A male technician with a beard, wearing a grey t-shirt and blue overalls, stands in a modern workshop. He is holding a tablet computer with both hands, looking at the screen. In the background, there is a green Bosch diagnostic tool mounted on a stand. The workshop is well-lit and organized.

ESI[tronic] 2.0 Online

News 2023 | 1

- Secure Diagnostic Access (SDA)
Two-factor authentication (2FA) for VW Group brands
- All information at a glance,
readily available on a manufacturer basis
- Coverage for brand new vehicles
- Did you already know? System information
for 48V systems in the ESI[tronic] manuals

Secure Diagnostic Access (SDA) Two-factor authentication (2FA) for VW Group brands



As reported in the last ESI News, since the end of December 2022, access to protected diagnostic data of the **VW, Audi, Seat, Cupra and Skoda** brands requires two-factor authentication (2FA) in addition to logging in with the personal Bosch ID. But only if the user wants to open protected diagnostic data of the VW brands. The user is actively notified of this in the ESI[tronic]. This fulfills the latest security standard of the VW group, which is defined by the vehicle manufacturer independent of diagnostic providers.

Please note: At least the ESI[tronic] update 2022/4 must be installed to use the 2FA and thus unlock the protected data.

A 2FA is already common for a variety of applications in different areas, e.g. at payment service providers or for ordering goods at online mail order companies.

How does 2FA work for the brands mentioned above?

- The user receives an input field in ESI[tronic] for a number combination.
- The combination of numbers is displayed on the user's smartphone using a 2FA app (e.g., Google Authenticator), as is common with many 2FA solutions.
- If the user enters the combination of numbers in the input field, the protected data is unlocked for the user.

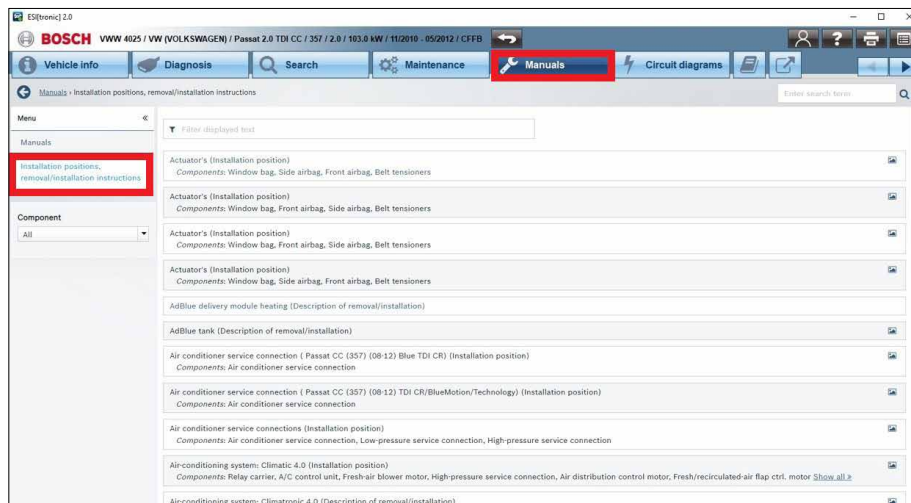
The user can find more details about this process step in the ESI[tronic] 2.0 Help Center as well as in the previous ESI News issue 2022 | 4.

All information at a glance, readily available on a manufacturer basis



As part of the integration of original manufacturer information, the accessibility of installation/removal descriptions and position information has been improved. You can now find these quickly and easily quickly and easily under the "Manuals" tab directly on the left as a separate menu item.

