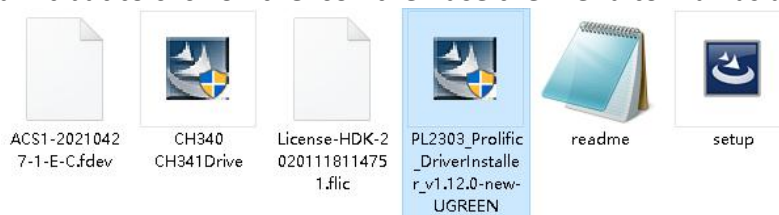
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-Step 4. Copy the data file (ACS1-20210427-1-E-C.fdev , different vehicle models may use different data files) from software package to installation file (C:\Program Files (x86)\EVCTRL \EVProgrammer) .



本地磁盘 (C:) > Program Files (x86) > EVCTRL > EVProgrammer		
名称	修改日期	类型
ACS1-20210427-1-E-C.fdev	2021-04-27 11:12	FDEV 文
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NPOI.OpenXmlFormats.dll	2019-03-25 13:54	应用程序
PCANBasic.dll	2016-06-20 13:02	应用程序
temp	2021-07-14 16:25	DAT 文

-Step 5. Install “ PL2303_Prolific_DriverInstaller_v1.12.0-new-UGREEN” .Make sure not to double click the icon to run it but to click on the icon then use the menu to “run as administrator” .

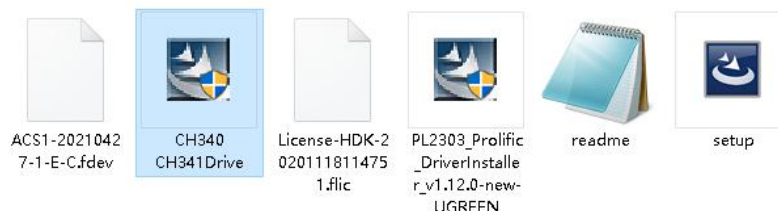




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-Step 6. Install "CH340 CH341Drive" .Make sure not to double click the icon to run it but to click on the icon then use the menu to "run as administrator" .



-Step 7. Use "run as administrator" to run "EVOLUTION" icon from the installation file or the shortcut "EVOLUTION" icon from the desktop .

NAME	DATE	TIME
ACS1-20210427-1-E-C.fdev	2021-04-27	11:12
DevComponents.DotNetBar.Charts.dll	2017-06-30	19:57
DevComponents.DotNetBar2.dll	2019-03-25	13:54
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NPOI.OpenXmlFormats.dll	2019-03-25	13:54
PCANBasic.dll	2016-06-20	13:02
temp	2021-07-14	16:25

-The software installation is finished and up working now .



PROCEDURE

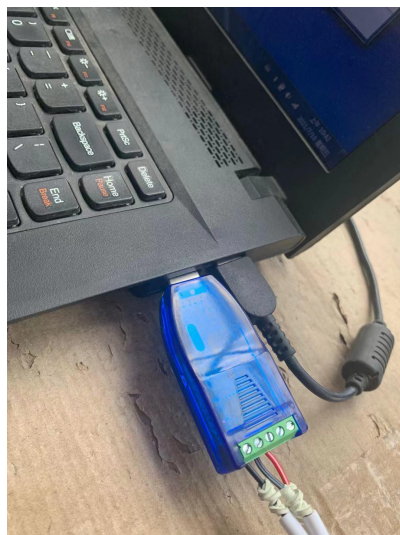
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HOW TO CONNECT SOFTWARE WITH CONTROLLER ?

-Step 1. Plug the "Data transfer cable" to controller and your laptop.



