

BODAS-service

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Replaces: 10.10

Data sheet

Version 3.x



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Features

The BODAS-service PC software tool provides a convenient and user-friendly method of executing service functions for BODAS controllers from Rexroth. Parameters could be displayed and edited, process variables displayed, and their values graphically plotted and recorded. In addition, error messages could be read out, reset as well as the application's diagnostic configuration configured. Furthermore, functions are available for reading out and writing to the controller EEPROM.

For BODAS controllers, equipped with CAN diagnosis, extensive version information on the controller is displayed. For these controllers, in the event of an emergency, full access to all process variables and parameters is possible for a single service session via an "Emergency Access" (requires only the BODAS-service DEMO version).

BODAS-service also offers an option for the loading of application software, so-called HexFiles, onto BODAS controller RC and the transfer of display configuration Files onto the BODAS Display DI3.

The respective functions are enabled by a USB hardlock (license control).

BODAS-service contains BODEM 25 and FT2 (Not available from Windows 7).

The following license versions can be selected:

- BODAS-service Diagnosis (contains BODEM25 license)
- BODAS-service Flash Tool
- BODAS-service Full Version (contains BODEM25 license)

All of the listed functions can be executed on a PC or laptop.

Ordering code

BODAS-service 3.X is available from Rexroth as follows:

License version _____	Material numbers
Diagnosis _____	R902109418
Flash Tool _____	R902109417*
Full Version _____	R902109416*

Note

Version administration of BODAS-service:

The Index X defines the Version of BODAS-service (e.g. status 09/2011 = 3.3).

The Version with the higher Index defines always the latest Version and is always backwardscompatible to the former Versions.

Maximum two Updates of BODAS-service are scheduled per year.

Updates can be downloaded under www.boschrexroth.de/mobile-electronics under the heading BODAS Tools.

Main components

- CD-ROM
- License (USB dongle)

Required components

- **Appropriate RS232 or CAN connection cable**
from a serial port of the PC/Laptop (available COM port) or a connection from the interface of a CAN adapter to the CAN interface in the wiring to the controller
- **Flash Adapter FA1**
for software transfer (flashing of application software) from PC via the serial interface RS232 to a BODAS controller RC series 20 and 21 and controller MC
- **CAN-USB interface**
from Vector (CANcardX, CANcardXL, CANcaseXL) or Peak (PCAN-USB) to the CAN interface of the controller

This connection cable and the CAN-USB interface are not included in supply of the PC tool.

The connection cable (one cable for CAN and RS232), Flash Adapter FA1 and a CAN-USB interface can be ordered from Rexroth under the following material numbers.

– Connection cable _____	R902109422
– Flash Adapter _____	R902045960
– Interface CAN-USB _____	R902602780

Optional bundles:

The BODAS-service bundles contain the tool, the connection cable as well as a CAN-USB interface.

These bundles can be ordered from Rexroth under the following material numbers:

- BODAS-service Diag bundle _____ R902109421
- BODAS-service Flash Tool bundle _____ R902109420*
- BODAS-service Full Version bundle _____ R902109419*

* To transfer software from PC to a BODAS controller RC series 20 and 21 via the RS232 interface a flash adapter FA1 is required. This is not included in the Bundles and must be ordered separately!

System requirements

- Personal computer with 500 MHz Pentium II microprocessor (minimum)
- VGA video adapter or video adapter with a resolution of at least 1024x768 and at least 16 bit colour quality
- Minimum 512 MB main memory (RAM)
- One free serial or CAN interface (depending on selected communication interface)
- One free USB interface (for license key - USB dongle)
- Available hard disk capacity > 200 MB
- Java runtime environment (installation occurs automatically)

Operating system

- Windows 2000
- Windows XP
- Windows Vista
- Windows 7
(Only for BODAS-service. Not available for FT2 and BODEM)

Program installation from CD

Using the [Run] function in the [Start] menu, start "BODAS-service 3.xxx_Setup.exe" from the CD-ROM.

All further instructions are provided on the screen. During the installation process you will be offered the choice to install BODEM25 and FT2. These earlier versions of BODAS tools for Windows 2000, XP and Vista are intended for field service of controllers series MC.

