

# DIAMEX DX65

English Manual



## OBD2 ANALYZER

[www.diamex.de](http://www.diamex.de)

## Technical Description:

### OBD2 Handheld Diagnostic Device:

- automatic or manual selection of OBD2 protocols
- very fast automatic mode (protocol scan), 0,1s – 2,6s depending on the protocol
- ultra-fast boot complex, ready to use after only one second
- reads and displays the most important vehicle data (depending on the vehicle)
- LIVE display of sensor data (selectable)
- display of the vehicle identification number, if supported by the vehicle
- brand database – the device recognizes the vehicle brand to access individual data and error codes
- reads and displays the error code memory
- reads and displays freeze frame data
- deletes the error code memory
- multilingual (standard setting: English & German)
- more than 8,500 error codes as plain text
- measures the battery voltage



### OBD2 protocols of every currently existing vehicle are supported:

ISO9141-2

ISO14230-4 (KWP2000)

J1850 PWM

J1850 VPWM

ISO15765-4 (CAN, 11/29 Bit, 250/500 kBaud) incl. sub-protocols

- electricity supply via the OBD2 connection from the vehicle, internal 12V power supply is applicable
- full graphics 132x32 LC display – contrast adjustable. Ultra-light white background illumination
- acoustic signals to support outputs, acoustic signals when error codes are found
- 2 LEDs to display the MIL status and to control the data flow
- 2 buttons to operate the device
- connect it to an OBD2 standard cable
- dimensions: 80x135x30 WxHxD, about 150g

## Manual

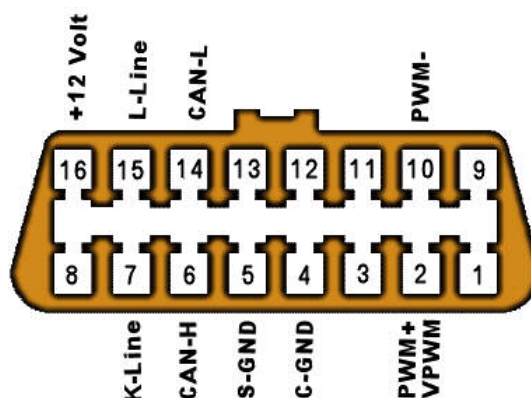


Please read the manual carefully. Success in on-board diagnostics requires a certain time to familiarize yourself with the device. With processor-supported electronic devices it is necessary to look carefully at the complex possibilities of the analyzer to reach results which can be examined and comprehended. The operation of the device is structured and intuitive. If there are problems in spite of this you can consult our websites and the Internet forum to receive the latest information on the product.

## OBD2 Diagnostic Device

### Connection and Operation:

- Please insert the included OBD2 interface cable in the OBD2 socket of the vehicle. It should be located within a one meter radius of the driver's seat.
- layout of the OBD2 interface (pictured)
- *Please always start the engine during the first diagnostic of a vehicle which has not been diagnosed before. This way, one gets clear sensor data.*



### Operation of the Device:

In this manual the left button is designated as button A and the right one button B. Button A always navigates upwards or out of the menu – to use the escape function push it a little longer. Button B navigates downwards and works like an “enter” button if one selects the menu item and presses the button longer.

After getting used to it for a few minutes one is accustomed to the principle and can operate the device quickly.

### Main Menu:

After connecting it to the diagnostic socket the device displays its designation and the current firmware version. Afterwards, the main menu is displayed. In the lower section there are the settings like the choice of the menu language or brightness/contrast.

Navigate up- or downwards with the buttons A or B, pressing B longer selects the respective action.



### Setting Brightness and Contrast of the Display:

These settings are already adjusted. The settings contrast and brightness can be adjusted in the submenu. Button A reduces, button B increases the current setting. If button A is pressed longer the submenu will be exited.



### Battery Voltage:

Measuring battery voltage is quite exact. Please note that the DX65 analyzer is not calibrated and the battery voltage depends on many factors. Therefore, this value is an approximation.