Data transfer cable



USB connector plugged to your laptop



4 Pin square connector plugged to vehicle programming interface on the wiring harness



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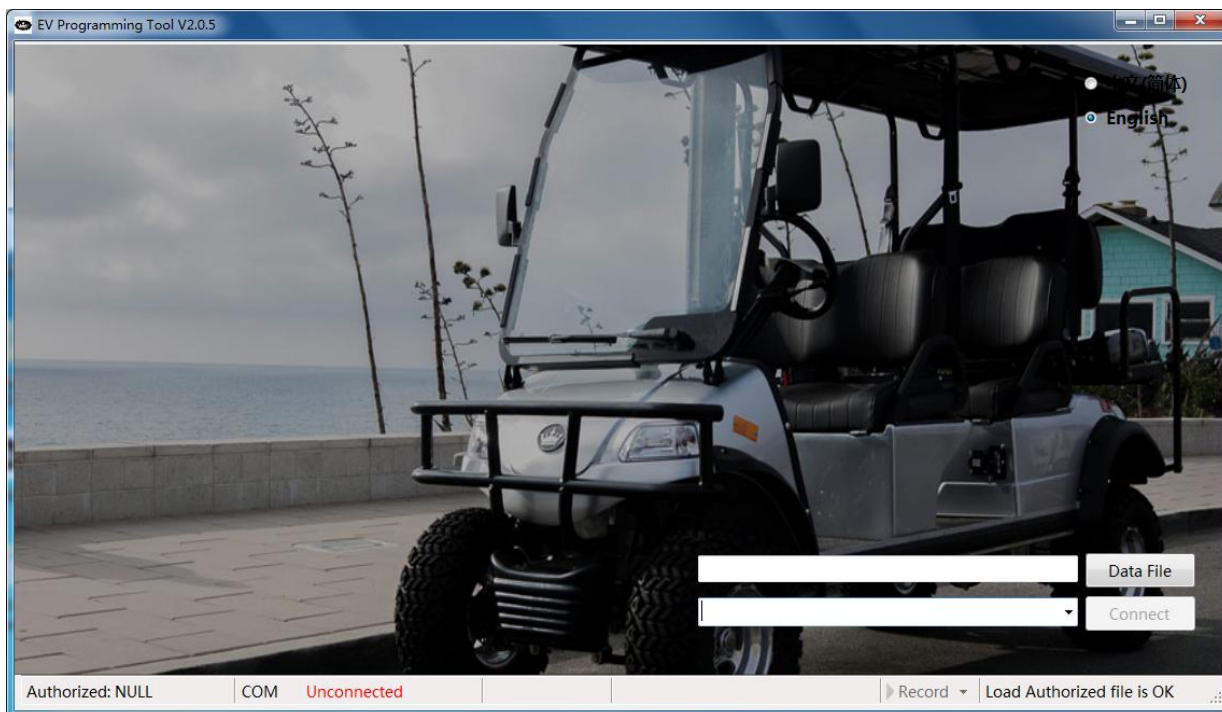
-Step 2. Turn on golf cart power supply (switch on key switch) .



-Step 3. Open “EVOLUTION” the interface software .