Note

System administrator rights are required in order to install the BODAS-service software on Windows.

Updates

Current BODAS-service program updates can be found on the Internet under www.boschrexroth.com/mobile-electronics under the header "BODAS-Tools" or within the Rexroth media directory under the search criteria "Diagnosis Tool BODAS-service". It is recommended to check personally for a BODAS-service update at least every 6 months!

Start-up and operation

BODAS-service

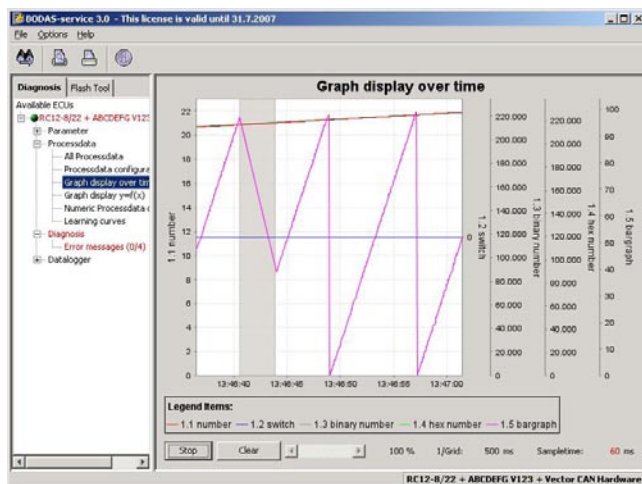
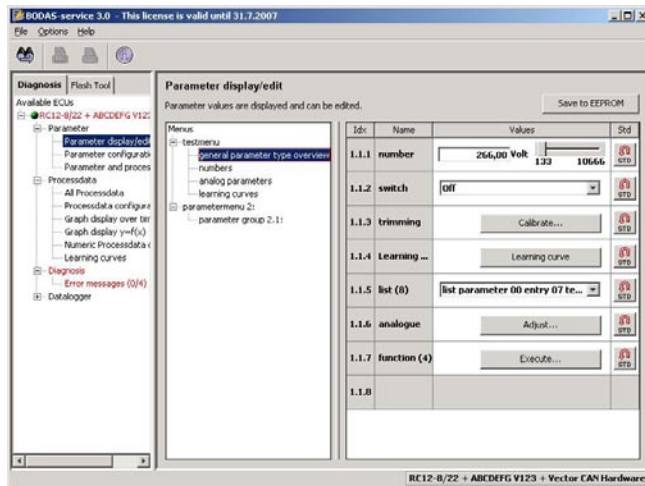
After starting the program, the last configuration (automatic query) can be loaded (note that there is start delay the first time the program is started due to loading of the Java environment. This startup delay will be not displayed (e.g. with a "sandglass"). After the initial program start a delay of 30 seconds, due to the startup of the JAVA Environment, is normal). If the last configuration is not used or if the last configuration cannot be confirmed by the connected hardware, BODAS-service Diagnosis must first scan for connected devices. This can be used for automatic scanning of the serial- and CAN interface for BODAS controllers. The serial interfaces (COM ports) to be searched must be correctly configured prior to performing the scan (with the File → Interface menu item).

With the BODAS-service Flash Tool, it is possible to scan for connected devices using the System Scan function as well as to use the interface selection to directly flash (download application software) a BODAS controller.

The BODAS-service Diagnosis Configurator can be activated and deactivated via the "Options" menu.

A detailed functional description of the tools can be found in the online help. This can be accessed after starting the program by pressing the F1 key.

