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Owing to changes in standards and equipment, the characteristics given in the text and images in this document are not binding until they have been confirmed with us.

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ART. 960318

Date : 11 / 2010

«Inspired by Simplicity»

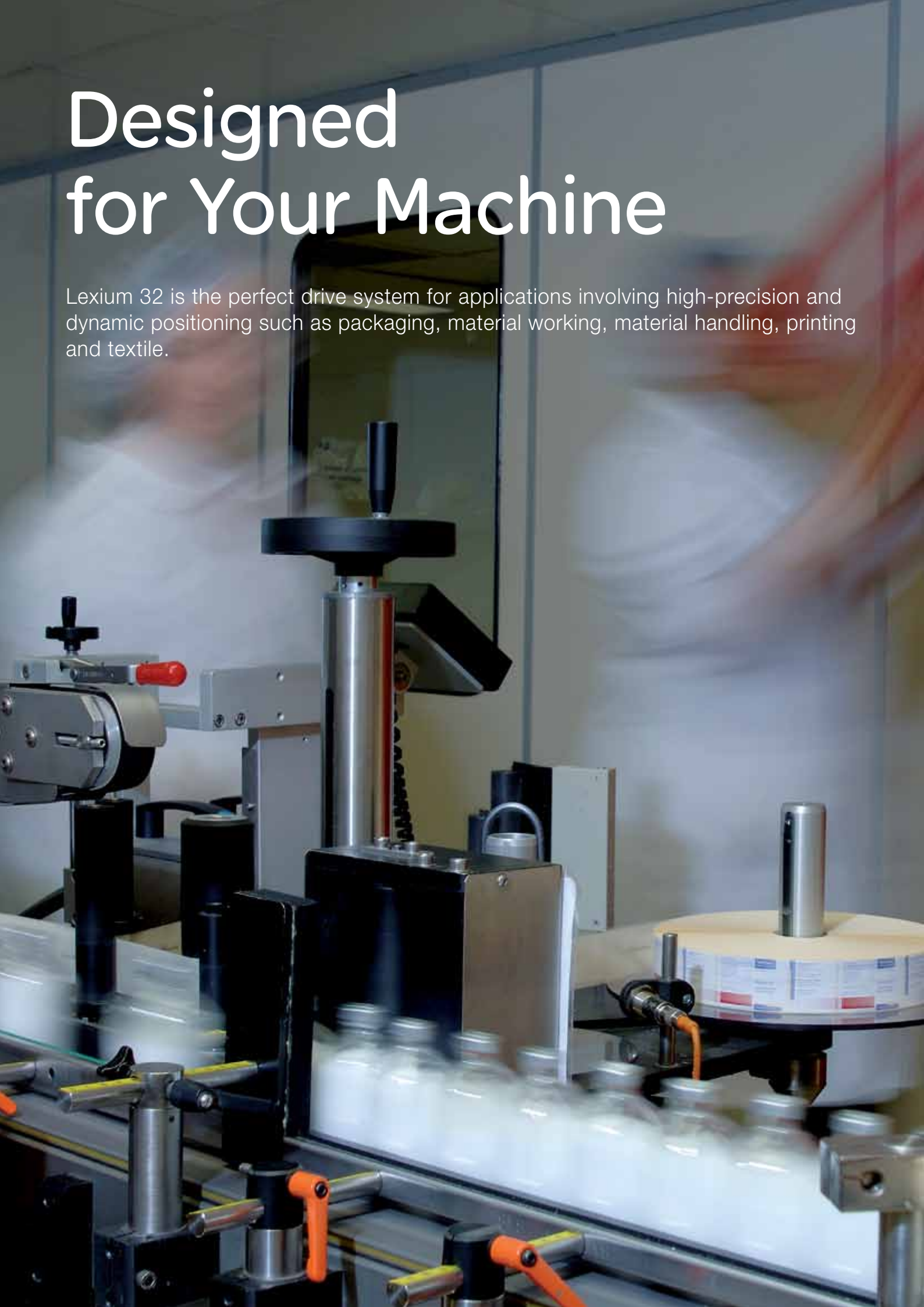
Lexium 32

Servo drives and motors
Power range from 0.15 kW to 7 kW

Schneider Electric

Designed for Your Machine

Lexium 32 is the perfect drive system for applications involving high-precision and dynamic positioning such as packaging, material working, material handling, printing and textile.