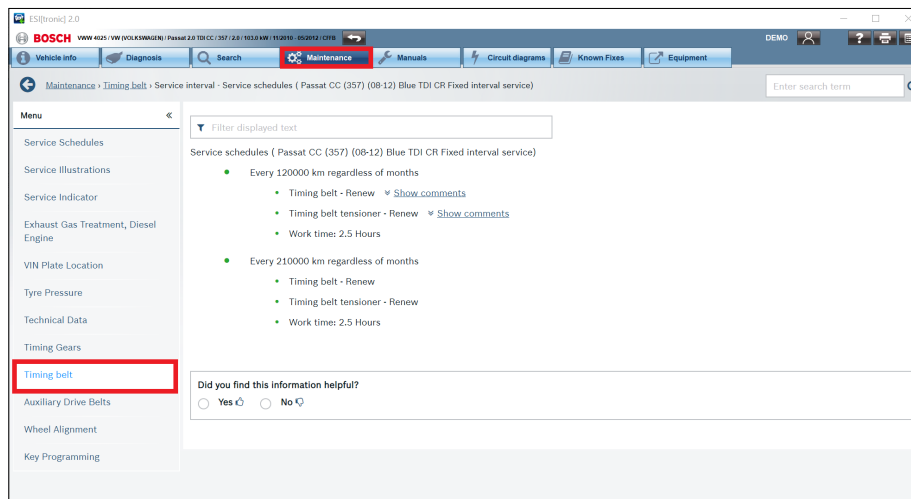
This provides you with fast, direct access to a wealth of useful information on the selected vehicle in the vehicle overview.





Access to information on timing belts has also been improved. This topic now also has a separate menu item on the left under the "Maintenance" tab, covering all information on

- Change intervals for timing belts
- Work times for renewal
- Change instructions



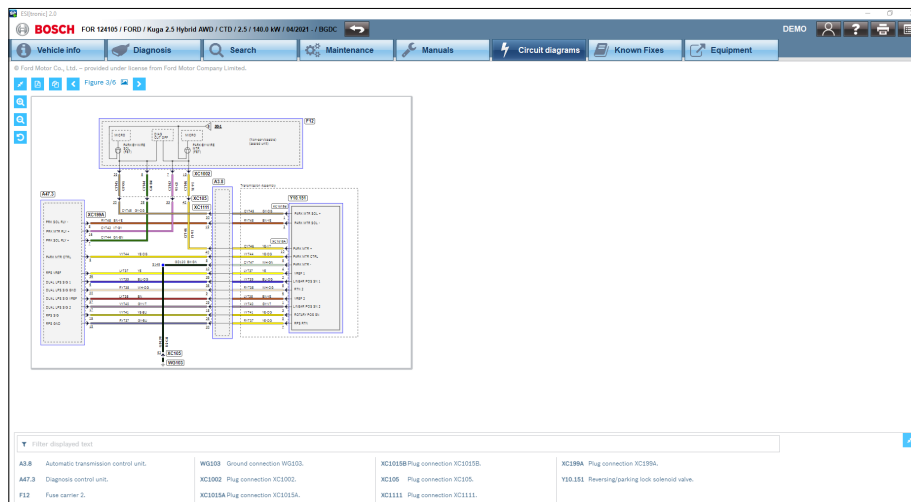
The screenshot displays the ESI[tronic] 2.0 software interface. The top navigation bar includes tabs for Vehicle info, Diagnosis, Search, Maintenance (highlighted in red), Manuals, Circuit diagrams, Known Fixes, and Equipment. The main content area shows the 'Timing belt' menu item highlighted in red in the left sidebar. The main content area displays service schedules for a Passat CC (357) (08-12) Blue TDI CR Fixed interval service, including intervals for 120,000 km and 210,000 km, with sub-items for Timing belt - Renew and Timing belt tensioner - Renew, each with a 'Show comments' link. A feedback question 'Did you find this information helpful?' is visible at the bottom with 'Yes' and 'No' radio buttons.



As a user, you can now benefit from another new feature: wiring diagrams in the original manufacturer layout, specifically adapted to ESI[tronic].

Based on a complex automation process in data creation, we adapt the manufacturer wiring diagrams with our Bosch-specific terminologies and integrate the wiring diagrams into our ESI[tronic].

Clear benefit for users:
Full information from the vehicle manufacturer, combined with all known functions and uniform naming in ESI[tronic].





The first wiring diagrams cover vehicle models from Fiat and Ford. Other models of these and other makes, such as Volkswagen, Audi, Skoda, BMW, Mercedes-Benz and Renault will be included step-by-step as part of the next ESI[tronic] 2.0 Online updates.

As announced in the ESI News 2022/3, a comprehensive concept for providing instructions on how to de-energise high-voltage systems has been created. The focus of any concept will always be to ensure the safety of users and up-to-date information.

Since summer 2022, a comprehensively described procedure for de-energising and verifying de-energisation of the VW e-Golf has been available to our users.