Typical applications



Function/operating notes

The BODAS-service PC software tool provides a convenient and user-friendly method of executing service functions for BODAS controllers from Rexroth. Depending on the license version which is purchased, the tool is characterized by the following functions:

- Extremely user-friendly, through Windows user interface, free configurable work flow and online help
- Simultaneous display of multiple parameters for modification settings
- Simultaneous display of multiple process variables in graphical or numeric form
- Printout of all settings and process variables for documentation purposes
- Clear and easy-to-understand display of error messages
- Easy-to-use data logger: Save measured values (process variables and parameters) to the hard disk
- Selectable and expandable program language
- Adjustable device language (relevant to controller data, up to 4 languages available)
- Diagnosis Configuration for a BODAS or C application on BODAS controller RC
- Transfer software from PC to a BODAS controller RC (flashing of application software)
- Transfer of Display configuration Files onto BODAS Display DI3.
- Save the data contained in the EEPROM of a BODAS controller or transfer an EEPROM file (EPR file) to a BODAS controller
- Command line control option for various BODAS functions, e.g. flash programming or EPR file download

Additional functions for BODAS controller RC beginning with CAN diagnosis:

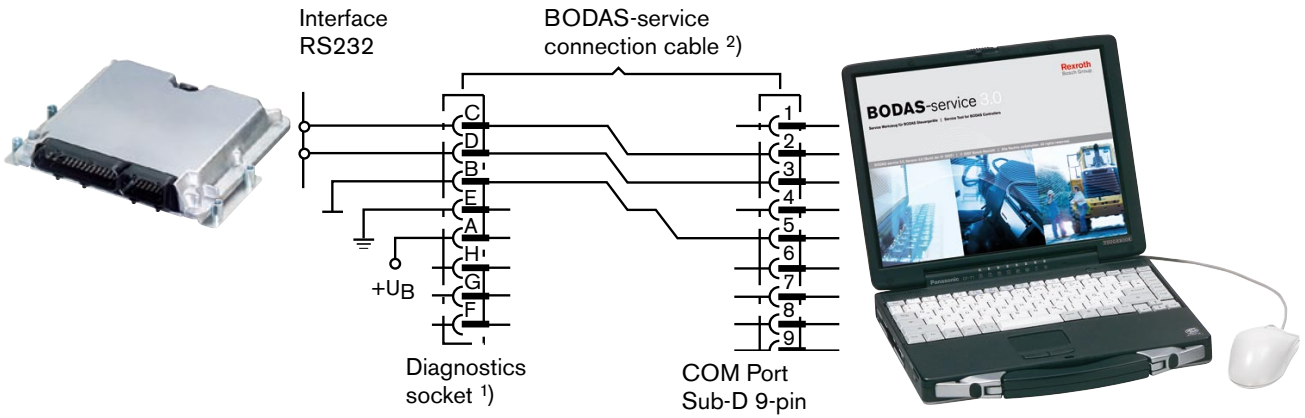
- Display of extensive version information
- Emergency release of all parameters and process variables via an "Emergency Access" (beginning with the BODAS-service DEMO version) for a one-time connection by means of the "Seed and Key" process

Note

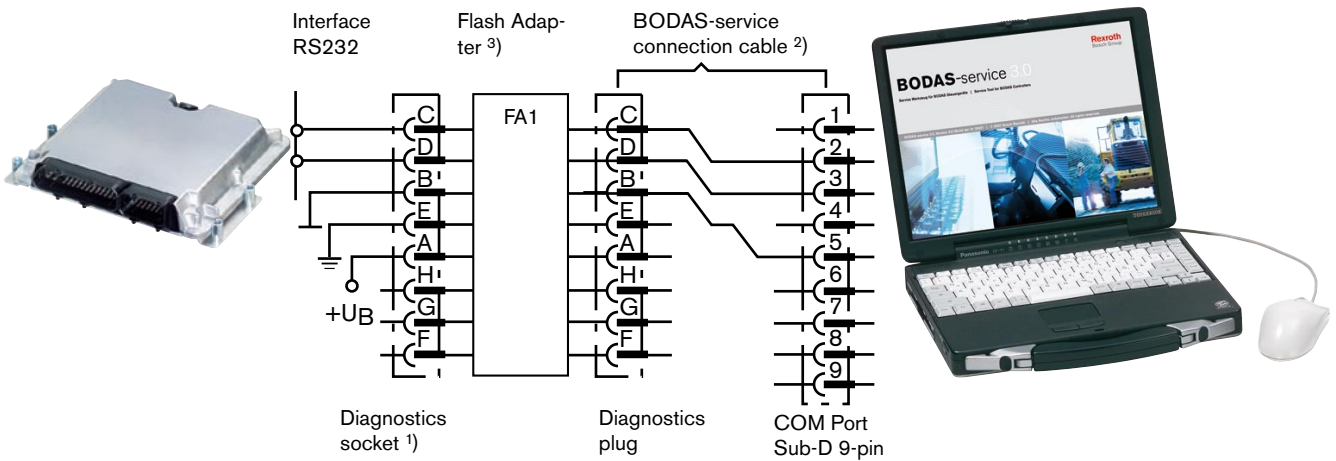
A demo version of BODAS-service 3.x – capable of displaying data only – is available as a free download on the Internet at www.boschrexroth.com/mobile-electronics under the header "BODAS-Tools" or within the Rexroth media directory at the search criteria "Diagnosis Tool BODAS-service". The demo version does not allow to modify, save or delete any parameters or data.

