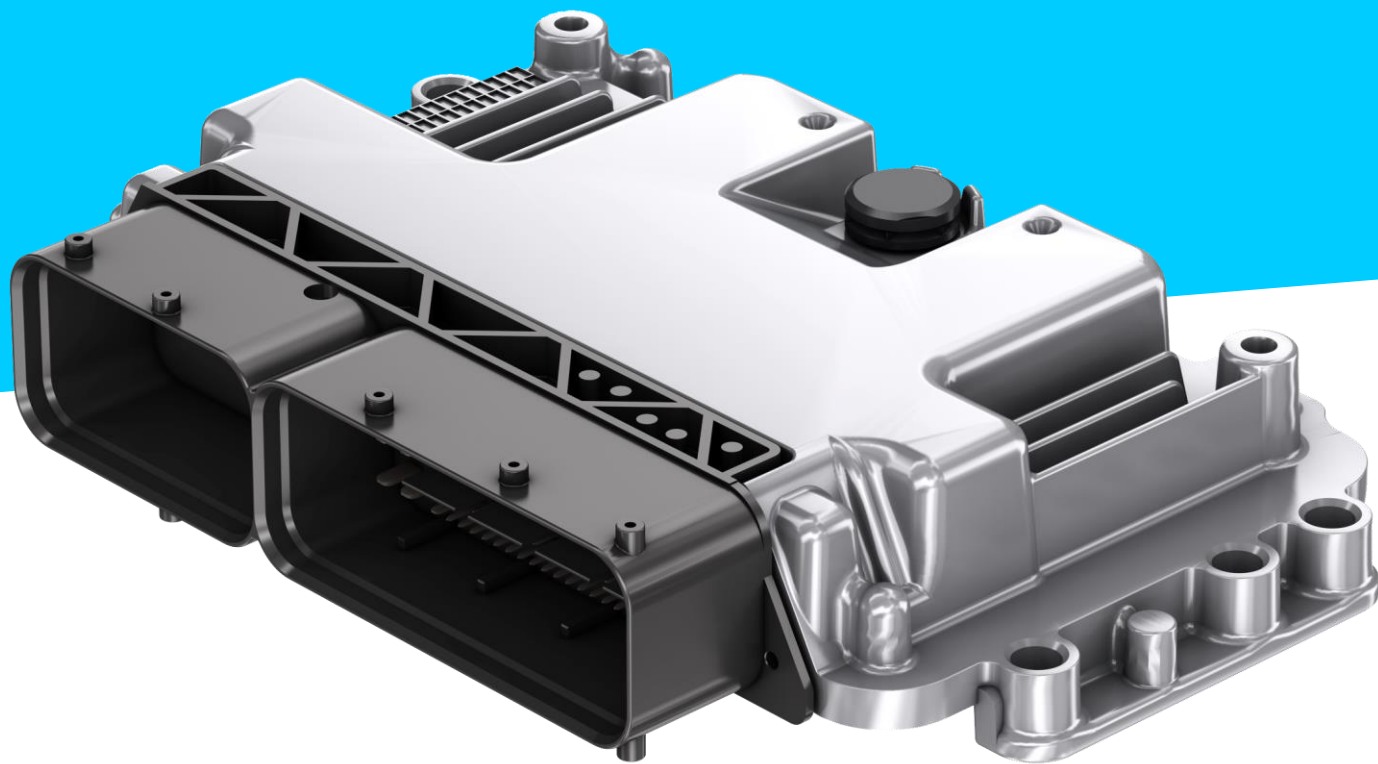


# BODAS controller RC5-6 series 40

## Electronic control unit



The BODAS RC5-6 series 40 controller from Bosch Rexroth is based on a completely new technological platform in terms of hardware and basic software. In addition to current requirements, it also meets future demands on electronic control units in mobile working machines. The series 40 offers new possibilities, particularly in terms of functional safety, data integrity, input/output flexibility and communication interfaces. It is a reliable control solution for telehandlers, chassis superstructures, agricultural attachments, tractors, municipal vehicles and construction machinery.