Instructions for vehicle models of other manufacturers have been published as part of further ESI[tronic] 2.0 Online updates. Further instructions will follow step-by-step based on the information provided by vehicle manufacturers. Due to country restrictions, not all information is available outside Europe.

Coverage for brand new vehicles



The initiative to quickly provide vehicle coverage for new vehicle models in ESI[tronic] 2.0 Online continues.

The following vehicle models were created for you only a few weeks after their market launch and are already available in ESI[tronic] 2.0 Online:

- **Mercedes GLC-Class [254] (RB key: MB 0137135, MB 0137135, MB 0137135)**
Market launch: November 2022, Availability in ESI[tronic]: January 2023
- **Audi e-tron Facelift 2022 (RB key: AUD0124155, AUD0137830)**
Market launch: November 2022, Availability in ESI[tronic]: January 2023

The focus is particularly on the systems and functions for the most important service and repair tasks on a new vehicle. The corresponding vehicle coverage is made available to you via the usual updates through the Diagnostics Download Manager (DDM).

Did you already know? System information for 48V systems in the ESI[tronic] manuals



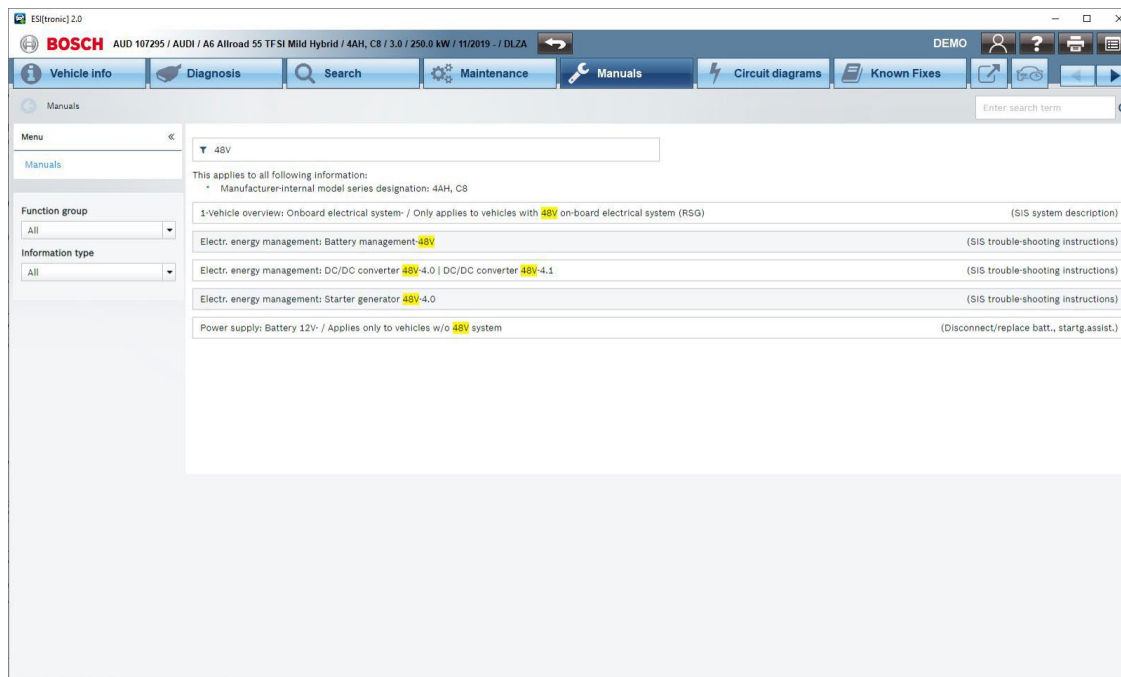
In addition to the regular 12V vehicle electrical systems, 48V vehicle electrical systems have meanwhile become an integral part of everyday life in a car workshop.

Mostly used in mild hybrid vehicles, this still applies to the low-voltage area and can be used without additional high-voltage training.

In addition to information on pure high-voltage systems, the diagnostic software ESI[tronic] offers technical information on 48V systems within the manuals and thus offers additional support in everyday workshop work.

