Giving you exceptional performance, an unprecedented level of sophistication and outstanding power in a solution that is simple to use throughout the entire lifecycle of your machines from engineering, installation, commissioning all the way to operation and maintenance.
Where Power Meets Simplicity

The Lexium 32 servo drive range meets your specific requirements for motion control by offering three servo drive models and two servo motor families, as well as a full compliment of options and accessories. This gives you the flexibility to select the drive and motor combination with the power, performance and functionality you need, as well as seamlessly integrate them into existing Schneider Electric PLC-centric or motion controller-centric architectures.

- **Lexium 32 Compact**
  - For communication via +/- 10 V or pulse train input

- **Lexium 32 Advanced**
  - For CANopen or CANmotion architectures

- **Lexium 32 Modular**
  - Open for the world of motion with numerous modules

- **Lexium BMH**
  - Extremely versatile

- **Lexium BSH**
  - Highly dynamic
The servo drives

The Lexium 32 servo drive platform consists of three book-size servo drive models: the Lexium 32 Compact, the Lexium 32 Advanced and the Lexium 32 Modular. These servo drives cover the power range from 0.2 kW to 7 kW. The supply voltages are adjustable to single-phase (110 V to 240 V) or three-phase (380 V to 480 V) applications. Each comes with the “safe torque off” safety function (IEC/EN 61800-5-2).

The servo motors

The two motor families include the medium-inertia Lexium BMH and the low-inertia Lexium BSH. At a high power density, the motors cover a torque range from 0.5 Nm to 88 Nm. Both motor families are available in consistent frame sizes. Compared to an equivalent frame size of BSH motor, the BMH motor has a higher inertia by a factor of 2.4. The Lexium BMH motor is ideal for applications requiring robust load adaptation and plug-and-play motion tuning, while the Lexium BSH motor is more suitable to the needs of highly dynamic applications.

The integration

Lexium 32 servo drives can be seamlessly integrated into Schneider Electric PLC-centric or motion controller-centric architectures.
The Lexium 32 lets you capture and use braking energy to make our servo technology the most efficient motion technology for a wide range of industries.

Servo technology is the most efficient motion technology. And Lexium 32 lets you even use the generated braking energy.

Lexium 32 complies with the RoHS Directive 2002/95/EC.
Superior Performance and Compact Design

Best-in-class servo drives
The book-size Lexium 32 servo drives pack maximum power into minimum volume. This saves on cabinet space and size, reduces the machine footprint and decreases costs. Lexium 32 also offers an impressive overload capacity of 400%. With an $I_{\text{peak}} / I_{\text{continuous}}$ ratio between 3 and 4. The servo drives provide superior performance and outstanding dynamics for faster production.

Exceptional performance
Enhanced motor control efficiently reduces vibration and jerk with autonomic parameter calculation, and speed control helping to extend the life of the machine.

Top-notch motors
The medium-inertia BMH and low-inertia BSH motors also excel with best-in-class power density values. The compact BMH and BSH power packs require less space in your machine. With various connector options, you can adapt the motor to your application’s space and mounting requirements.

Configurable extra performance
The Lexium 32 servo drive range allows you to easily add extra performance features. Choose from three external encoder modules, certified safety technology and a large variety of communication modules.

With a power density of 548 W/l
Lexium 32 is unrivalled in the motion industry

A speed bandwidth of 1600 Hz provides outstanding response by cutting the settling time to a minimum

Compare the impressive torque density of 2.7 Nm/l* to other offers
*BMH, size 100

3 = 8
3 encoder modules for 8 different encoder interfaces plus 4 fieldbus interfaces

Optimized vibration reduction for long machine life
Fast engineering

Tools for motor sizing, CAD and cabinet drawings, support for PLCopen libraries and user-friendly commissioning software dramatically increase efficiency at all stages of the engineering phase.

The software has been optimized for re-usability, standards-compliance and interoperability. Integrated PLCopen libraries give you even more power, flexibility and simplicity in engineering your application.

Commissioning and autotuning

The Lexium 32 autotuning function makes tuning easier than ever before with three modes to work in depending on your level of experience.

- **Wizard**: Fast and efficient, this mode needs practically no user interaction to yield exceptional results for simple applications.