### CUSTOMER BENEFITS

- Freely programmable, powerful controller
- Fulfills functional safety requirements according to EN ISO 13849 and ISO 25119
- Proportional and switching outputs for the safe control of actuators
- Protection against unauthorized access
- Multi-functional inputs
- High quality standard of Bosch Automotive Electronics

### FUNCTION AND BENEFITS

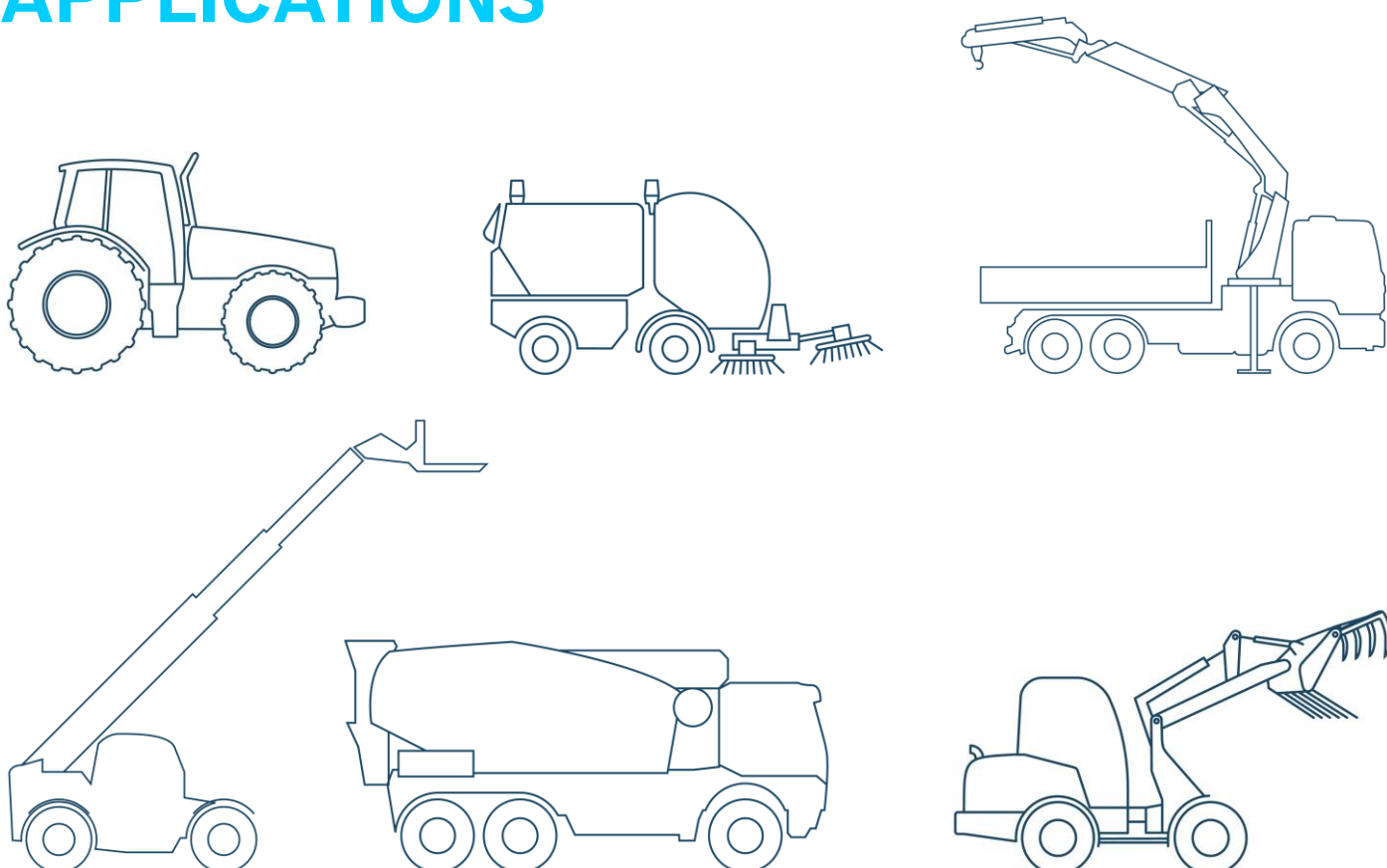
#### **Freely programmable, powerful controller**