This information concerns, among other things, **system descriptions** of complete 48V systems to support the overall understanding and the interaction of various components. The **installation positions** of the respective components are also available, as is the necessary **technical information** for correctly evaluating the diagnosis. The required **test data** is listed here, making set-/actual value comparisons possible. This significant upgrade thus grants users access to further information in relation to the latest vehicle technology.

Did you already know? System information for 48V systems in the ESI[tronic] manuals



The screenshot displays the ESI[tronic] 2.0 software interface. The top navigation bar includes tabs for Vehicle info, Diagnosis, Search, Maintenance, Manuals, Circuit diagrams, and Known Fixes. The 'Manuals' tab is active, and a search bar on the right contains the text '48V'. The search results are displayed in a list format, showing various system information entries related to 48V systems.

Menu

Manuals

Function group

All

Information type

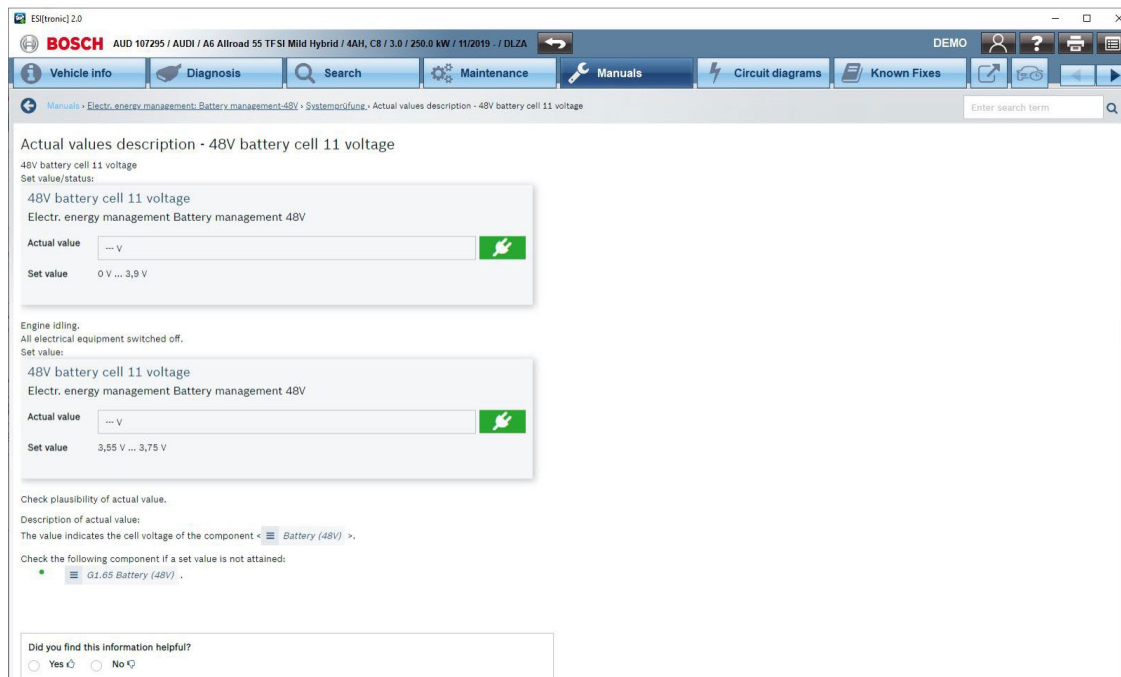
All

Enter search term

This applies to all following information:

- Manufacturer-internal model series designation: 4AH, C8
- 1-Vehicle overview: Onboard electrical system- / Only applies to vehicles with 48V on-board electrical system (RSG) (SIS system description)
- Electr. energy management: Battery management: 48V (SIS trouble-shooting instructions)
- Electr. energy management: DC/DC converter 48V-4.0 | DC/DC converter 48V-4.1 (SIS trouble-shooting instructions)
- Electr. energy management: Starter generator 48V-4.0 (SIS trouble-shooting instructions)
- Power supply: Battery 12V- / Applies only to vehicles w/o 48V system (Disconnect/replace batt., startg.assist.)

