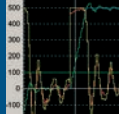


## Drive System MC2



## Top Technology made in Germany

SIEB & MEYER was founded in 1962 and has been an internationally successful company in the field of industrial electronics since then. With 200 employees we develop and manufacture control and drive technology. Our product range includes controllers for the machine construction and automation technology, servo amplifiers for various drives, frequency converters for high-speed applications and feed-in technology for renewable energy. Concentration on our core competence results in a worldwide leading position for controllers in the field of PCB drilling and routing machines. Close cooperation with our customers from the development up to the troublefree operation of our products is the basis of our quality philosophy. Highly qualified engineering teams and a modern manufacturing process lead to a maximum amount of innovations and flexibility in serving our customers. Worldwide service and customer-oriented trainings are guaranteed with our headquarters in Lueneburg and our subsidiaries.



## MC2 – THE Drive System for Your Machine

The drive system MC2 – including motion controller MC2 and drive amplifiers of the series SD2S – is the solution for machine manufacturers who develop a PC-based application software and look for a well-proven system for the motion tasks. The communication between the motion controller MC2 and the client's PC is established via Ethernet based on the DNC-361 protocol. Using the provided documentation the client can easily implement the protocol into his application software. Then, the various motion functions of the drive system MC2 are available in the application software.

MC2 runs a real-time operating system that permits synchronous data transmission to the drive amplifiers. This makes controlled spatial movement of the axes possible. The used optical fiber connection ensures an extremely fail-safe data line.

The drive amplifiers SD2S can evaluate all common measuring systems and reach an exceptional positioning accuracy with very constant speed. These features ensure a high quality of the manufactured products.

As an option, SD2S provides the opportunity to output trigger signals for the synchronization of the application unit, e.g. print head. This function also allows scaling the motion axes to the resolution of the application unit.

MC2 provides up to 8 inputs or outputs for your machine. With an optional, external I/O module the inputs and outputs can be expanded to a maximum of 96 inputs and 96 outputs. The transmission protocol IO-Link 3 ensures reliable data transmission to the I/O system 50.06 via optical fiber cables.