Lexium 32 for the Leading Edge

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 exactly the power, performance and functionality you need and that comes at the right price. Simplified engineering, installation and commissioning let you get your machine up and running faster, with more ease and cost-effectiveness than ever.

Superior performance and maximum efficiency

Increase the productivity of your machine with peak performance values and outstanding motor control. Reduce the machine footprint with highly compact motors and drives. Decrease machine downtime with built-in reliability and intelligent features. Save time, energy and effort at every stage of your machine's lifecycle.

Open for the world of motion – consistency across the board

Lexium 32 supports a great number of standardized motion interfaces. Fieldbus modules and encoder modules flexibly adapt your Lexium 32 solution to your automation architecture. Leverage the full power of existing assets such as applications or legacy motors.

Integrated safety

Benefit from standards-compliant safety on board. If required, use the optional safety module to easily add more safety functions and reduce the time and money spent on safety engineering and certifications.

Where Power Meets Simplicity

The Lexium 32 servo drive range provides you with a solution that meets exactly your requirements. Lexium 32 takes ease of use, power and performance to unprecedented levels to give you the decisive competitive edge at every step from design, engineering, installation and commissioning to operation and maintenance.

Lexium 32 Compact
for control
via +/- 10V or
pulse train input

Lexium 32 Advanced
for CANopen or
CANmotion
architectures

Lexium 32 Modular
is open for the world
of motion with
numerous modules

Lexium BMH
is extremely versatile

Lexium BSH
is highly dynamic

Fast, simplified engineering

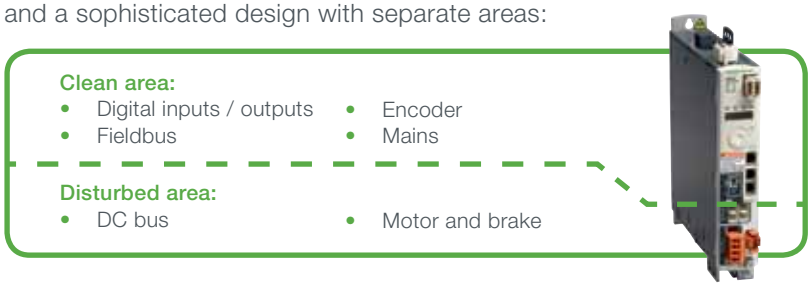
Powerful integration software simplifies the entire process from planning all the way to commissioning to boost efficiency:

- Validated architectures
- Sizing tools
- CAD and cabinet drawings
- Support for PLCopen libraries
- User-friendly software SoMachine, SoMove and SoMove Mobile

PLCopen library, CAD and cabinet drawings

Smart EMC approach

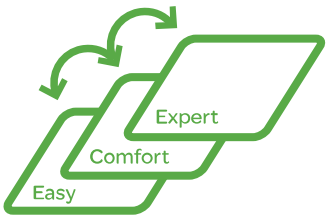
EMC made easy with intelligent features, an integrated EMC filter and a sophisticated design with separate areas:



Rapid commissioning and easy Autotuning

The three Autotuning modes make tuning easier than ever before:

- Easy: Fast and efficient, this mode needs practically no user interaction to yield perfect results for simple applications.
- Comfort: This mode automatically selects and tunes all important parameters and lets you further tune the drive for excellent results.
- Expert: In Expert mode, you can tweak each individual parameter to get stunning results for the ultimate in high-end applications.



Autotuning for different levels of expertise

Enhanced autotuning can save up to **5** hours of commissioning time as compared to the competitors

Simplified installation

Lexium 32 offer plenty 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 for easy access.
- Removable, colour-coded connectors facilitate installation and maintenance.
- Optional memory for a quick parameterization of the drives without PC.
- Different connector types allow for maximum flexibility.

Operation and maintenance

A machine powered by Lexium 32 has built-in reliability, durability and a long service life. Smart functions and features help you save time.

- The integrated “Safe Torque Off” function leads to 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 of a hardware problem, hook up the new drive, 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.