The powerful 32-bit multi-core processor can be programmed in the high-level language C or in the IEC 61131-3 languages. Lockstep operation increases diagnostic coverage by means of redundant program processing. The basic software is configured using a cloud tool. The programming interface (API) provides easy access to inputs and outputs, communication interfaces, diagnostic and system resources. Bosch Rexroth also offers the implementation of customer-specific applications.

#### **Fulfills functional safety requirements according to EN ISO 13849 and ISO 25119**

The BODAS RC5-6 controller meets high requirements on functional safety and data integrity. Safety functions up to performance level PL d can be implemented according to the harmonized standard EN ISO 13849. New in the series 40 is the achievement of the AgPL d according to the ISO 25119 standard, which is used for machines in agricultural technology and for municipal vehicles.

### APPLICATIONS



TECHNICAL DATA

BODAS controller RC5-6 series 40	
Supply voltage:	12 V or 24 V nominal
Processor:	SPC58, 200 MHz multi-core
Max. current consumption:	20 A
Current controlled power outputs:	5, up to 4 A each, battery switching, PWM up to 1 kHz
Switching power outputs:	6, up to 4 A each ground switching
Switching outputs:	8, up to 200 mA each, ground switching, e.g. for controlling relays
Signal inputs:	30, thereof 24 which can be flexibly configured in software, thereof 8 with SAE J2716 SENT
Signal outputs:	1x analog 0 - 10 V, 1x PWM
Sensor supply:	<ul style="list-style-type: none"><li>2x 150 mA @ 5V</li><li>1x 300 mA @ 5V</li><li>1x 150 mA @ 10 V</li></ul>
Communication:	<ul style="list-style-type: none"><li>2x High Speed CAN or CAN-FD</li><li>1x High Speed CAN, ISOBUS</li><li>1x LIN Master</li></ul>
Functional safety:	<ul style="list-style-type: none"><li>EN ISO 13849 to PL d</li><li>ISO 25119 to AgPL d</li></ul>
Release:	Dual-channel inhibit function with restart prevention
Temperature range:	-40 °C to +85 °C
Dimensions LxWxH:	136.5 x 203 x 44 mm incl. multi-point connector, without mating connector
Data sheet:	95207

Proportional and switching outputs for the safe control of actuators

The BODAS RC5-6 series 40 controller from Bosch Rexroth provides current-controlled, battery-switching power outputs for controlling solenoids on pumps, motors and valves. In safety-relevant applications, loads are operated between these outputs and the ground-switching power outputs. In case of a short circuit, the loads are switched off on both sides and the mobile machine is brought into a safe state.

Protection against unauthorized access

Unauthorized flashing and diagnostic access, e.g. changing safety-relevant parameters, can cause considerable material damage and personal injury. The BODAS RC5-6 controller offers special protection mechanisms against such kind of access.

Multi-functional inputs

The BODAS RC5-6 is part of Bosch Rexroth's versatile BODAS component kit, which also includes a wide variety of sensors, displays and operating elements with compatible interfaces. The signals of the BODAS components can be acquired and processed via multi-functional inputs of the control unit. Bosch Rexroth also offers complementary application software and tools for development and commissioning.

High quality standard of Bosch Automotive Electronics

Like all Bosch Rexroth controllers, the BODAS RC5-6 series 40 is also manufactured according to the high quality standards of Bosch Automotive Electronics.