Click on software Icon



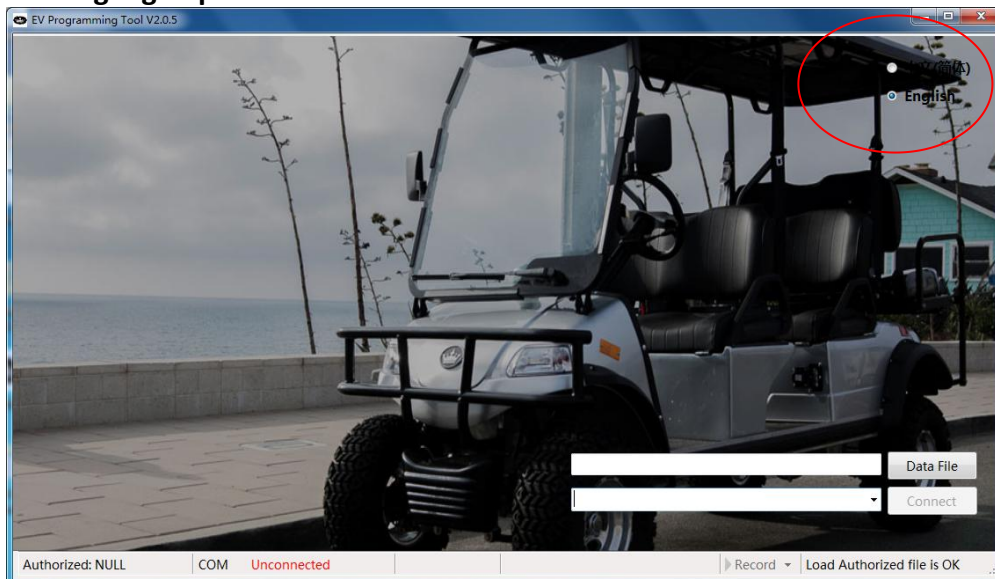
Software interface



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-Step 4. Select Language options.

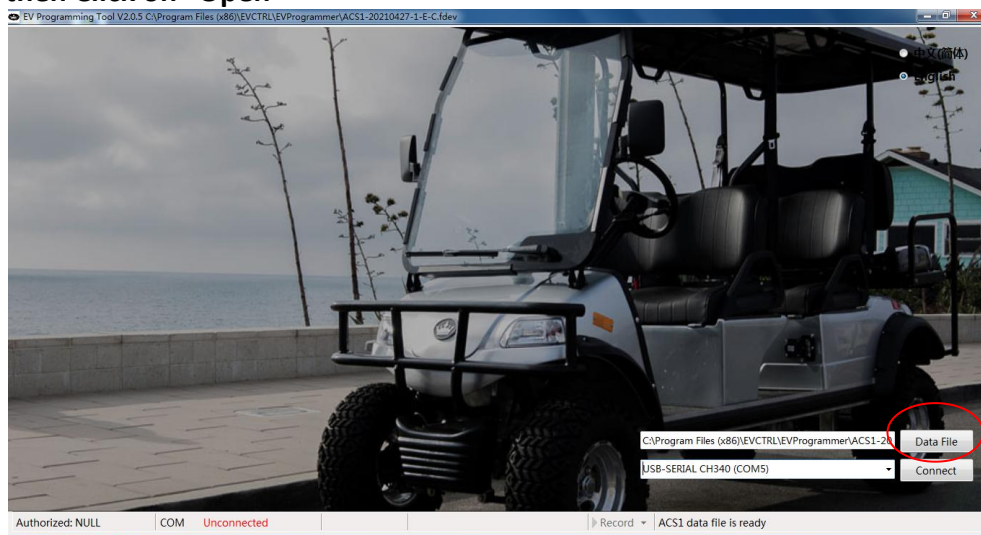


-Step 5. Load data file.

>Click on “Data file”Icon

>Select data file (data file is in the installation folder in C:\Program Files (x86)\EVCTRL \EVProgrammer)

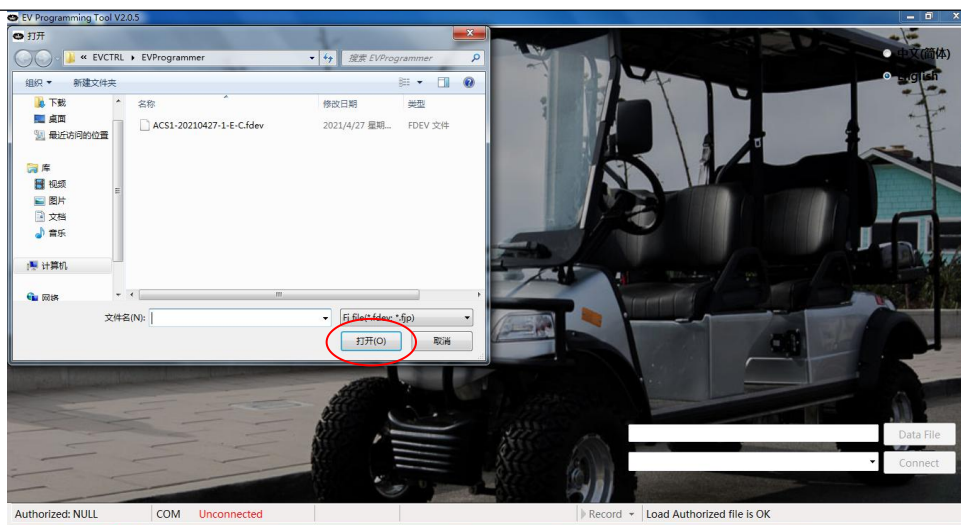
>Select file then Click on “Open”