< 3 min.
for replacing a drive, thanks to smart connectors and the memory card

Superior Performance and Maximum Efficiency

The excellent performance of Lexium 32 servo drives makes your machines fast and highly productive. At the same time, numerous efficiency features help you save time and energy to dramatically reduce the total cost of ownership.

Peak performance

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%.

Optimum motor control

Excellent performance is also ensured by enhanced motor control. Here are just some of the highlights that make Lexium 32 the servo drive of choice:

- Highly efficient vibration reduction with autonomic parameter calculation
- Second notch filter and speed observer
- Two flange compatible, powerful motor families Lexium BSH and Lexium BMH

Configurable extra performance

The Lexium 32 servo drive range allows you to easily add extra performance features by means of options. You can choose from:

- Three external encoder modules
- Safety module
- Large variety of fieldbus modules
- I/O extension module.

Functions for a long machine life

Performance is more than simply the peak values of the drive. The way the drive and the mechanical components of your machine interact is just as important. This is why Lexium 32 brings you functions such as:

- Optimized vibration reduction
- Jerk limitation

Side-by-side mounting

A speed bandwidth of
1,600 Hz
provides outstanding response by cutting the settling time to a minimum

Compare the impressive torque of
2.7 Nm/l*
to other offers

*BMH, size 100

3 = 7
3 encodder modules for 7 different encoder interfaces plus
4 fieldbus interfaces

+

Optimised vibration reduction for long machine life and fast positioning

Superior Performance and Maximum Efficiency

Energy efficiency

Energy efficiency has been a key focus in the design of Lexium 32 - to the benefit of the environment and the user:

- About 70 % of the energy consumed in the industry is used by electric motors.
- The energy costs account for 96 % of the total cost of ownership of an electric motor.
- New efficiency classes have been defined in IEC 60034-30 for induction motors (IE = International Efficiency):
  - IE1 = Standard Efficiency (comparable to the old EFF2 class) 86 %
  - IE2 = High Efficiency (comparable to the old EFF1 class) 90 %
  - IE3 = Premium Efficiency 92 %
  - Lexium BMH = 98 %

Servo technology is the most energy efficient motor technology. DC bus daisy chaining lets you even use the regenerated braking energy of one drive to accelerate another

Stock saving

The intelligent design of the Lexium 32 range and the consistency with the Schneider Electric automation portfolio ensures that a great number of the parts are standardized and can be consistently used across the entire platform. This lets you reduce stock and create thousands of variants from a just a small number of parts.

Energy Efficiency

The Lexium BMH motors even surpass the highest of the new efficiency classes by 6 %

Multiloader

For parameterization, even when the drive is off and in its packaging

Open for the World of Motion

Lexium 32 supports a wide selection of standardized hardware and software motion interfaces for fast integration into your architecture and ensures vendor-independence. In addition, Lexium 32 allows you to 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.

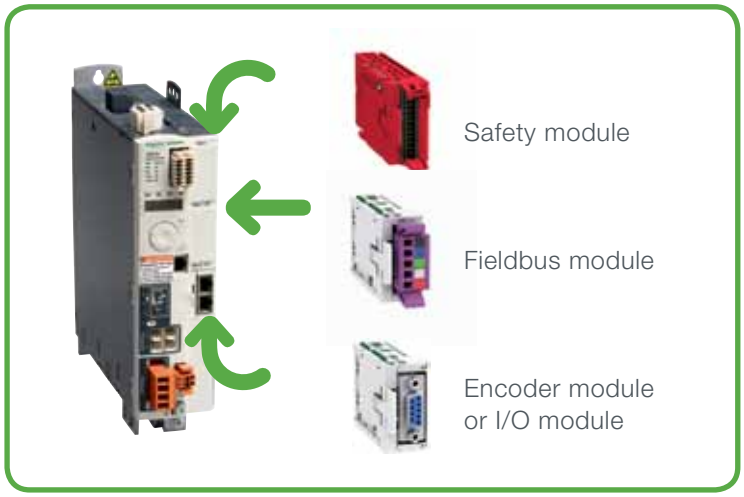
Control interfaces

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.