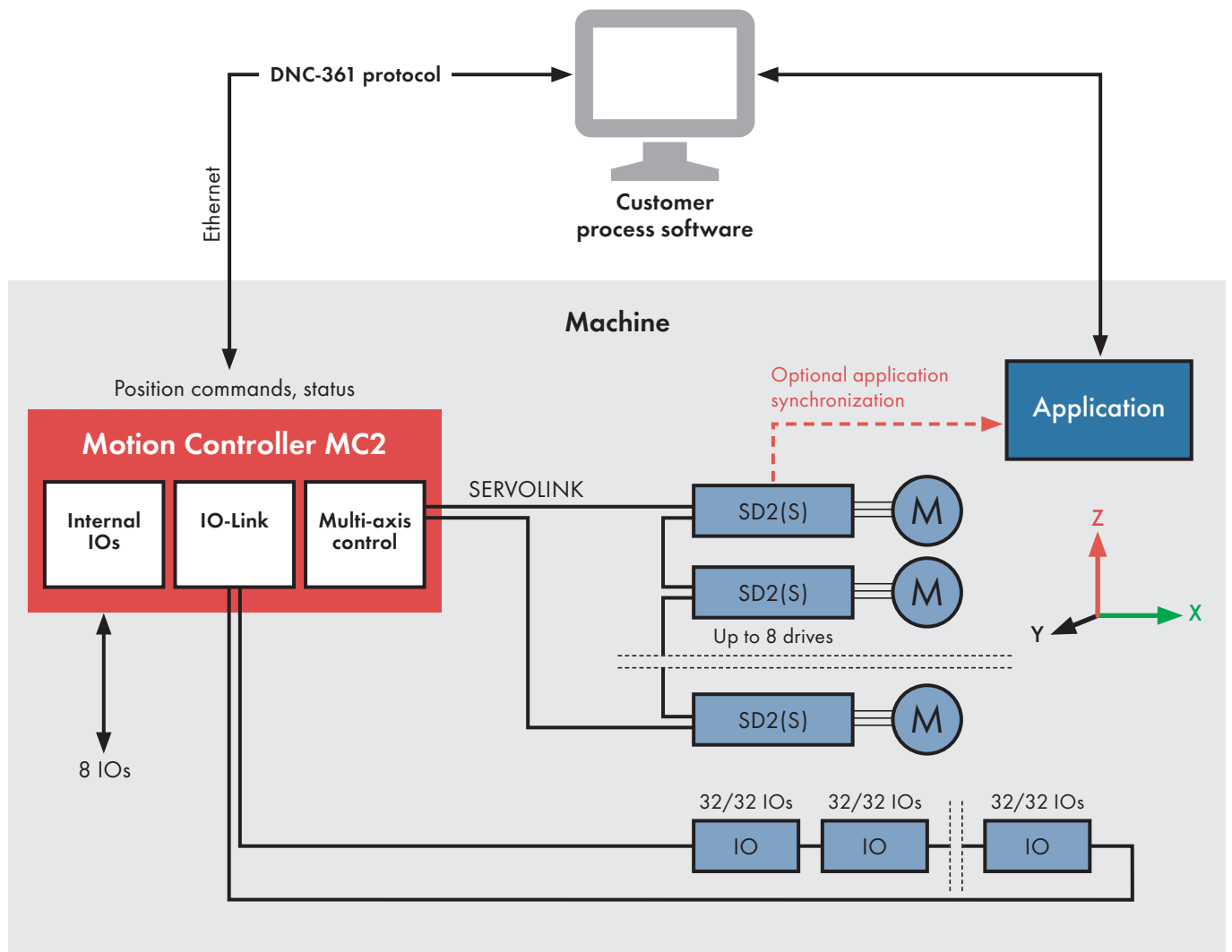
### System Specifications of the Drive System:

- Ethernet interface with DNC-361 protocol (UDP telegrams)
- Point-to-point control, position interpolation points
- Linear and circular interpolation
- Gantry, gear function
- Scalable trigger function (optional)
- Internal resolution up to 20 nm (standard 100 nm)
- Very precise synchronization
- Parameterization and optimization via software *drivemaster2* and *drivemaster3*



