



# Drive System SD2

**SIEB & MEYER**





## 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 300 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 tooling 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 training are guaranteed with our headquarters in Lueneburg and our subsidiaries.



## Drive System SD2 – The Universal Drive Solution

How about a second channel? The universal drive amplifier SD2 for machine controls is available as one-channel or as two-channel versions. Linear motors, rotary servo motors, high-pole torque motors as well as synchronous/asynchronous tool spindles with or without sensor can be driven by the SD2. The specialty: Synchronous and asynchronous motors can reach speeds up to 480,000 rpm.

For the connection to a higher-ranking control analog reference values ( $\pm 10\text{ V}$ ) or pulse-direction values are processed. Alternatively, a CNC control can be connected via the bus system SERVOLINK 4. SIEB & MEYER offers a SERVOLINK 4 PCI plug-in board for a PC-based control. The used optical fiber technique ensures a troublefree fail-safe connection between the CNC control and the drive amplifiers.



**Universal Motor Encoder Interface** – SD2 evaluates all common measuring systems for rotary and linear motors, starting with A as absolute value encoders with EnDat, Hiperface or SSI interface, encoder, magnetoresistive sensor, Hall effect sensor, linear Hall sensor, linear scale with 1Vpp or TTL level up to R as resolver.

**Safety Integrated** – The safety category 4 acc. to EN 954-1 can be reached by the integrated restart lock. As external protective circuits can be reduced, system costs are minimized. The requirements according to SIL 3 and EN 61508 are met.

**Flexible Cooling** – The standard version of SD2 is delivered with an integrated heat sink. Optionally, the heat sink can be delivered as cool plate version. This allows using liquid cooling, mounting plug-through heat sinks or installation of air-cooled lamella heat sinks.

\* 4-channel multi-axes solution (left) and 2-channel compact device (right)

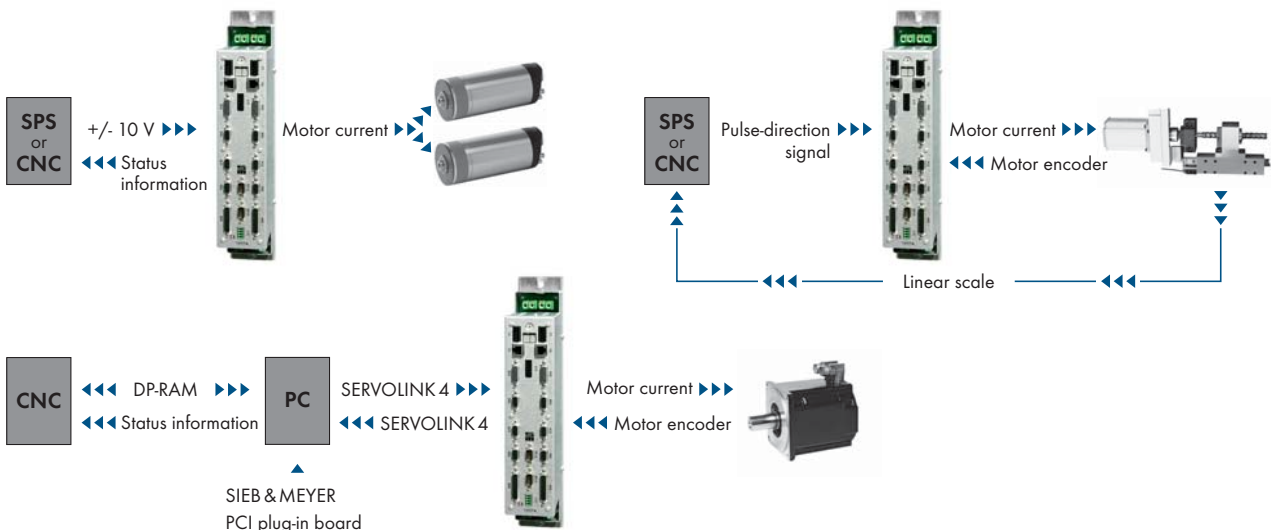
### SD2 – Multi-Axis Concept

The multi-axis drives in two-channel design are suitable for machines with several moving axes. Energy is supplied to the connected SD2 drives from the power supply module PS2. Together with the SIEB & MEYER servo motors this forms a compact and cost-optimized drive package.