Pluggable modularity

If your application requires other types of communication and options, the servo drive of choice is Lexium 32 Modular. It lets you add the fieldbus module you need from a large variety of industrial protocols. Modules for a second encoder and a safety module give you full flexibility in designing new machines and also let you leverage the power of existing solutions.



Lexium 32
complies with the

RoHS

Directive 2002/95/EC

Machine and motor interfaces

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

Resolver
- EnDat 2.2
- Hiperface
- A/B/I
- SSI
- BiSS
- 1 Vpp
- 1 Vpp + Hall

Integrated safety

Safety is a complex and costly issue in the design and operation of a machine. To make things a lot simpler for you, all 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 according to international standards and provides numerous benefits.

Integrated safety function

- Simplified machine design and engineering
- Less wiring
- Simpler sensor systems
- Shorter downtimes; resume exactly where you left off before an incident
- Compliance with international standards
- Machine certification is made a lot easier

Additional safety

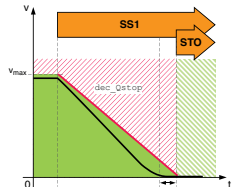
If your machine requires more safety functions than “Safe Torque Off”, you can simply install the optional enhanced safety module eSM. This option gets rid of the hassle of devising complex, proprietary safety concepts and having them certified in all your target countries. The safety module offers the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

Standards

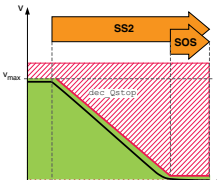
- IEC/EN 61508
- IEC/EN 61800-5-2
- EN ISO 13849-1
- IEC/EN 62061

TÜV Nord
Safety approved Certification

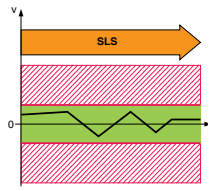
Optional safety module eSM



Safe Stop 1 (SS1)
Monitors deceleration and then shuts off the torque



Safe Stop 2 (SS2)
Monitors deceleration and standstill position



Safely Limited Speed (SLS)
Monitors whether a specified velocity is exceeded

Safe Operating Stop (SOS)
Monitors standstill position and triggers STO in case of impermissible movements

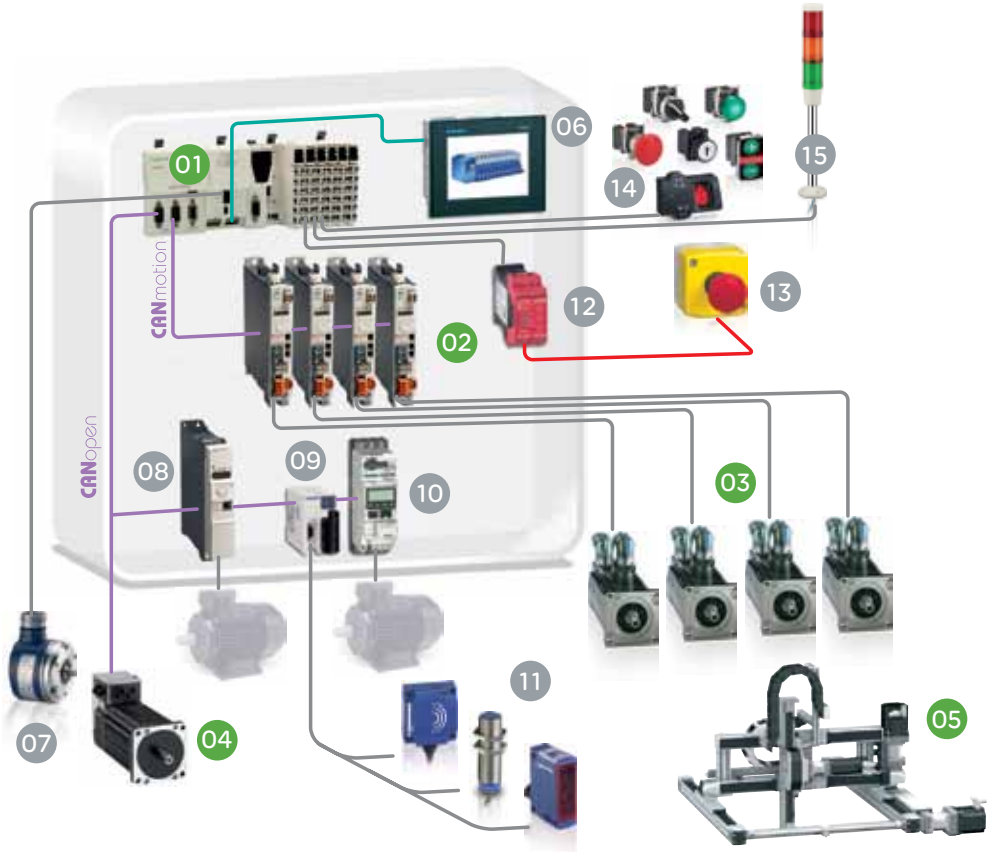
All safety functions mentioned in this brochure as per IEC/EN 61800-5-2.