### Start the Diagnostic:

Firstly, one selects the start of the diagnostic in the main menu. Press and hold button B longer and the automatic connection will be started. After a successful connection the current status is displayed. The picture depicts no grave errors, two temporary errors, the MIL (Malfunction Indication Lamp) is switched off and an OBD2 compatible ECU was detected. The diagnostic menu opens when button B is pressed again. Then saved errors, the error environment, and the vehicle's sensor data can be displayed.



## OBD2 Diagnostic Device

**Manual Selection of Protocols:**

In few cases the automatic protocol scan cannot connect to the vehicle so the protocol can also be selected manually. PWM, VPWM, ISO, KWP, and CAN can be chosen. Please inform which protocol is supported by your vehicle. Connection problems are common with vehicles constructed in 1999/2000 (petrol) and diesel cars from 2003/2004. Please contact our technical support in case of problems.

**Deletion of Errors:**

Press button B longer on the menu item "delete error codes" button B resets the OBD2 error memory. Button A exits the menu. Please make sure that all problems which caused the error messages were cleared up and fixed. Otherwise errors which were not fixed permanently will probably appear immediately again. Then it seems as if the error cannot be erased. Please consult your local garage then.



If there are no errors stored in the in the OBD2 error memory of the vehicle the error menu is automatically inaccessible. If you suspect that there are errors which are not displayed please check whether the MIL in the cockpit is lit up. If this is not the case the error might not be accessible over the OBD2 norm system. Please read the related information stated at the bottom of this manual.

**Error Environment:**

If errors are saved, they and their environment (freeze frames) can be examined. As soon as an error occurs the ECU saves relevant data of the event, e.g. rpm, velocity, temperatures etc. This way, one can probably locate the cause of the error.

**Sensor Data:**

In the sensor data menu the current information from the vehicle can be displayed via available sensors. The amount of displayed variables varies and depends on the vehicle.

The data is refreshed depending on the protocol. PWM and CAN are very fast protocols with a high refresh frequency. ISO and KWP2000 have a significantly longer access time. 2-3 variables per second are normal. When a variable is selected with button A it can be displayed bigger with button B.

**Information Menus:**

In these menus there is more detailed information on the utilized protocol of the diagnosed car and the vehicle itself. If the function is supported by the vehicle, the VIN (Vehicle Identification Number) can be displayed as well as the PID list which is significant for the supported sensor data of the vehicle.

Only petrol cars constructed in 2000/2001 or later and diesel vehicles constructed in 2003/2004 or later have OnBoardDiagnostic which is necessary to operate the DX65. The error message „no connection to the ECU“ hints at a vehicle which is not compatible. Please consult databases on the Internet on this topic.



## OBD2 Diagnostic Device

### Vehicle Attachment System:

The DX65 analyzer is equipped for the patented Richter attachment system (optional). This innovative and modular concept makes a variable and safe attachment of the device in the vehicle possible. The components of this system can be obtained at retailers, at <http://www.hr-navicomfort.de> or contact us.

### Hints and Maintenance:

Please contemplate deleting the error memory because important data on the driving behavior is stored there which the vehicle has to “re-learn” after some kilometers of driving. It should also not be deleted shortly before an inspection because important variables are reset and the vehicle might not pass the examination. The device can be operated within a temperature range from -10 to +60 degrees Celsius. Opening the device leads to a loss of guarantee.



### Warning:

In the EU it is not permitted to operate this diagnostic interface while driving.

### Liability Note:

The manufacturer is not liable for damages caused by the operation of the DIAMEX DX65 device.



### OBD2 CANNOT be used to:

access airbags, ABS, maintenance intervals and comfort electronics via OBD2. OBD2 analyzers are generally not applicable to disable, read or reset security relevant messages, error settings, maintenance intervals, comfort electronics or adjusting the speedometer.

**Neither ABS, ESP nor airbag displays can be disabled.**

**Maintenance intervals are reset by garages (or specialized interfaces).**

**Comfort electronics can only be accessed by special tools which are specific to every manufacturer.**

These actions are not connected to OBD2's approach and were purposely not included in

the OBD2 specifications. That is why no manufacturer has to grant access to the necessary commands.

Every manufacturer can assign different command structures to these parts. That is why a standard diagnostic via OBD2 is impossible in these cases.



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