Connection variants

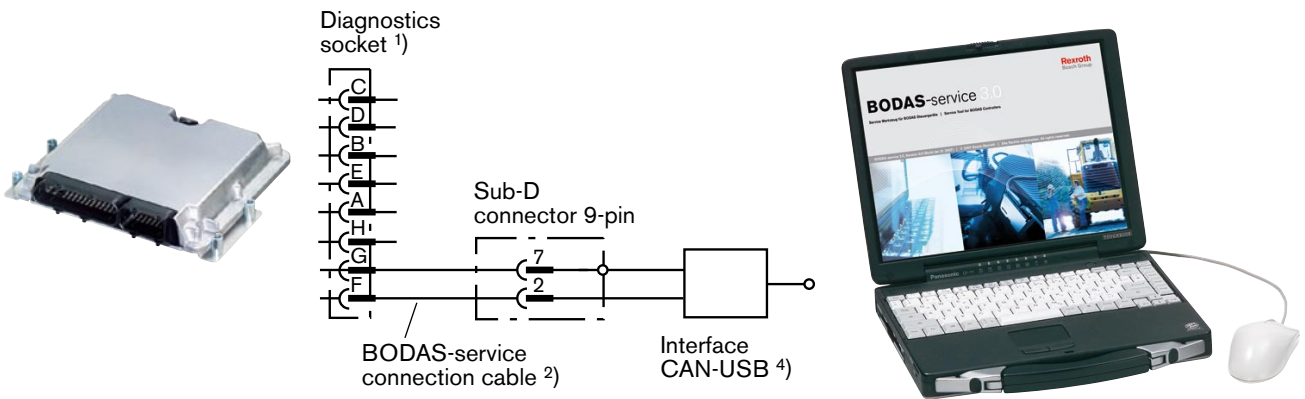
Variant 1: RS232 without flash function



Variant 2: RS232 with flash function



Variant 3: CAN with and without flash function



Connection variants

1) Ordering code for the Metallock-Bantam diagnostics socket, manufacturer: e.g. FCI

Consisting of	FCI order designation
Socket	UTG012-8S
8 connector contacts	RC16M23K
Cable clips	UTG12PG
Dust cap	UTP12DCG

The diagnostics socket is available from Rexroth under material number R909831291.

2) The BODAS-service connection cable is available from Rexroth under material number R902109422.

3) The Flash Adapter FA1 is available from Rexroth under material number R902045960.

4) The CAN USB Interface is available from Rexroth under material number R902602780.