### SD2 – Compact Device

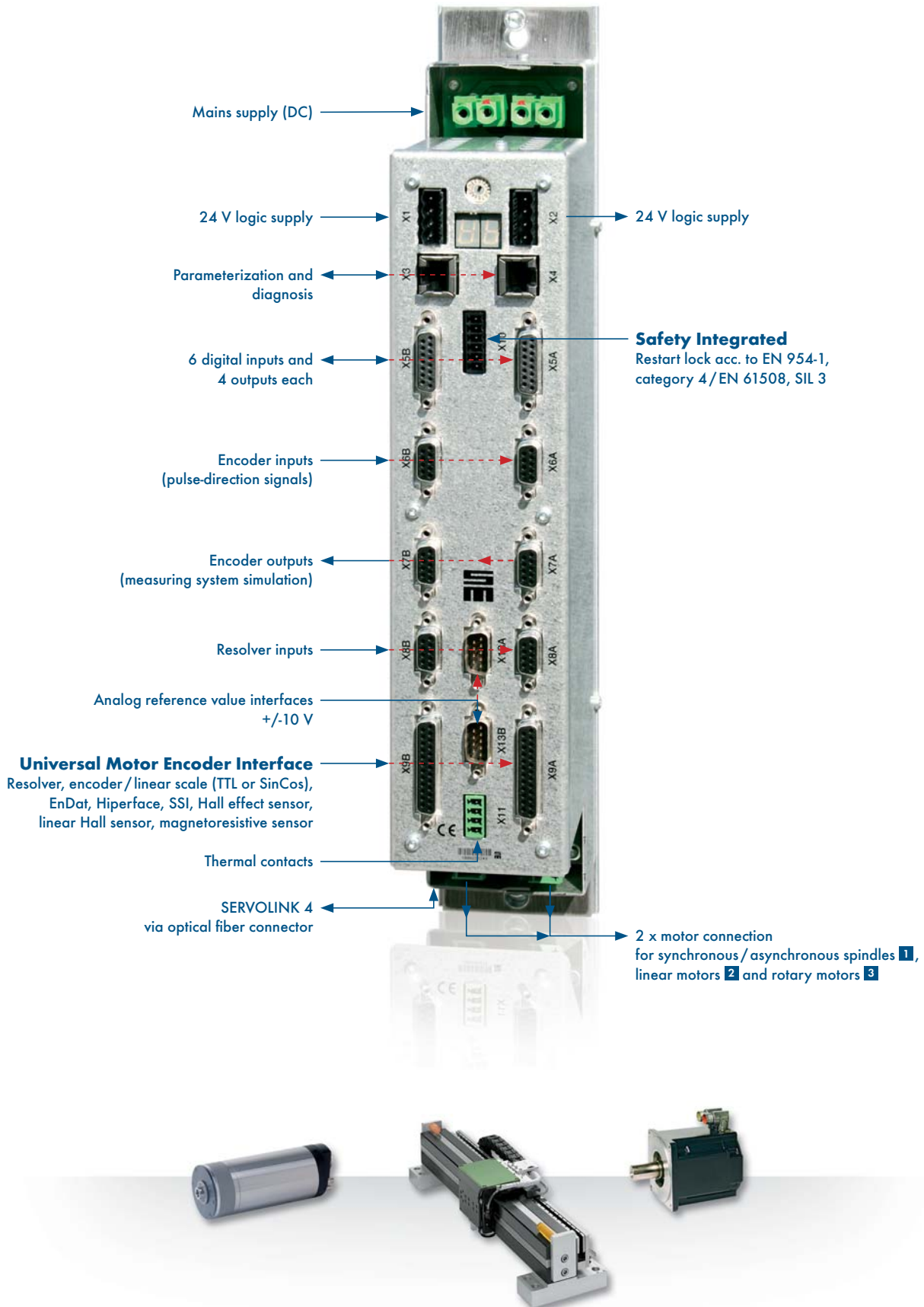
The devices with integrated power supply are suited for applications with only a few drives. That way an X-Y table can be operated via just one SD2 drive. This compact device combines power supply and two drives in one housing. This is surely the easiest way to integrate the power electronics into your control.

