

BiSS
INTERFACE

BiSS
SAFETY

- Fully-digital and bidirectional
- Open Source
- Real Time Feedback of Position and Status
- Fast and cost-efficiency
- Simply integrable



BiSS interface

The BiSS interface is a fully-digital bidirectional connection for absolute measuring systems. Therefore, BiSS is perfectly suited for dynamic axes with very high accelerations, constant speed control and best positioning accuracy possible.

Advantages

The great advantage of the BiSS interface is its open source protocol for sensors, inverters and drives, offering e.g. high speeds (data rate up to 10 MHz) and a delay compensation for the optimal operation of the drive system. The selection of the components is not imposed by a licensed interface, but only by the requirements of the application, which results in more flexibility and higher cost-efficiency.

- ▶ BiSS is fully-digital and bidirectional and is perfectly suited as a motor feedback system for both linear and rotary axes.
- ▶ As the BiSS interface is not proprietary, it is cost-efficient and flexible. This ensures a much wider choice of available products.
- ▶ The inverters equipped with an RS422 and RS485 interface can mostly be used for BiSS thanks to an extension with a firmware update for BiSS, thus opening the possibility of using an open source interface.
- ▶ There is nevertheless also the possibility of a quick and simple BiSS Master implementation with free BiSS IPs on processors and FPGAs.
- ▶ Advantages for the commissioning of motor and inverter thanks to plug-and-play using the motor data and maintenance information that can be stored in and retrieved from the encoder and to the possibility to set the absolute measuring system to a predefined position value.
- ▶ Information and evaluation of the complete system during operation thanks to Condition Monitoring and to the delay compensation for accelerated communication, e.g. to minimize drift effects due to temperature.

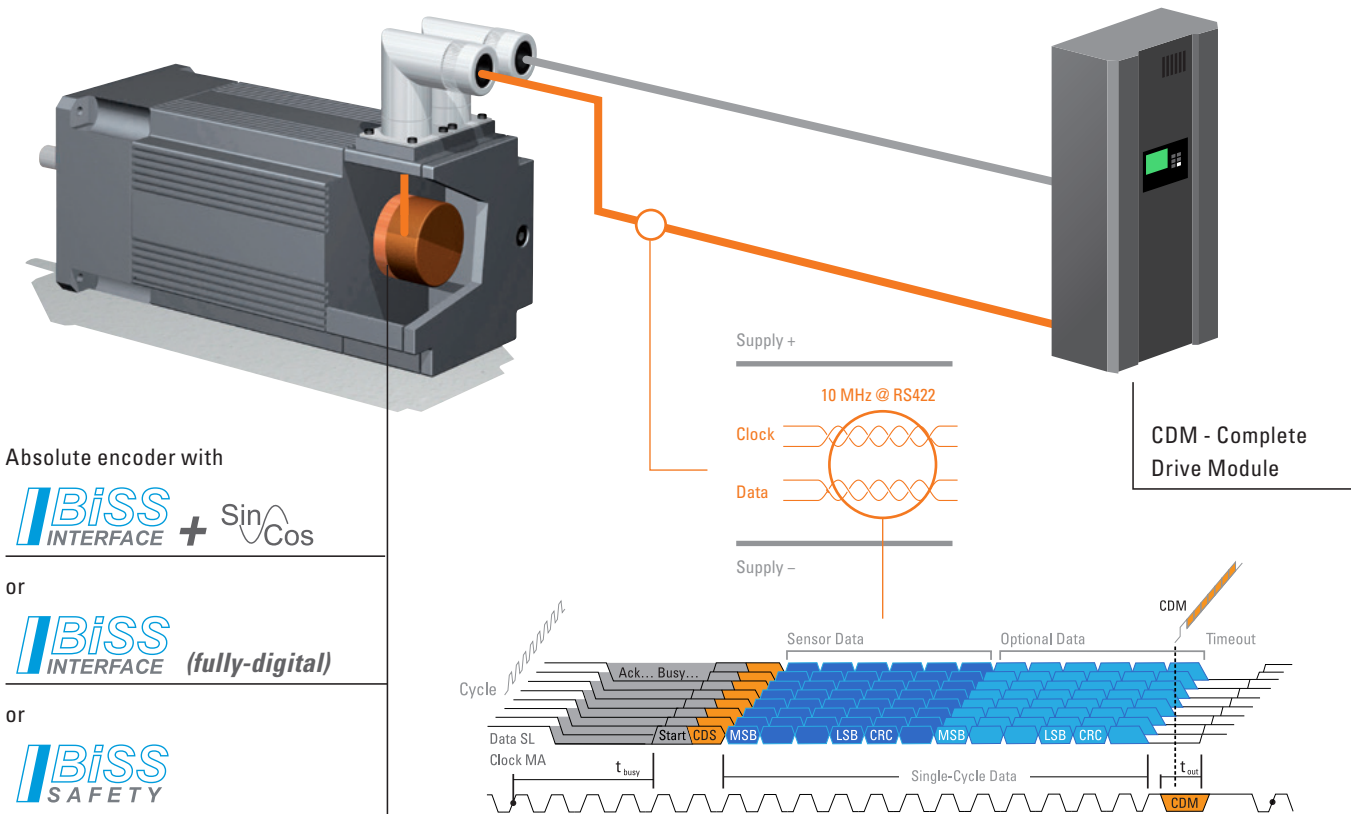
Contact persons for advice and support for the implementation of BiSS

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BiSS Safety

BiSS Safety is entirely based on BiSS and uses all of its protocol options. All identification features, electronic data sheets and diagnosis possibilities are entirely preserved.

The further development of BiSS for safety-relevant applications (BiSS Safety) presupposed the following functionalities:

- Achieving SIL2 and SIL3 with the existing BiSS protocol
- Keeping all physical interfaces for the use of existing and new sensors

The external structure remains a point-to-point wiring such as for a standard BiSS protocol. But, inside the device, two independent sensors are used for generating the position data and securing the transmission. BiSS Safety uses here the 'Black Channel' approach for safe data communication.

i BiSS Support Tool

The BiSS Support Tool assists you in the implementation. The following components are available in a set for this purpose:

- Sendix 5873 Motor-Line (8.5873.HK3E.C323)
- BiSS-to-PC Adapter (USB)
- GUI Software for Windows PC
- Analysis board
- Adapter cables for connecting the components



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