Assembly of the BODAS-service connection cable

Material number R902109422

X1

Metallock-Bantam

for connection to the FCI Metallock-Bantam diagnostics socket R909831291

X2

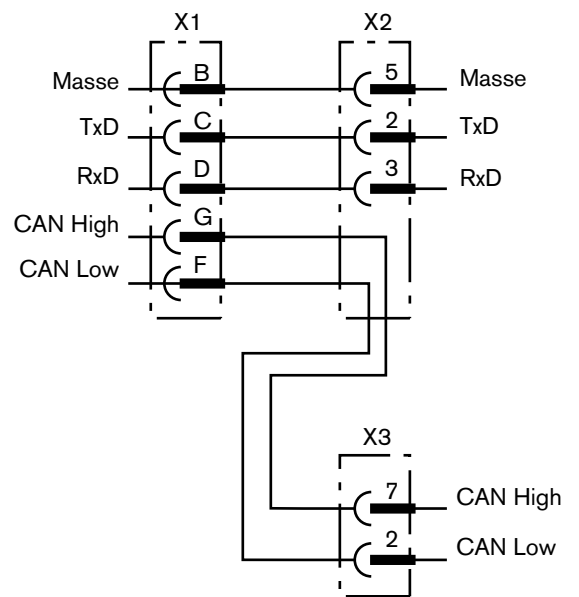
Sub-D connector, 9-pin,

for connection to RS232 Sub-D interface

X3

Sub-D connector, 9-pin,

for connection to CAN Sub-D interface



Note

1. The respective interfaces may be damaged if the RS232 cable interface is connected to a CAN-USB interface or the CAN cable interface is connected to the RS232 interface.
2. The BODAS-service connection cable offers no EMC protection through shielding or twisted pair.
3. The BODAS-service connection cable has protection class IP 20.
4. The BODAS-service connection cable is designed for operating and storage temperatures from -40°C to +70°C.

Safety notes

General instructions

- The proposed circuits do not imply any technical liability for the system on the part of Bosch Rexroth.
- The use of BODAS-service in the standard working mode of the machine is not permissible.
- Working on the PC with BODAS-service in combination with a control unit or display in a machine or vehicle is only permissible during commissioning of the machine or during service operations. Appropriate safety measures must be provided against hazards caused by unexpected operational states.
- Changing parameters or loading (flash-programming) software onto the BODAS controller RC or BODAS display may only be performed by trained and experienced specialists who are suitably familiarized with both the components used and the complete system.
- When performing flash-programming, the user is responsible for ensuring that the software to be flash-programmed is compatible with the BODAS RC or BODAS display hardware/vehicle in question.
- Incorrect parameter settings resp. programming by using BODAS-service may create potential hazards while the machine is in operation.
It is the responsibility of the machine manufacturer to identify hazards of this type in a hazard analysis and to bring them to the attention of the end user. Rexroth assumes no liability for dangers of this type.
- System developments, installations and commissioning of electronic systems for controlling hydraulic drives must only be carried out by trained and experienced specialists who are sufficiently familiar with both the components used and the complete system.
- While commissioning and maintenance of the machine with BODAS-service the machine may pose unforeseen hazards. Before commissioning the system, you must therefore ensure that the vehicle and the hydraulic system are in a safe condition.
- Make sure that nobody is in the machine's danger zone.
- No defective or incorrectly functioning components may be used. If the components should fail or demonstrate faulty operation, repairs must be performed immediately.

Notes on the installation point and position

- Connect the RC controller to a PC with the BODAS-service connection cable only. The BB-3 connection cable must not be used! Incorrect connection cables or wiring could cause the PC interface to be destroyed!
- The control unit and the PC must be switched off when the BODAS-service connection cable is connected or disconnected.
- When using the BODAS-service flash function, the drive unit (e.g. diesel engine) must be switched off during data transmission to the BODAS controller!

Intended use

- Operation of the BODAS-service must generally occur within the operating ranges specified and released in this data sheet, particularly with regard to voltage, temperature, vibration, shock and other described environmental influences.
- Use outside of the specified and released boundary conditions may result in danger to life and/or cause damage to components which could result in consequential damage to the complete system.

Improper use

- Any use of the BODAS-service other than that described in chapter "Intended use" is considered to be improper.
- BODAS-service may be used on a restricted base only for development, configuration and parametrization of safety relevant applications. Details for safety relevant requirements can be provided on request by Bosch Rexroth Mobile Electronics.
- Use in explosive areas is not permissible.
- Damage resulting from improper use and/or from unauthorized interference in the component not described in this data sheet render all warranty and liability claims void with respect to the manufacturer.

Safety notes

More detailed information

- More detailed information on BODAS-service may be obtained from www.boschrexroth.com/mobile-electronics under the heading BODAS Tools.
- Pay regular visits to our home page for the latest product information and information about updates.
- Disposal of BODAS-service must be performed professionally by the customer.
- Copying, translation and distribution of Bosch Rexroth software is prohibited under copyright law.

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Subject to change.