- **Comfort**: This mode automatically selects and tunes all important parameters and lets you further tune the drive for excellent results for the main motion applications.

- **Expert**: In Expert mode, you can tweak each individual parameter to get stunning results for the ultimate in high-end applications.
Simple Installation and Maintenance

Simplified installation
Lexium 32 servo drives and motors offer a host of features to support rapid mechanical and electrical installation, as well as maintenance of drives and motors.

- The compact, book-size drives are optimized for direct side-by-side cabinet mounting.
- All connections are located at the front or the top to allow for easy access.
- Removable, color-coded connectors facilitate installation and maintenance.
- Separate areas for distributing cables dramatically simplifies the EMC concept.
- Optional memory cards let you parameterize servo drives without a PC in just a fraction of the time required by other approaches.
- The motors are available with straight, angled and rotatable connectors to respond to your specific installation conditions.

Operation and maintenance
The Lexium 32 simplifies and optimizes the way you and your customers respond to incidents:

- The “safe torque off” function integrated in all Lexium 32 drives helps ensure shorter down times and faster restarts after incidents such as emergency stops since the machine can resume operation exactly where it left off.
- In case the drive needs replacement, hook up the new drive, just plug the memory card into the slot, have the new drive read the cloned parameters and confirm.
- In an Ethernet/IP environment, the “faulty device replacement” (FDR) function allows a replacement device to read its parameters from a server. Additional functions such as remote diagnostics facilitate operation even further.

The standardization of parts used within the Lexium 32 simplifies parts logistics and makes managing of your stock of spares considerably easier.
Lexium 32 supports a wide selection of standardized hardware and software motion interfaces for fast integration into your new or existing architecture regardless of supplier.

It allows you to choose what you need and leverage your existing assets. Whether you want new hardware power and performance for your valuable software application or a new drive for your special motor – Lexium 32 is your solution of choice.

**Communication interfaces**

You want servo power in a simple application? The answer is Lexium 32 Compact. It provides a +/-10 V and a pulse train interface.

If you need additional connectivity, Lexium 32 Advanced is the right choice. It can be integrated into a wide variety of control architectures via CANopen/CANmotion.

If your application requires other types of communication, the servo drive of choice is Lexium 32 Modular. It lets you add the communication board you need from a large variety of industrial protocols.

<table>
<thead>
<tr>
<th></th>
<th>Lexium 32 Compact</th>
<th>Lexium 32 Advanced</th>
<th>Lexium 32 Modular</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication</strong></td>
<td><strong>On board:</strong></td>
<td><strong>On board:</strong></td>
<td><strong>Options:</strong></td>
</tr>
<tr>
<td></td>
<td>+/- 10 V</td>
<td>CANopen</td>
<td>CANopen/CANmotion</td>
</tr>
<tr>
<td></td>
<td>Pulse train input</td>
<td>CANmotion</td>
<td>DeviceNet</td>
</tr>
<tr>
<td><strong>Commissioning interface</strong></td>
<td>Modbus</td>
<td>Modbus</td>
<td>PROFIBUS DP</td>
</tr>
<tr>
<td><strong>Operating modes</strong></td>
<td>Jog</td>
<td>CANopen modes</td>
<td>Motion sequence mode</td>
</tr>
<tr>
<td></td>
<td>Electronic gear</td>
<td>CANmotion cyclic</td>
<td>Motion modes</td>
</tr>
<tr>
<td></td>
<td>Speed control</td>
<td>synchronous mode</td>
<td>CANmotion cyclic</td>
</tr>
<tr>
<td></td>
<td>Torque control</td>
<td>synchronous mode</td>
<td>synchronous mode</td>
</tr>
</tbody>
</table>

**Machine and motor interfaces**

Lexium 32 supports a wide variety of machine and motor interfaces, such as:

- Resolver
- EnDat 2.1 / 2.2
- Hiperface
- A/B/I
- SSI
- BISS
- Sin/Cos for linear motors

This gives you full flexibility in designing new machines and also lets you leverage the power of existing solutions.
Lexium 32 servo drives come with “safe torque off” on board as per IEC/EN 61800-5-2. This safety function is fully compliant with and certified to international standards and provides numerous benefits:

- Simplified machine design and engineering
- Less wiring
- Simpler sensor systems
- Shorter downtimes that resume where you were before an E-stop incident
- Compliance with international standards
- Machine certification becomes a lot easier

If your machine requires more safety functions than “safe torque of,” you can simply install the optional enhanced safety module eSM. This option frees you from the hassle of devising complex, proprietary safety concepts and having them certified in all your target countries. The safety module offers the following safety functions as per IEC/EN 61800-5-2:

- Safe stop 1 (SS1)
- Safe stop 2 (SS2)
- Safely limited speed (SLS)
- Safe operating stop (SOS)

Standards:

- IEC/EN 61508
- IEC/EN 61800-5-2
- EN ISO 13849-1
- IEC/EN 62061

All safety functions mentioned in this brochure as per IEC/EN 61800-5-2.
Lexium 32 Servo
Drive Overview

The servo range

<table>
<thead>
<tr>
<th>Type</th>
<th>Lexium 32 Compact</th>
<th>Lexium 32 Advanced</th>
<th>Lexium 32 Modular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage range</td>
<td>110 V to 240 V, One phase</td>
<td>380 V to 480 V, Three phases</td>
<td></td>
</tr>
<tr>
<td>Power range</td>
<td>1.5 A to 10 A, 150 W to 1.6 kW</td>
<td>1.5 A to 24 A, 400 W to 7 kW</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>On board: • +/- 10 V • pulse train input</td>
<td>On board: • CANopen • CANmotion</td>
<td>Options: • CANopen/CANmotion • DeviceNet • PROFIBUS DP • Ethernet/IP</td>
</tr>
<tr>
<td>Commissioning interface</td>
<td>Modbus</td>
<td>Modbus</td>
<td>Modbus</td>
</tr>
<tr>
<td>Embedded safety</td>
<td>“Safe torque off”</td>
<td>“Safe torque off”</td>
<td>“Safe torque off”</td>
</tr>
<tr>
<td>Other options</td>
<td>Memory card</td>
<td>Memory card</td>
<td>Memory card, enhanced safety module eSM, 2nd encoder module</td>
</tr>
</tbody>
</table>

The servo motors

<table>
<thead>
<tr>
<th>Type</th>
<th>Lexium BMH</th>
<th>Lexium BSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame size</td>
<td>70, 100, 140 and 205</td>
<td>55, 70, 100 and 140</td>
</tr>
<tr>
<td>Torque range</td>
<td>1.4 Nm to 88 Nm</td>
<td>0.5 Nm to 33.4 Nm</td>
</tr>
<tr>
<td>Inertia</td>
<td>Factor 2.4</td>
<td>Factor 1</td>
</tr>
<tr>
<td>Encoder singleturn</td>
<td>16 traces absolute</td>
<td>128 traces absolute</td>
</tr>
<tr>
<td>Encoder multiturn</td>
<td>16 or 128 traces absolute</td>
<td>128 traces absolute</td>
</tr>
<tr>
<td>Options</td>
<td>2 windings, keyed shaft, angled connectors, brake, IP65 and IP67 (compressed air)</td>
<td>2 windings, keyed shaft, angled connectors, brake and IP65</td>
</tr>
</tbody>
</table>
Where power meets simplicity
Lexium 32 is a servo drive range with three servo drive models and two servo motor families. It provides you with the drive and motor combination that has the power, performance and functionality you need...at the right price.

Superior performance and compact design
Increase the productivity of your machine with peak performance values and outstanding motor control. Reduce the machine footprint with highly compact motors and drives.

Simplified engineering, installation and commissioning
Get your machine up and running faster, with ease and cost-effectiveness.

Open for the world of motion
Lexium 32 supports numerous standardized motion interfaces. Communication boards and encoder options adapt your Lexium 32 solution to your new or existing automation architecture.

Integrated safety
Benefit from standards-compliant safety on board. If required, use the optional safety module to meet your safety requirements reduce the time and money spent on safety engineering and certifications.

For more information email
motion@us.schneider-electric.com or visit
www.Schneider-Electric.us/go/motion