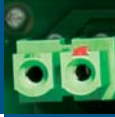
### Examples for System Integration



**Alternatively:**  
SIEB & MEYER CNC

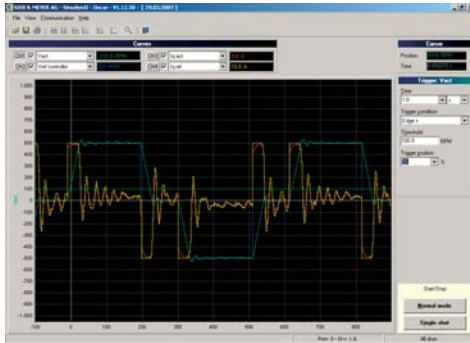
## The Interfaces of SD2 (Two-channel Device)



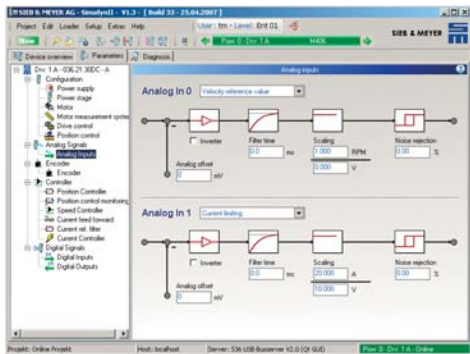


# Technical Specifications SD2 Multi-Axes Concept

## Software for Initial Operation and Parameterization: *drivemaster2*



The oscilloscope function allows optimization of the axes in the machine without additional measuring equipment. That way for example overshoots during positioning can be eliminated or resonance frequencies in the mechanical elements can be reduced.



The clear design of the software allows intuitive parameterization via graphics and block diagrams. The „Parameter-Wizard“ assists the user step-by-step through the system configuration and allows intuitive setup of the device via help messages and comments.

## SIEB & MEYER Motors: Compact and Powerful

Please ask us for SIEB & MEYER motors that are suitable for your application.

### One-channel Devices

#### 325 V mains supply (DC)

$I_r$ : 10 A	$I_p$ : 14 A	410 x 70 x 225 mm
$I_r$ : 14 A	$I_p$ : 28 A	410 x 70 x 225 mm
$I_r$ : 25 A	$I_p$ : 56 A	410 x 70 x 225 mm

#### 680 V mains supply (DC)

$I_r$ : 10 A	$I_p$ : 14 A	410 x 70 x 225 mm
$I_r$ : 14 A	$I_p$ : 28 A	410 x 70 x 225 mm
$I_r$ : 14 A	$I_p$ : 56 A	410 x 70 x 225 mm
$I_r$ : 35 A	$I_p$ : 113 A	410 x 130 x 225 mm

### Two-channel Devices

#### 325 V mains supply (DC)

$I_r$ : 10 A + 10 A	$I_p$ : 14 A + 14 A	410 x 70 x 225 mm
$I_r$ : 10 A + 10 A	$I_p$ : 28 A + 28 A	410 x 70 x 225 mm
$I_r$ : 10 A + 20 A	$I_p$ : 28 A + 56 A	410 x 100 x 225 mm
$I_r$ : 10 A + 20 A	$I_p$ : 28 A + 85 A	410 x 100 x 225 mm

#### 680 V mains supply (DC)

$I_r$ : 7 A + 7 A	$I_p$ : 14 A + 14 A	410 x 70 x 225 mm
$I_r$ : 7 A + 7 A	$I_p$ : 28 A + 28 A	410 x 70 x 225 mm
$I_r$ : 7 A + 17 A	$I_p$ : 28 A + 56 A	410 x 100 x 225 mm

$I_r$  = rated current,  $I_p$  = peak current. Stated currents are rms values.

