

# BODAS DCT Display Configuration Tool

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1/6

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## Data sheet

PC-Software, Version 1.0 and 2.0  
Graphic configuration tool for  
BODAS display DI3



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## Features

- PC software for creating a configuration file for BODAS display DI3
- Windows-based user interface
- Graphic-supported configuration process for:
  - Creating device setup
  - Creating graphic interfaces for individual display page (e.g. dashboard)
  - Assigning events (CAN bus, keys, rotary dials, etc.) to actions
- Compilation function for configuration file
- Download configuration file to DI3 display
- Parameterization and diagnostic function for BODAS RC-controllers connected to CAN bus

## Ordering code

BODAS DCT/10 \_\_\_\_\_ R902109631

BODAS DCT/11 \_\_\_\_\_ R917008413

DCT/10 (software-version 1.0) is compatible only with BODAS displays DI3 series 10.

DCT/11 (software-version 2.0) is compatible only with BODAS displays DI3 series 11.

## Required components

The following components are required for the display configuration process and/or during commissioning/service:

- **BODAS display DI3 Standard series 10 (R902109513) / series 11 (R917008411) or DI3 Video series 10 (R902109505) / series 11 (R917008412)**  
6.5" multifunction color display for mobile applications
- **Connection cable (to be assembled by user)**
- Needed for DI3 display power supply and for connecting PC and DI3 display for downloading DCT configuration file
  - DEUTSCH DT06-12SA 12-pin mating connector (R900877038) for display wiring harness connection
  - 9-pin SUB-D connector female
  - CAN termination resistor 120 ohm
- **CAN-USB interface (R902602780)**

## System requirements

- IBM compatible personal computer with at least Pentium II microprocessor (> 1 GHz)
- Operating system, either Windows 2000, Windows XP, Windows 7
- Graphics board with a resolution of at least 1024 x 768
- Free USB 2.0 interface for connecting the CAN-USB interface
- Minimum 256 MB vacant RAM
- Free Harddisk > 100MB recommended

## Program installation

Perform installation process in the following order:

- The complete documentation for BODAS DCT can be found on the DCT product CD as an integrated tool-help which could be activated with „F1“ function button during a DCT session.  
Please read this carefully before using the DCT. Only use the software according to this documentation.
- Install drivers for the CAN-USB interface (R902602780) as per instructions on separate data storage medium (PEAK Systems Product CD).
- Start from setup.exe (application). The installation process is started via Install Shield.
- Start the DCT program by calling up the DCT application (BODAS-DCT).

# Description

## BODAS DCT (Display Configuration Tool)

The Rexroth software tool BODAS DCT (Display Configuration Tool) offers the user a Windows-based interface for easy, customer-specific configuration of

- Device settings
- Graphic display pages (e.g. dashboard)
- Fonts
- Parameter settings and diagnostics pages
- Menus
- Dialog boxes/pop-ups
- Alarm messages
- Video pages (DI3 Video only)

The design, layout and number of display elements for each display page can be freely designed by the user on the PC. Prior knowledge or knowledge of programming is not required.

The BODAS DCT enables predefined or freely designed elements and bitmaps (e.g. customer logos, display instruments, diagrams, etc.) to be integrated easily in the display pages designed by the user.

## BODAS DCT library

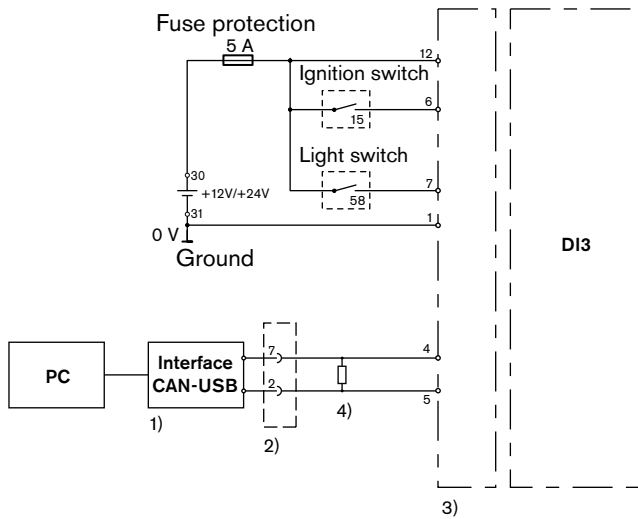
The library supplied with the display offers the BODAS DCT user the option to use a set of predefined graphic elements to design the display pages, in order to create an operational system in the shortest time.