Consistency across the board

Perfect integration with the Schneider Electric product range for consistency across the board.

Configure your motor control devices with SoMove and SoMove Mobile, the setup software for PCs and mobile phones. Free, simple, time-saving and user-friendly.

SoMachine, specifically developed for you to design, commission and service your machines in a single software suite. It helps you get to market faster and gives you a competitive advantage.



Machine performance

- Synchronisation of 4 axes in 2 ms or 8 axes in 4 ms with the LMC 058 motion controller
- Maximum machine productivity due to highly dynamic motor control of the Lexium 32 servo drive

Fast machine commissioning

- Easy integration of Lexium Integrated Drives via CANopen interface
- Ready-to-use application function blocks and libraries for easy programming
- Synergetic use of Lexium 32 servo drives and variable Altivar 32 speed drives with common tools, common software and identical mounting and wiring concepts

Motion products

01 Controller **Modicon LMC058**
02 Servo Drive **Lexium 32**
03 Servo Motor **Lexium BMH, BSH**
04 Integrated Drive **Lexium ILA, ILE, ILS**
05 Multi-Axis System **Lexium MAX R3**

Other Schneider Electric products

06 Graphic terminal **Magelis XBT GT ...**
07 Encoder **OsiSense XCC**
08 Variable speed drive **Altivar 32**
09 Distributed I/O **Advantys OTB**
10 Motor starter **TeSys U**
11 Detectors **Osisense XC/XS/XU/XM/XX ...**
12 Safety controller **Preventa XPS MC ...**
13 E mergency stop **Harmony Xalk ...**
14 Pushbuttons & switches **Harmony XB4/5**
15 Signaling unit **Harmony XVM**

Lexium 32 Servo Range Overview

The servo drives

Type	Lexium 32 Compact	Lexium 32 Advanced	Lexium 32 Modular
Voltage range	110 - 240 VAC, 1 phase		380 - 480 VAC, 3 phases
Power range	1.5 A to 10 A 150 W to 1.6 kW		1.5 to 24 A 400 W to 7 kW
Communication	**On board:** +/- 10 V or Pulse train input	**On board:** CANopen or CANmotion	**Options:** • CANopen / CANmotion • DeviceNet • PROFIBUS DP • EtherNet/IP • EtherCAT
Commissioning interface	Modbus	Modbus	Modbus
Embedded safety	"Safe Torque Off"	"Safe Torque Off"	"Safe Torque Off"
Other options	Memory card	Memory card	Memory card Enhanced safety module eSM 2nd encoder module I/O module

The servo motors

Type	Lexium BMH	Lexium BSH
Frame size	70, 100, 140, 205	55, 70, 100, 140
Torque range	1.4 - 88 Nm	0,5 - 33.4 Nm
Inertia	Medium inertia (factor 2.4)	Low inertia (factor 1)
Position resolution with Lexium 32 Singleturn Multiturn	32.768 or 131.768 x 1 x 4.096	131.768 x 1 x 4.096
Options	Keyed shaft, angled connectors, brake, IP65, IP67 (compressed air)	Keyed shaft, angled connectors, brake, IP65 (compressed air)

Schneider Electric products and services for cost-effective, flexible and future-proof solutions

One global supplier to provide you with 24/7 support and assistance all around the world

Co-engineering for application design and implementation

Delivery of preassembled applications