Did you already know? System information for 48V systems in the ESI[tronic] manuals



ESI[tronic] 2.0

BOSCH AUD 107295 / AUDI / A6 Allroad 55 TFSI Mild Hybrid / 4AH, C8 / 3.0 / 250.0 kW / 11/2019 / DLZA

DEMO

Vehicle info | Diagnosis | Search | Maintenance | Manuals | Circuit diagrams | Known Fixes

Manuals > Electr. energy management: Battery management > 48V > Systemprüfung > Actual values description - 48V battery cell 11 voltage


Actual values description - 48V battery cell 11 voltage

48V battery cell 11 voltage

Set value/status:

48V battery cell 11 voltage

Electr. energy management Battery management 48V

Actual value: 

Set value: 0 V ... 3,9 V


Engine idling.

All electrical equipment switched off.

Set value:

48V battery cell 11 voltage


Electr. energy management Battery management 48V

Actual value: 



Set value: 3,55 V ... 3,75 V

Check plausibility of actual value.

Description of actual value:

The value indicates the cell voltage of the component <  Battery (48V) >.

Check the following component if a set value is not attained:

-   G1.65 Battery (48V) .

Did you find this information helpful?

Yes No

Did you already know? System information for 48V systems in the ESI[tronic] manuals



ESI[tronic] 2.0

BOSCH AUD 107295 / AUDI / A6 Allroad 55 TFSI Mild Hybrid / 4AH, C8 / 3.0 / 250.0 kW / 11/2019 - / DLZA

DEMO

Vehicle info | Diagnosis | Search | Maintenance | Manuals | Circuit diagrams | Known Fixes

Manuals > Electr. energy management: Battery management-48V > Einbaulage - Steuergeräte im Kofferraum

Einbaulage - Steuergeräte im Kofferraum

Einbaulagen

Steuergeräte im Kofferraum

A10.22	Batteriemanagement-Steuergerät (48V).
A10.9	Bordnetz (48V) Spannungsmanagement-SG.
G1.6	Batterie (12V).
G1.65	Batterie (48V).
U8.5	Spannungswandler.

Did you find this information helpful?

Yes No

Figure 1/1

BE144301

Filter displayed text

- A10.22 Battery management control unit (48V).
- A10.9 Veh. ele. sys. (48V) volt. manag. CU.
- G1.6 Battery (12V).
- G1.65 Battery (48V).
- U8.5 Voltage converter.

Did you already know? System information for 48V systems in the ESI[tronic] manuals



ESI[tronic] 2.0

BOSCH AUD 107295 / AUDI / A6 Allroad 55 TFSI Mild Hybrid / 4AH, C8 / 3.0 / 250.0 kW / 11/2019 - / DLZA

DEMO

Vehicle info | Diagnosis | Search | Maintenance | Manuals | Circuit diagrams | Known Fixes

Manuals > 1-Vehicle overview: Onboard electrical system - / Only applies to vehicles with 48V onboard electrical system (RSG) - System information/approximate values - Overview > Technical description - Version of the onboard e... Enter search term

Technical description - Version of the onboard electrical system

System information/approximate values

Version of the onboard electrical system

-	•
G1.6	Battery (12V).
G1.65	Battery (48V).
G7	Generator / electric motor.
U8.5	Voltage converter.

Main feature(s):

- Component < Battery (48V) > with 38.0 ... 53.0 V output voltage.
- Lithium ion battery.

Advantages of system < Onboard electrical system >:

- Increase of the electrical power limit.
- Reduction of the required cable cross-sections, thus saving weight.
- Fuel saving due to the support of the component < Internal combustion engine >.
- In the operating modes described in the following the system < Onboard electrical system (48V) > provides support or increases comfort.

Operating modes of the system < Onboard electrical system >:

Energy recovery:

- Brakes with energy recovery (recuperation).
- The component < Battery (48V) > is charged by the component < Generator / electric motor >.
- With the system < Onboard electrical system (48V) > active, the component < Battery (12V) > is charged through the component < Battery (48V) > via the component < Voltage converter >.

In the following operating conditions, braking action can be reduced or not present due to recuperation:

- Component < Battery (48V) > is fully charged.
- Vehicle speed shortly before the vehicle is stationary.

EA100700

U8.5

G1.6

G1.65

G7

Filter displayed text

- G1.6 Battery (12V).
- G1.65 Battery (48V).
- G7 Generator / electric motor.
- U8.5 Voltage converter.