A list of available library elements is shown below:

- Dash board instruments (e.g. temperature, rpm, speed, fill level) in gauge or bar graph format
- Value fields
- Table elements
- Rectangles, lines, circles
- Pictograms
- Text fields
- Dialog boxes/pop-ups

# PC connection with DI3 via CAN-USB interface

## Connections

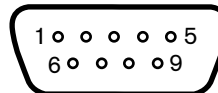


- 1) CAN-USB interface (R902602780)
- 2) SUB-D 9-pin connector female (not in the delivery content)
- 3) DEUTSCH DT06-12SA mating connector (R900877038)
- 4) CAN 120 Ω termination resistor (not in the delivery content)

## CAN-USB interface



– SUB-D out connector pin assignment:



Pin	Assignment
1	+12V/+5V/not assigned
2	CAN L
3	CAN-GND/not assigned
4	not assigned
5	not assigned
6	CAN-GND/not assigned
7	CAN H
8	not assigned
9	+12V/+5V/not assigned

The interface can be obtained under material number R902602780 from Bosch Rexroth

# Safety instructions

## General instructions

- The proposed circuits do not imply any technical liability for the system on the part of Bosch Rexroth.
- Working on the PC with BODAS DCT in conjunction 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 display DI3 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 display hardware/vehicle in question.
- Incorrect parameter settings on the BODAS display DI3 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. Bosch Rexroth assumes no liability for dangers of this type.
- The display firmware must be installed and removed by Bosch Rexroth or by the authorized partner concerned in order to uphold the warranty.
- It is not permissible to open the BODAS display DI3 or to modify or repair the unit. Modification or repairs to the wiring could result in dangerous malfunctions. Repairs to the BODAS display DI3 may only be performed by Bosch Rexroth or by an authorized partner.
- Make sure that the display configuration does not lead to safety-critical malfunctions of the complete system in the event of failure or malfunction. This type of system behavior may lead to danger to life and/or cause significant damage to property.
- When using cameras in combination with BODAS display DI3 Video, please note that the displayed picture can show distortion, depending on the curvature of the camera-lens (fish-eye effect). Take adequate account of this deviation when operating your system.
- 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 the BODAS display DI3 the machine may pose unforeseen hazards. Before commissioning the system, 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

- Do not install the BODAS display DI3 close to parts that generate considerable heat (e.g. exhaust).
- Radio equipment and mobile telephones must not be used in the driver's cab without a suitable outside antenna or near the control electronics.
- A sufficiently large distance to radio systems must be maintained.
- All connectors must be unplugged from the electronics during electrical welding and painting operations.
- Cables/wires must be sealed individually to prevent water from entering the device.
- Standing and permanently running water are not permitted anywhere near the display glass, the push-buttons or the pressure balance element (DAE).

## Notes on transport and storage

- If it is dropped, the BODAS display DI3 must not be used any longer as invisible damage could have a negative impact on reliability.
- Impacts with hard objects on the case or integrated glass/camera lens could cause the case or glass to break. In such cases, the BODAS display DI3 must be replaced without delay.
- Contamination of the BODAS display DI3, and especially of the keyboard and rotary dial, should be eliminated immediately to ensure correct function.
- Do not expose the case or keyboard to extremely acidic or alkaline substances. Avoid prolonged contact with oils and grease.
- Only use clean water and a damp cloth to clean the inspection window and keyboard.
- Avoid any utensils that scratch or which are abrasive when cleaning the BODAS display DI3.

# Safety instructions

## Notes on wiring and circuitry

- The BODAS display DI3 and the cameras must be powered from the same network. Optimally, the cameras will be powered from a port on the display.
- Lines to the cameras are to be shielded. The shielding must be connected to the electronics on one side or to the machine or vehicle ground via a low-resistance connection.
- Lines to the electronics must not be routed close to other power-conducting lines in the machine or vehicle.
- The wiring harness should be fixated mechanically in the area in which the BODAS display DI3 is installed (spacing < 150 mm). The wiring harness should be fixated so that in-phase excitation with the display occurs (e.g. at the displays mounting point).
- If possible, lines should be routed in the vehicle interior. If the lines are routed outside the vehicle, make sure that they are securely fixed.
- Lines must not be kinked or twisted, must not rub against edges and must not be routed through sharp-edged ducts without protection.
- Lines are to be routed with sufficient spacing to hot or moving vehicle parts.

## Intended use

- The BODAS display DI3 is designed for use in mobile working machines provided no limitations / restrictions are made to certain application areas in this data sheet.
- Operation of the BODAS display DI3 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 mobile working machine.

## Improper use

- Any use of the BODAS display DI3 other than that described in chapter „Intended use“ is considered to be improper.
- The BODAS display DI3 is not suitable for use in functions relevant to safety.
- Do not assign functions relevant to safety to the function buttons of the display. Separate switches are always to be used to control functions relevant to safety, e.g. emergency-off switch for immediate or controlled stoppage of the system.
- Make sure that the display configuration does not lead to safety-critical malfunctions of the complete system in the event of failure or malfunction of the display. This type of system behavior may lead to danger to life and/or cause much damage to property.
- 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.

## Further information

- More detailed information on the BODAS display DI3 can be found under [www.boschrexroth.com/mobileelektronik](http://www.boschrexroth.com/mobileelektronik) under the heading display.
- Pay regular visits to our home page for the latest product information and information about updates.