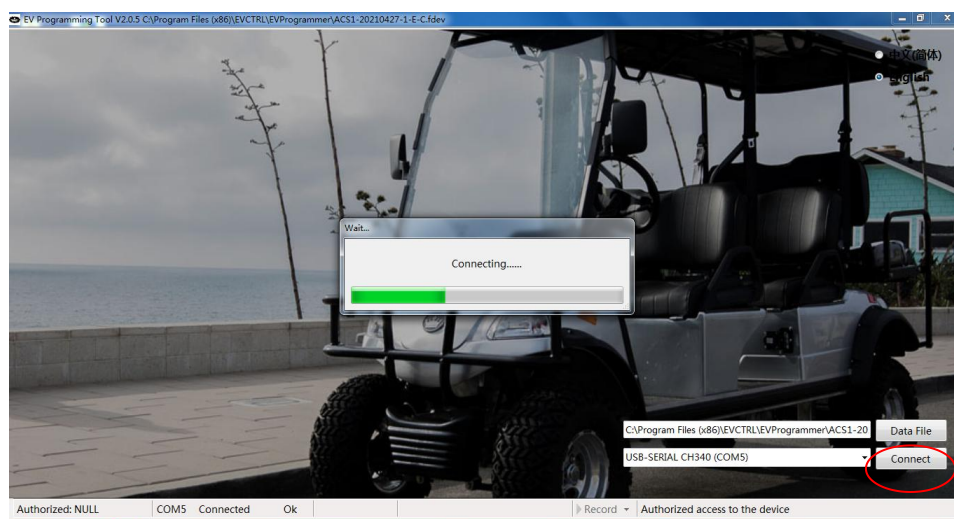


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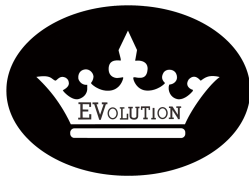
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-Step 6.Click “Connect” to establish the connection with Controller.



-The interface software is now connected with controller .