Servo amplifiers of series SD2S and Motion Controller MC2

## Structure of the Drive System MC2



### Application Examples:



Ultrasonic Scanning



Printing



X-Ray



Optical Scanning

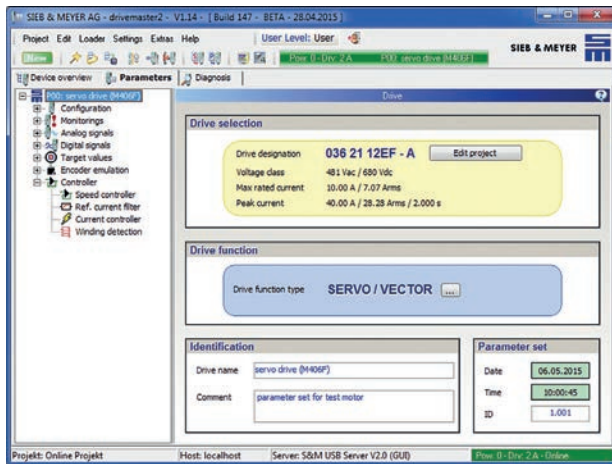


Direct Imaging

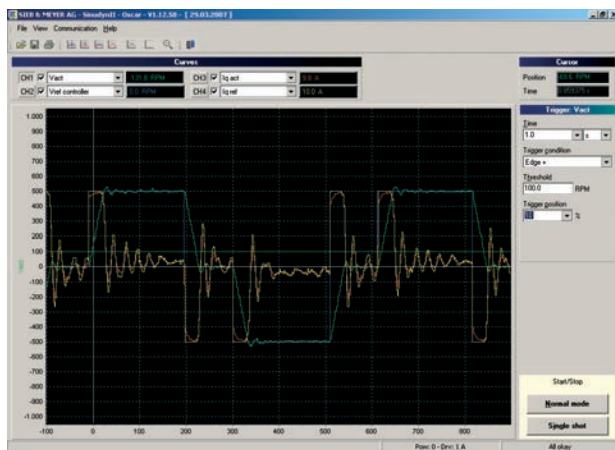


## Initial Operation and Parameterization Software: drivemaster2/drivemaster3

drivemaster2/drivemaster3 is a powerful tool for easy and goal-oriented parameterization and optimization of drive axes.



The parameters are used to adapt the drive axes to the mechanical and electrical characteristics of the machine.



OSCAR is an auxiliary program for optimizing machine movements. By means of the graphic visualization speeds, accelerations, and moving characteristics can be set individually for each axis. With this online optimization the machine manufacturer can determine the best possible values for a machine and thus achieve considerable improvements in the machine's productivity.

## Motion Controller MC2

- nanoETX board
- Ethernet interface to the PC
- Digital bus SERVOLINK via optical fibers to the drives SD2S and via IO-Link to the I/O system 50.06
- 8 inputs and outputs

## Servo Amplifier SD2S

- Servo amplifier for rotary and linear AC servo motors
- Evaluation of incremental encoders, absolute or linear measuring systems
- Digital bus via optical fibers for the connection with MC2

## 1-phase mains supply

### 230 V mains supply (AC)

1.4 kVA	I <sub>r</sub> : 10 A	I <sub>S</sub> : 14 A (28 A)*	250 x 75 x 180 mm
3.8 kVA	I <sub>r</sub> : 20 A	I <sub>S</sub> : 28 A (56 A)*	250 x 110 x 180 mm

## 3-phase mains supply

### 230 V mains supply (AC)

6.9 kVA	I <sub>r</sub> : 20 A	I <sub>S</sub> : 28 A (56 A)*	250 x 110 x 180 mm
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### 480 V mains supply (AC)

4.3 kVA	I <sub>r</sub> : 7 A	I <sub>S</sub> : 28 A	250 x 75 x 225 mm
9.7 kVA	I <sub>r</sub> : 14 A	I <sub>S</sub> : 28 A (56 A)*	250 x 110 x 180 mm
15 kVA	I <sub>r</sub> : 23 A	I <sub>S</sub> : 29 A	390 x 180 x 180 mm
20 kVA	I <sub>r</sub> : 30 A	I <sub>S</sub> : 56 A	390 x 180 x 180 mm
30 kVA	I <sub>r</sub> : 44 A	I <sub>S</sub> : 70 A	460 x 225 x 200 mm
55 kVA	I <sub>r</sub> : 80 A	I <sub>S</sub> : 113 A	450 x 275 x 265 mm
55 kVA**	I <sub>r</sub> : 80 A	I <sub>S</sub> : 113 A	430 x 200 x 265 mm

I<sub>r</sub> = rated current, I<sub>p</sub> = peak current. Stated currents are rms values.  
Voltage limits at 230 V: 110 V -10% up to 230 V +10%  
Voltage limits at 480 V: 230 V -10% up to 480 V +10%  
The device dimensions are defined as height x width x depth, related to the mounting dimensions.

- \* Version with higher peak current.
- \*\* With water cooling.

## Decentral I/O System 50.06

- +24 V<sub>DC</sub> supply
- up to 96 inputs and 96 outputs
- Inputs: +24 V (high active)
- Outputs: +24 V/350 mA
- CRC-controlled data transmission



- **CNC Controllers**
- **Drive Electronics**
- **Feed-in Technology**

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