Voltage limits at 325 V: 325 V -33% / +10%

Voltage limits at 680 V: 680 V -33% / +10%

The device dimensions are defined as height x width x depth, related to the mounting dimensions.

### Power Supply PS2

#### 110, 230, 400 and 480 V mains supply (AC)

$P_r$ : 22 kW	$P_p$ : 45 kW	410 x 70 x 225 mm
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$P_r$  = rated power,  $P_p$  = peak performance. The performance of the device is related to a 400 V mains supply. For different mains supply voltages the performance changes correspondingly. The device dimensions are defined as height x width x depth, related to the mounting dimensions.

# Technical Specifications SD2 Compact Device

### One-channel Devices with Integrated Power Supply

#### 230 V mains supply (AC)

$I_r$ : 14 A	$I_p$ : 56 A	410 x 100 x 225 mm
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#### 480 V mains supply (AC)

$I_r$ : 14 A	$I_p$ : 56 A	410 x 100 x 225 mm
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### Two-channel Devices with Integrated Power Supply

#### 230 V mains supply (AC)

$I_r$ : 11 A + 11 A	$I_p$ : 14 A + 14 A	410 x 100 x 225 mm
$I_r$ : 11 A + 11 A	$I_p$ : 42 A + 42 A	410 x 100 x 225 mm

#### 480 V mains supply (AC)

$I_r$ : 7 A + 7 A	$I_p$ : 14 A + 14 A	410 x 100 x 225 mm
$I_r$ : 7 A + 7 A	$I_p$ : 42 A + 42 A	410 x 100 x 225 mm

$I_r$  = rated current,  $I_p$  = peak current. Stated currents are rms values.

Voltage limits at 230 V: 230 V -33% / +10%, related to the input voltage.

Voltage limits at 480 V: 480 V -33% / +10%, related to the input voltage.

The device dimensions are defined as height x width x depth, related to the mounting dimensions.

Subject to changes and errors.



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

**SIEB & MEYER AG**

Auf dem Schmaarkamp 21  
21339 Lüneburg  
Germany  
Phone +49-4131-203-0  
Fax +49-4131-203-2000  
E-Mail: [info@sieb-meyer.de](mailto:info@sieb-meyer.de)  
[www.sieb-meyer.com](http://www.sieb-meyer.com)

**SIEB & MEYER USA, LLC**

4460 Lake Forest Drive, Suite 228  
Cincinnati - OH 45242 - USA  
Phone +1-513-563-0860  
Fax +1-513-563-7576  
E-Mail: [sales@sieb-meyerusa.com](mailto:sales@sieb-meyerusa.com)  
[www.sieb-meyerusa.com](http://www.sieb-meyerusa.com)

**SIEB & MEYER ASIA Co., Ltd.**

5<sup>th</sup> Fl., No. 578, Sec. 1, Min-Sheng N. Rd.  
Kwei-Shan Hsiang, Tao-Yuan Hsien 33393  
Taiwan, R.O.C.  
Phone +886-3-3115560  
Fax +886-3-3221224  
E-Mail: [smasia@ms42.hinet.net](mailto:smasia@ms42.hinet.net)  
[www.sieb-meyer.com](http://www.sieb-meyer.com)

**SIEB & MEYER (SHENZHEN) TRADING Co. Ltd.**

15 Floor H, Seaview Building  
Taizi Road, Shekou, 518067 Shenzhen - China  
Phone +86-755-26811417  
Fax +86-755-26812967  
E-Mail: [sma-china@umail.hinet.de](mailto:sma-china@umail.hinet.de)  
[www.sieb-meyer.com](http://www.sieb-meyer.com)