PROCEDURE

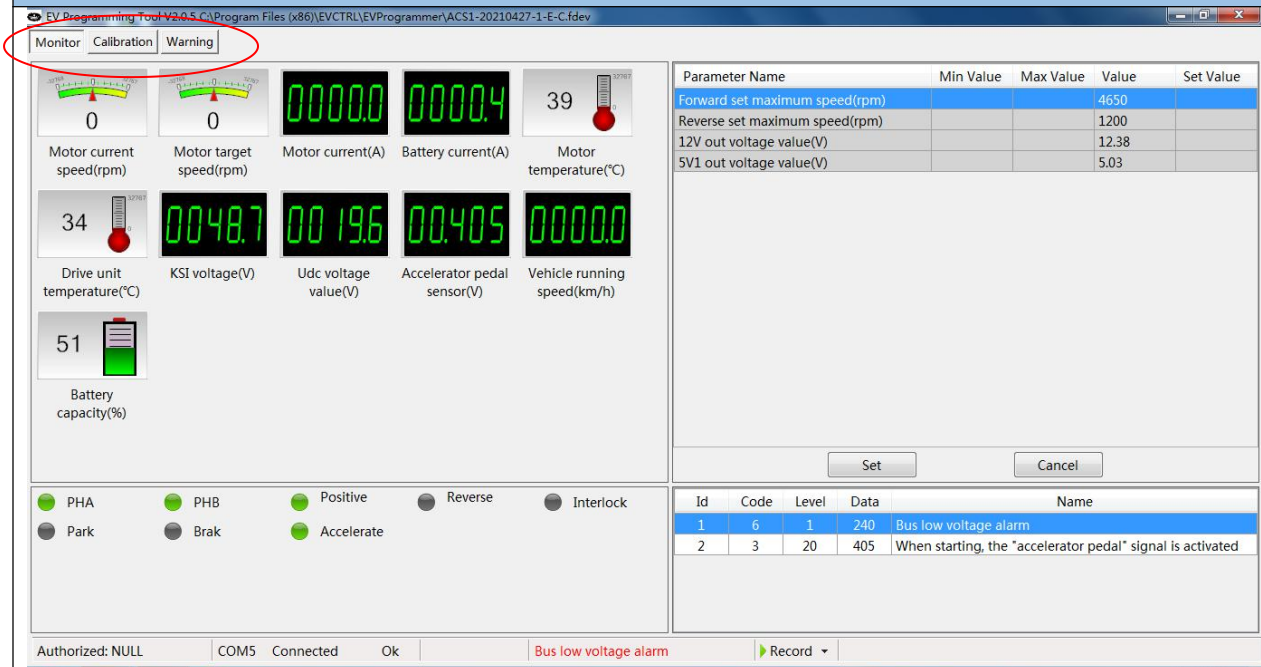
Reference: PR20210714-03

Version: 01.0

Category:

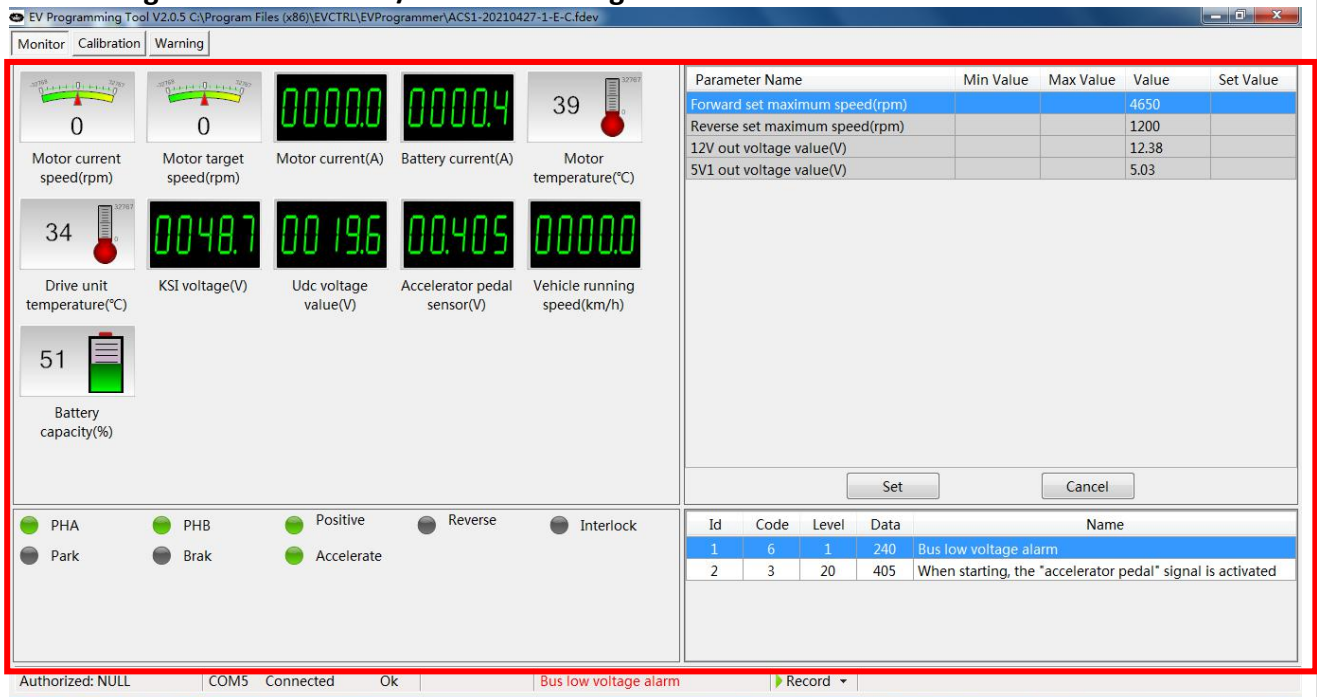
E

HOW TO USE INTERFACE SOFTWARE ?



-Main software menus .

- > “Monitor” for monitoring Instant vehicle status
- > “Calibration” for parameter set up /adjusting
- > “Warning” for active alarm /troubleshooting info



MONITOR



PROCEDURE

Reference: PR20210714-03

Version: 01.0

Category:

E

EV Programming Tool V2.0.5 C:\Program Files (x86)\EVCTRL\EVProgrammer\ACS1-20210427-1-E-C.fdev

Monitor Calibration Warning

Battery Energy consumption Brake pedal Standard gear mode Zonal gear mode Temperature Traction motor Electromagnetic brake Slop control High limit switch Remote control Slow mode

Accelerator Maintenance System parameter Lithium battery CAN bus Version information Turn speed limit Timing, mileage Emergency reverse Cargo weight System signal (AI) Speed calibration

System signal (DI) System signal (DO) Braking torque

Parameter Name	Min Value	Max Value	Value	Set Value
Battery current(A)			0.4	
KSI voltage(V)			48.7	
Battery voltage(BDI)(V)			45.1	
Battery capacity(%)			51	
Number of battery series	1	200	24	24
Minimum discharge time of BDI(min)	1	200	34	34
Discharge start voltage of a single battery(V)	0.01	320.00	2.13	2.13
Discharge end voltage of a single battery(V)	0.01	320.00	1.62	1.62
Discharge reset voltage of a single battery(V)	0.00	320.00	2.14	2.14
Undervoltage warning point of a single battery(%)	1	100	20	20
Undervoltage fault point of a single battery(%)	1	100	10	10
When under - voltage failure, limit vehicle speed enable	OFF	ON	ON	ON
Battery voltage undervoltage protection point(V)	5.0	200.0	36.0	36.0
Delay time of filtering voltage point of battery pack overdischarge cutoff(s)	1	100	30	30
Charge reset voltage of a single battery(V)	0.00	320.00	2.35	2.35
Charging start voltage of a single battery(V)	0.01	320.00	2.10	2.10
Charging end voltage of a single battery(V)	0.01	320.00	2.35	2.35
Allow to reset battery capacity value(%)	0	100	70	70
BDI reset	OFF	ON	OFF	OFF
BDI reset enable in when electrical reset	OFF	ON	ON	ON

Set Cancel

Authorized: NULL COM5 Connected Ok Bus low voltage alarm Record

CALIBRATION

EV Programming Tool V2.0.5 C:\Program Files (x86)\EVCTRL\EVProgrammer\ACS1-20210427-1-E-C.fdev

Monitor Calibration Warning

Current Alarm History Alarm

Id	Code	Level	Data	Name
1	6	1	240	Bus low voltage alarm
2	3	20	405	When starting, the "accelerator pedal" signal is activated

Alarm Description

Alarm Name Bus low voltage alarm

Alarm Process The main circuit breaker is disconnected and all functions of the motor are prohibited

Alarm Reason Bus voltage is below the minimum permissible threshold

Alarm Solution 1. Check the main circuit breaker and connection harness 2. Check the main circuit breaker 3. Check whether the threshold setting is reasonable 5. Replace the controller

Authorized: NULL COM5 Connected Ok Bus low voltage alarm Record

WARNING

>Current Alarm

>History Alarm